



**GRADUATE SCHOOL**  
**ISTANBUL MEDENİYET UNIVERSITY**  
DEPARTMENT OF HISTORY

**From Watching the Sky to Reading the Minutes:  
Changes in Ottoman Time Consciousness during the  
Eighteenth Century**

PhD Thesis

**Bahri Özel**

November 2025



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Advisor

**Assoc. Prof. M. Zahit Atçıl**

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## THESIS JURY APPROVAL

This PhD thesis titled “From Watching the Sky to Reading the Minutes: Changes in Ottoman Time Consciousness during the Eighteenth Century,” written by Bahri Özel at the Department of History was accepted by our jury.

### JURY MEMBERS

### SIGNATURE

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## **STATEMENTS**

### **Style and Reference Manual Statement**

Having reviewed this thesis written under my supervision, I confirm that it has been written in accordance with Chicago Manual of Style and used its [footnote/in text] reference format consistently throughout the entire text.

Signature

Doç. Dr. M. Zahit Atçıl

### **Declaration of Originality**

I hereby declare that all information in this dissertation has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conducts, I have fully cited and referenced all material and results that are not original to this work.

Signature

Bahri Özel

## PREFACE

This dissertation on timekeeping is the culmination of a long and demanding journey, one that would have been impossible to complete without the intellectual, institutional, and emotional support of many individuals and organizations. It is my great honor to recognize those who have walked this path with me.

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My deepest thanks go to my mother and to my brothers and sister, whose patience and care formed the quiet foundation beneath this work.

A historical study of this scope, involving complex archival navigation and numerous date conversions, is rarely free of error. While I have made every effort to ensure accuracy, any mistakes that remain are entirely my own. The fundamental contributions of this research, however, belong to the collective wisdom of those named here. To anyone I may have inadvertently omitted, I ask for your understanding and forgiveness.

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This dissertation is dedicated to M. Tarık Ötgen.

# GENİŞ ÖZET

## **Gökyüzünü İzlemekten Dakikaları Saymaya: On Sekizinci Yüzyılda Osmanlı Zaman Anlayışında Değişimler**

Özel, Bahri

Doktora Tezi, Tarih Anabilim Dalı

Danışman: Doç. Dr. M. Zahit Atçıl

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Bu doktora tezi, ilk bakışta basit gibi görünen ama önemli sonuçlar doğuran bir sorunun peşine düşüyor: Osmanlılar “ayın kaçı”nı nasıl biliyorlardı ve insan gözüne, yerel şahitliğe dayanan zaman ölçümlerinde ortaya çıkan belirsizliklerde aynı tarihte nasıl buluşabiliyorlardı? Tez, bu soruyu soyut astronomi teorisi üzerinden değil, günlük kayıtlara dayanan arşiv belgeleri üzerinden cevap verir. Yani “takvim nasıl olmalıydı?” sorusundan çok, “takvim gündelik hayatta nasıl işliyordu?” sorusunu merkeze alır. Bu yaklaşım, zamanın yukarıdan dayatılan tek bir cetvel değil, farklı kurumların ve toplulukların sürekli müzakere ettiği bir pratik alan olduğunu göstererek tezin genel yönelimini belirler.

Bu çalışma, Osmanlı zaman tutma pratiklerinde on sekizinci yüzyılı bir dönüm noktası olarak konumlandırır. Yüzyıl boyunca daha esnek, gözlem merkezli, repertuarı görece dar bir tarihlendirme alışkanlığından, daha yoğun bir kesinlik, karşılaştırma ve eşgüdüm kültürüne doğru kademeli bir değişim yaşanır. Bu değişim, teknoloji ya da tepeden inme reformları merkeze alan doğrusal bir anlatı yerine; vakanüvislerin, katiplerin ve kadıların günlük kayıtlarına yaslanan, vaka incelemesine dayalı daha organik bir çerçevede ele alınır.

Tezin temel iddiası, on sekizinci yüzyılda önceki “tek tip” zaman ölçüm (mono-style timekeeping) sistemine kıyasla farklı bir “ikili” zaman ölçüm (dual-style timekeeping) rejiminin ortaya çıkmasıdır. Bu ikili zaman ölçüm tarzında belgeler

giderek aynı anda birden fazla zaman koordinatını içermeye başlar: kameri (Hicri) ve şemsi (Rumi) tarihler birlikte yazılır; haftanın günü, ayın günlerini kontrol etmek için bir tür referans noktasına dönüşür; namaz vakitlerinin yanında mekanik saate dayalı zaman ifadeleri yaygınlaşır, tam saatlerden çeyrek saat ve dakikaya kadar inceler. Bu değişim, salt astronomi teorisinin ürettiği zihinsel bir dönüşüm olarak değil, bürokrasinin genişlemesi, mali baskılar, sosyal değişimler ve hilalin şahitlikle ilan edildiği bir imparatorlukta artan senkronizasyon ihtiyacına verilmiş pratik bir cevap olarak sunulur.

Araştırma, zaman ölçümünü, mesafe, ağırlık veya hacim ölçüsü gibi temel bir ölçüm sistemi olarak düşünmeye davet eder. Nasıl ki ölçü birimlerinde standardizasyon çabaları, daha bütünleşmiş idari, iktisadi ve sosyal yapılara işaret ediyorsa, zaman ölçümü alanındaki standardizasyon yönelimleri de benzer bir dönüşümün göstergesidir. On sekizinci yüzyıl Osmanlı dünyasında gözlenen “kesinlik” artışı, yalnızca Avrupa’dan ithal edilen saatlerin çoğalmasıyla açıklanmaz; aksine, zaman ifadelerinin dilsel özelliklerinde ve tarihlendirme alışkanlıklarında görülen bir yoğunlaşma üzerinden takip edilir. Tez, bu dönüşümü anlamak için teoriyi merkeze alarak tepeden inme bir yaklaşım yerine pratiğin içinden yukarıya doğru bir bakış geliştirir. Böylece müneccimbaşı ve muvakkitlerin hesaplarının yanında, kadıların hükmü, padişahların onayı, katiplerin düzeltilmesi ve yerel cemaatin kabulü gibi unsurların birlikte çalıştığı bir zamansal ekosistem inşa eder.

Bu öncül, tezin en kritik tarihyazımı müdahalesini de beraberinde getirir: Osmanlı kaynaklarında görülen kronolojik tutarsızlıklar, katip hatası olarak görülmemeli, aksine müzakere edilerek işleyen bir sistemin nasıl çalıştığına dair temel kanıtlar olarak değerlendirilmelidir. Araştırmada Hicri tarihler arasındaki uyumsuzluklar bir arıza olarak değil, kayıt tutanların, yargı mercilerinin ve yerel toplulukların birlikte icra ettiği senkronizasyon çabasının izleri olarak ele alınır. Başka bir ifadeyle, kronolojik tutarsızlıklar belgenin kenarında kalmış parmak

izleridir ve müzakere sürecini bu izleri takip ederek yeniden inşa etmek mümkündür.

Hicri takvim, ayın 29,5 günlük döngüsü nedeniyle her ay için “29 mu 30 mu?” kararını gerektirir. Bu kararın önceden hazırlanmış bir çizelge ile sabit olmayıp, şahitlik, hava koşulları, ufuk çizgisi, yerel otoriteler ve haberin yayılma hızı gibi değişkenlere bağlı olması, kısa vadeli tarih farklılıklarını kaçınılmaz kılar. “Bu ay ne zaman başladı” veya “Bu ay kaç gün” soruları teknik bir ayrıntı olmaktan çok, ibadetin, mahkemenin, borcun, maaşın, yasın ve bayramın doğru gününü belirleyen pratik bir meseleydi. Bu yüzden zaman, gökyüzüne bakmanın yanı sıra, habere güvenmenin, şahitliği onaylamanın, defterdeki tarihi güncellemenin ve nihayetinde bir topluluğu aynı güne ikna etmenin alanına dönüşüyordu. Aynı olayın farklı belgelerde ayın farklı günleriyle kaydedilmesi bir yanlışlık değil, farklı bilgi zincirlerinin, farklı otorite kanallarının ve farklı senkronizasyon anlarının kayda geçmiş izidir.

Bu çerçevede, Osmanlı zamanının merkezi bir saat gibi her yerde aynı anda tıklayan bir sistem olmadığı, farklı otoriteler, farklı haber yolları ve farklı kayıt türleri arasında kurulan bir koordinasyon alanı olduğu savunulur. Aynı mekanda, aynı kurumda, hatta aynı sosyal çevrede dahi farklı tarihlendirme pratiklerinin yan yana durabildiğini görmek mümkündür. Örneğin 1746’da Sultan I. Mahmud’un bir savaş gemisinin denize indirilme törenine katılımı, sultanın sır katibince 15 Rebiyülevvel 1159, mali katibince ise 16 Rebiyülevvel 1159 olarak kaydedilmiştir. Her iki kayıt da aynı günü anlatır, fakat ayın gününü farklı numaralandırır. Bu durum basit bir dikkatsizlikten ziyade, “ayın kaç” bilgisinin hangi kanaldan teyit edildiğine ve tarihlendirmenin hangi ölçüme göre yapıldığına bağlıdır. Dolayısıyla mesele kimin yanlış tarih verdiği değil, aynı mekanda nasıl farklı tarihlerin üretilebildiği sorusudur.

Araştırma metodolojik olarak tümevarımsaldır: yinelenen mikro gözlemlerden hareketle zaman bilincindeki değişimi tarif eden makro bir argüman kurar. Bu

tümevarımın dayandığı temel analitik birim ise yalın, ama teşhis gücü yüksek bir ikilidir: “ayın günü + haftanın günü” eşleşmesi. Bunun mantığı şudur: Hicri ay 29 gün de sürebilir 30 da. Ama yedi günlük hafta döngüsü, ayın uzunluğundan bağımsız, kesintisiz ve herkesçe bilinen bir ritimdir. Bu nedenle “ayın 5’i + Salı” gibi eşleşmeler, bir kaynağın iç tutarlılığını test eden, dış kaynaklarla karşılaştırıldığında da düzeltme ve uyarlama izlerini görünür kılan teşhis araçlarına dönüşür. Böylece kronolojik tutarsızlıklar, tarihçinin başını ağrıtan bir problem değil, Osmanlı zaman ölçü sisteminin nasıl işlediğini gösteren birer veri haline gelir.

Bu noktadan hareketle tez, geniş bir kaynak evrenini bir araya getirir: kadı sicilleri, sultan ruznameleri, mali defterler, merasim defterleri, kronikler ve farklı türde anlatı kaynakları. Ama amaç, bu kaynakları yalnızca bilgi aktaran metinler olarak kullanmak değil, kaynakların kendi zaman üretim mekanizmalarını incelemektir. Kayıt tutanların tarihlendirmeyi nasıl yaptıkları, ne zaman tereddüt ettikleri, hangi kelimeleri kullandıkları, hangi durumlarda düzeltme yaptıkları, hangi durumları görmezden geldikleri, hatta bazen astronomik olarak imkansız ay sürelerini (örneğin 28 veya 31 gün) nasıl sosyal olarak mümkün hale getirdikleri, tezin ampirik zeminini oluşturur. Bu sayede tez, hem nicel iz sürme (dağılım, tekrar, örüntü) hem de nitel okuma (dil, gerekçe, otorite, eleştiri) yöntemlerini birlikte kullanır.

Tezin geliştirdiği iki katmanlı analiz şeması, kronolojik uyumsuzlukların “nerede” ve “nasıl” ortaya çıktığını sınıflandırmak için tasarlanmıştır. Birinci katman iç ve dış analiz ayrımıdır. Uyumsuz tarihler tek bir kaynağın kendi içinde mi görülüyor, yoksa kaynaklar karşılaştırıldığında mı ortaya çıkıyor? İkinci katman ise belirtilmiş ve belirtisiz tarih düzeltmesi ayrımıdır. Kayıt tutan kişi, ayın günü ve haftanın günü arasında değişen eşleşmeyi okuruna açıklayarak mı, yoksa sessizce mi düzeltiyor? Bu iki analiz yöntemi tezin ikinci bölümünde, 1740’lı yıllarda tutulmuş kaynaklar üzerinden ayrıntılı biçimde gösterilir.

Bu şema sayesinde, kronolojik farklılıklar yalnızca var veya yok şeklinde değil, farklı türlerdeki birer pratik olarak görülebilir: Bazı uyumsuzluklar yerel bir bilginin geç ulaşmasından doğar; bazıları otorite çatışması veya farklı tanıklık kanallarının rekabetinden; bazıları ise metin türünün doğasından (günlüklerin anlık, kroniklerin geriye dönük derlemesi gibi unsurlardan) kaynaklanır. Böylece tutarsızlık tek bir kategori olmaktan çıkar, zaman üretiminin farklı işçilikleri olarak sınıflanır.

Çalışma, problematiği soyut bir düzlemde bırakmayıp dikkat çekici bir vakayla somutlaştırır: 1739 Ramazan'ının sonunda İstanbul'da yaşanan "senkronizasyon krizi." Başkentin hesabına göre Ramazan Çarşamba günü başlamışken, Edirne üzerinden gelen bir haber, Sofya çevresinde Ramazan'ın bir gün erken başladığını bildirir. Bu bilgi kabul edilirse, İstanbul'da "bugün" artık 30 Ramazan değil, 1 Şevval yani bayramdır. Haber, kadıdan şeyhülislama, sadrazamdan sultana uzanan bir karar zincirinden geçer; sonuçta Topkapı Sarayı'ndan atılan top ile bayram ilan edilir. Fakat haberin ulaşmadığı veya geç ulaştığı semtlerde günlük ritim aynı anda değişmez. Dolayısıyla kentin bir kısmı bayram ederken, başka bir kısmı hala oruç tutmaktadır. Tez bu durumu, tek bir şehir içinde oluşan "kameri tarihlendirme bölgeleri" olarak değerlendirir; bazı mahalleler oruç tutarken bazıları bayram ederek farklı zaman dilimlerinde yaşamıştır. Bu vaka, tezin ilk bölümünde ayrıntılı biçimde anlatılan ve senkronizasyon problemini bir şehir haritası gibi görünür kılan örneklerden biridir.

Tez, vaka incelemelerinden hareketle başka araştırmalara uygulanabilir üç analitik kavram sunar:

- Kameri tarih düzeltmesi (lunar date alteration): Bir kameri ayın başlangıcı veya süresi, beklentilerden saptığında kayıt tutanların senkronizasyonu sağlamak için gösterdiği çaba. Bu çaba bazen kaynakta açıkça belirtilmiştir (belirtilmiş

düzeltilme), bazen de görünmez ama tespit edilebilir (belirtisiz düzeltilme). Tez, bu olguyu yalnızca düzeltilme değil, bir yönetim ve ikna süreci olarak da ele alır.

- Kameran tarihlandırma bölgeleri (lunar date zones): Coğrafi senkronizasyonu haritalandırma yöntemi. Aynı eyaletteki şehirler veya aynı şehirdeki mahalleler arasında farklı yerelliklerin kısa süreliğine farklı “şimdi”lerde bulunabilmesi, bu kavramla görünür kılınır. Böylece “aynı olay neden farklı tarihlerle kaydedildi” sorusu, hatadan ziyade mekansal bilgi akışı üzerinden açıklanabilir.

- Kameran referans zincirleri (lunar reference chains): Bir tarihin şeceresini izleme yöntemi. Gözlem veya ilan sonucunda kaydedilen bir kameran tarih, başka metinlerde tekrarlandıkça alternatifleri arasından sıyrılarak otorite kazanır. Olayı kaydeden ilk anlatılardan günümüz modern çalışmalarına kadar süren kameran tarih referans zincirleri takip edilerek, hatanın veya otoritenin nasıl aktarılabildiğini gösterir.

Tez, dört ana bölüm üzerinden kurgulanır ve her bölüm, sorunun başka bir katmanını açar. Tezin planı, bölümlerin neyi hedeflediğini özetler. İlk bölüm senkronize olamayan kutlamalar üzerinden problemi tanıtır. İkinci bölüm kullanılan yöntemleri açıklar ve tarih düzeltmesi kavramını inşa eder. Üçüncü bölüm coğrafi ve tarihyazımsal haritalama (tarihlandırma bölgeleri ve referans zincirleri) örnekleri içerir. Dördüncü bölüm ise ikili zaman ölçüm tarzını deneysel ve dilsel bir dönüşüm olarak sentezler.

Birinci bölüm, 1739 örneği gibi vakalarla senkronizasyon problemini ortaya koyar ve literatürdeki yaklaşımları değerlendirir. Bu bölümde amaç, sorunu büyütme değil, sorunun zaten büyük olduğunu göstermektir.

İkinci bölüm teorinin ötesinde pratiği yakalamaya dönük yeni yaklaşımlar önerir. Kameran tarih düzeltmesi burada analitik bir merceğe dönüşür ve iki katmanlı şema (iç/dış; belirtilmiş/belirtisiz) tanıtılır. Ayrıca günlük hayat

senaryoları üzerinden (orucun başlangıcı, ölüm anı, borç ödeme günü gibi) zaman belirsizliğinin sosyal sonuçları tartışılır. Bu bölümde, vaka incelemeleri esas alınarak, düzeltme süreci “müşahede, haberleşme, müzakere, ilan” olarak dört aşamalı bir modelle yeniden kurulur.

Üçüncü bölüm, tezin ölçek büyüttüğü yerdir: Bir yandan aynı yılın (1746) imparatorluk çapında farklı tarihlendirme biçimlerini tarihlendirme bölgeleri ile haritalandırır; diğer yandan belirli olayların tarihyazımsal dolaşımını referans zincirleri ile izler. Böylece çalışma, hem mekansal senkronizasyonu hem de metinler arası aktarımı aynı analitik evrene taşır. Bunun doğrudan hedefi şudur: Osmanlı kronolojisini daha hassas kurmak isteyen tarihçinin, önce bu çoğulluğu ve aktarım mekanizmasını hesaba katması gerekir.

Dördüncü bölüm ise bir sentez ve gramer bölümüdür. Tez burada ikili zaman tutma tarzının, yalnızca takvim tercihlerinde (şemsi/kameri) değil, dilin işleyişinde (yıl, ayın günü, haftanın günü, saat, dakika), repertuar genişlemesinde ve kayıt sürekliliğinde belirdiğini savunur. Böylece on sekizinci yüzyıl, tek bir reform anından ziyade, belgelerin katmanlandığı, zaman koordinatlarının üst üste yazıldığı ve eşzamanlılık talebinin giderek rutinleştiği bir değişim dönemi olarak resmedilir.

Tez sonuç olarak Osmanlı zamanını iki uç arasında düşünmemeyi önerir: ne bütünüyle esnek ve kaotik bir dünya, ne de merkezi otoritenin her şeyi belirlediği sert bir düzen. Bunun yerine, sabit ve akışkanın birlikte çalıştığı bir zaman rejimi çıkar karşımıza. Haftanın günleri gibi bazı ritimler sabit ve kalibrasyon sağlayıcıdır; ay başlangıcı gibi bazı ritimler ise gözlem, haber ve otorite onayıyla sürekli yeniden üretilir. Bu üretim, yalnızca bilgi değil, aynı zamanda ikna ve meşruiyet üretimidir: kadı hükmüyle bağlanır, padişahın onayıyla kamusallaşır, katiplerin defteriyle kalıcılışır, topluluğun ibadeti ve alışverişiyle gerçek olur.

Bu nedenle tez, kronolojik uyumsuzluğu tarihçinin düşmanı değil, müttefiki yapar: farklı tarihlendirme pratiklerinin senkronizasyon çabası, sistemin nasıl işlediğinin en görünür olduğu yerlerdir. Üstelik bu yaklaşım, sadece Osmanlı tarihçiliği için değil, çoklu takvim kullanan veya yerel şahitliğe dayalı zaman rejimlerine sahip başka toplumları inceleyen araştırmacılar için de uygulanabilir bir kavram paketi sunar. Kameri tarih düzeltmesi, kameri tarihlendirme bölgeleri ve kameri referans zincirleri, herhangi bir belgeyi tek bir doğru çizelgeye zorlamadan, kendi zamansal mantığında değerlendiren bir tarihçilik anlayışı önerir.

Son tahlilde bu çalışma, on sekizinci yüzyıl Osmanlı dünyasını dakikaların okunmaya başladığı bir eşik olarak tarif eder. Gökyüzünün işaretleri hala belirleyicidir, fakat artık tek başına yetmez; bürokrasi genişlerken ve koordinasyon ihtiyacı büyürken, zamanın belgedeki temsil dili de katmanlaşır. “İkili zaman ölçüm tarzı” olarak tarif edilen şey tam olarak budur: modernleşme çizgisinde tek yönlü bir ilerleme değil, çoklu zamansal dillerin yan yana durduğu, birbirini denetlediği ve bir tür pratik çözüm olarak birlikte işletildiği bir zamansal ekosistem. Tez bu sistemi, farklılıklar arasında doğruyu arayarak değil, onların üretimindeki emeği okuyarak görünür kılar.

**Anahtar Kelimeler:** Osmanlı İmparatorluğu, On Sekizinci Yüzyıl, Zaman Ölçümü, Hicri Takvim, Tarihyazımı.

## ABSTRACT

### **From Watching the Sky to Reading the Minutes: Changes in Ottoman Time Consciousness during the Eighteenth Century**

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This study explores the evolution of Ottoman time consciousness during the eighteenth century, arguing that this period marks a pivotal transition from flexible, observation-based timekeeping to a new culture of precision. The study challenges conventional top-down narratives focused on theoretical astronomy by shifting the vantage point from theory to practice. It posits that time was not dictated but negotiated by a wide ecology of actors, including sultans, judges, scribes, and clerks, who managed the inherent temporal ambiguity of the Hegira lunar calendar, a system reliant on local moon sightings.

This research employs an inductive methodology centered on a simple metric: the statistical alignment of lunar month-days with weekdays. By analyzing a diverse corpus of court registers (*kadı sicilleri*), sultanic diaries (*sultan ruznameleri*), financial daybooks, and chronicles among others, the study treats chronological discrepancies as primary evidence of a flexible and adaptive system, rather than errors to be corrected.

The dissertation's central argument is the emergence of a "dual-style" timekeeping regime in the eighteenth century, which contrasts with the preceding "mono-style" era. This new phase was characterized by the increasing coexistence of lunar (Hegira) and solar (Rumi) dates, the routine addition of weekdays as calibration anchors alongside month-days and a new linguistic precision using clock-based hours and minutes. Preliminary findings suggest

that this shift was driven by the practical demands of a growing bureaucracy, fiscal management, and new forms of social coordination.

Ultimately, this study reframes Ottoman timekeeping as a dynamic field of practice. It introduces three new analytical concepts, “lunar date alteration” (the synchronization effort by recordkeepers), “lunar date zones” (mapping geographic synchronization) and “lunar reference chains” (tracing a date’s historiography). They collectively provide a richer, more historically grounded account of how time was measured, recorded, and coordinated across the empire.

**Keywords:** Ottoman Empire, The Eighteenth Century, Timekeeping, Hegira Calendar, Historiography.

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# Introduction: Temporal Ambiguity and Gradual Precision

Timekeeping is a fundamental system of measurement, like those used for distance, weight, or volume.<sup>1</sup> Just as cultures choose between metric and imperial units for length, societies adopt diverse calendar systems to mark time. Each system is built on distinctive cyclical events, like solar, lunar or sidereal, which reflect local cultural and environmental priorities. By weaving these cycles into their daily routines, communities throughout history have created rhythms that express both cosmological beliefs and practical needs. Movements toward the standardization of these measurements have signaled broad shifts toward more integrated social, administrative, economic, and political structures.

This study analyzes the institutional and social efforts driving the eighteenth-century Ottoman Empire's significant transition from flexible, traditional timekeeping toward a standardized and precise temporal regime. To chart this change, the research primarily employs a simple yet unexplored metric: the pairings of days of the lunar month and days of the week. Secondly, the study supports this analysis by tracking the increasing use of solar dates used alongside the lunar calendar and changes in linguistic styles, such as more precise references to hours and minutes.

The dominant calendar in Ottoman administration and Muslim daily life, the Hegira Lunar calendar, depended on the sighting of the New Moon. Since each lunar cycle spans roughly 29½ days, a conscious decision had to be made: which month would have 29 days, and which would be extended to 30? Rather than consulting an official and fixed timetable, people in the Ottoman world turned to local authorities or peers to verify the current day of the month. The differing answers to this question form the core empirical foundation of this research.

While historical sources suggest that calendar users often arrived at broadly similar conclusions, uniformity was never fully achieved. For instance, in April 1746, when Sultan Mahmud I (r. 1730-1754) celebrated the commission of a warship to sea, the lunar date was recorded as 15<sup>th</sup> Rebiyülevvel 1159 for his private secretary while 16<sup>th</sup>

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<sup>1</sup> Jeffrey Huw Williams, *Defining and Measuring Nature: The Make of All Things* (Bristol: IOP Publishing, 2020).

Rebiyülevvel 1159 for his financial scribe, in their records.<sup>2</sup> Both recordkeepers documented the daily activities of the sultan and reached different conclusions in lunar dating. Hundreds of similar discrepancies can be found in sources from the eighteenth century reflecting, revealing variations between regions and within cities. Their analysis demonstrates an ongoing, participatory engagement of Ottoman subjects with the calendar to ensure correct temporal alignment.

This reliance on a fluctuating calendrical system prompts crucial questions: Did shifting month lengths complicate communal ceremonies, administrative coordination, and economic planning? How did various Ottoman stakeholders, such as bureaucrats, merchants, and ordinary citizens, cope with the potential for confusion? And finally, how have modern historians accounted for these irregularities when interpreting Ottoman documents?

To address these questions, this study methodologically adopts an inductive approach, employing statistical analysis to investigate how time was recorded. The research corpus spans the late seventeenth through early nineteenth centuries, with a special emphasis on the mid-eighteenth. It combines court registers (*kadı sicilleri*) and sultanic diaries (*sultan ruznameleri*) with decrees, ceremonial manuals, financial daybooks, travelogues, and campaign narratives. Its primary metric is simple: the alignment of lunar month-days with weekdays. Because each lunar month requires a practical decision, 29 or 30 days, this alignment registers whether a scribe began a month on a Monday or a Tuesday, whether a correction was made midstream, and how that choice rippled forward. The approach is quantitative where possible like tallying month-length patterns, plotting first-day sequences, and tagging corrections. It is also qualitative where necessary, attending to the language of hesitation, revision, and critique.

From this empirical base, three interrelated insights emerge, challenging established narratives and offering new perspectives on the evolving temporal regime in eighteenth-century Ottoman society.

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<sup>2</sup> The details of this case are examined further in Section 3.1.1 “A Year Across the Empire.”

First, time in the Ottoman world has too often been narrated from the top down. Scholars typically start with learned treatises, especially in astronomy and theology, and then infer how time must have been measured across the empire. Those texts are indispensable: they codify prayer schedules, prescribe computational schemes for determining duration of lunar and solar months, and articulate norms meant to tether practice to theory. But they also tempt us toward an elegant and misleading generalization. Prescriptive texts presume uniform adherence; historical actors did not.

This study shifts the vantage point from theory to practice, from the intentions of system-builders to the routine labors of those who made time legible on paper. It brings into view a dense ecology of actors: alongside well-known royal astronomers (*müneccimbaşı*) and mosque timekeepers (*muvaqqit*), it includes sultans who sanctioned announcements, *kadis* whose rulings made time legally operative, and the scribes and clerks who fixed dates in sultanic diaries, court registers, financial daybooks, correspondence ledgers, campaign journals, and local chronicles. In this ecology, the “recordkeeper” is pivotal. Faced with competing cues such as reports from local people or a courier’s arrival, announcements from the court or palace, or the immediate need to coordinate the start of fasting, they did not simply copy an idealized calendar.

The recordkeepers, individuals behind the sources, chose among alternative dates. They sometimes explicitly noted an adjustment; other times, they silently harmonized entries as new information arrived. Sources include the consequences of these seemingly small choices across the same political space and even within the same institution. Month-beginnings shift by a few days between sources; salary calculations are stretched or compressed to align with administrative cycles; and parallel references to the lunar (Hegira) and solar (Rumi) calendars proliferate, each pressed into service for different purposes. What emerges is a spectrum of localized practices that intersect with, and occasionally override, theoretical frameworks.

The eighteenth-century sources reveal a complex temporal landscape, complicating any tidy narrative of a single, centralized system. The primary evidence for this is the fact that the same lunar month could be counted differently in nearby locales, or even among neighborhoods within a single city. This variation suggests that the “correct” date was not simply decreed from the top down. Instead, it was negotiated within local networks

shaped by terrain, transport, and the speed at which news of a new moon sighting could travel. Therefore, the measurement of time depended on which authority a writer followed.

Reconstructing these documentary traces reveals how authority over the calendar was distributed and did not flow in a single direction. This was a dynamic process involving multiple, interacting actors: astronomers might supply the technical method, but it was often local judges who made that time legally operative. Rulers then sanctioned the proclamation of these verdicts, and finally, recordkeepers reflected these contingent decisions in their writing. This study tracks these very routes of circulation to demonstrate how, out of this variation, long-term and medium-term coherence was achieved, even though short-term discrepancies became an increasing source of friction for certain parts of the population and administration.

The result is a fresh portrait of Ottoman timekeeping: it was not a single, regimented clock ticking uniformly from center to periphery, but a dynamic, coordinated field of practice where rules, observations, and administrative needs met, and sometimes collided, on paper. Treatises supplied the vocabulary; practice assigned meanings and durations to units; and recordkeepers, as the ultimate arbiters of the written record, decided whether a month should last twenty-nine or thirty days and whether a year would close at 354 or stretch to 355. Recognizing this layered ecology of time thus replaces the simple assumption of uniformity with a historically grounded account of how time was actually measured, recorded, and coordinated across a vast empire.

This layered ecology was built upon a clear hierarchy of temporal units. While the monthly count was flexible and subject to local negotiation, the weekly cycle remained fixed and universally acknowledged. This distinction granted the weekly cycle a unique authority, allowing it to serve as a calibration anchor. Because weekdays were continuous and invariant, calendar users could leverage them to cross-check and realign the floating lunar dates without compromising the larger chronological framework. Referring to the weekday, therefore, provided a crucial means to mitigate confusion in administrative, legal, and social contexts. Citing the lunar day alone invites ambiguity, whereas combining it with the weekday provides clarity. Although prior scholarship has acknowledged this hierarchy, its practical implications have yet to be fully explored

through the close, source-driven analysis undertaken here. Thus, the second insight argues that these discrepancies can be charted in detail.

By focusing on flexible month-days and stable weekdays, this research investigates chronological inconsistencies across primary sources and maps these discrepancies in two novel ways. First, it introduces the concept of “lunar date zones,” geographically defined areas where calendar synchronization depended on the relay of moon-sighting reports, often delivered by couriers. This concept of zones helps explain why different regions recorded the same event on different lunar dates. Second, the research develops “lunar reference chains,” which trace how a single date is cited, re-cited, and modified diachronically and across successive layers of authority, from eyewitness accounts and court records to later chronicles. These chains illuminate how both authenticity and error are transmitted through the historiographical process.

Crucially, this approach avoids reducing lunar dates to simple binary markers of true or false. Instead, it highlights the internal hierarchy where the stability of weekdays takes precedence over the variability of lunar month-days. This perspective allows lunar dates to be understood not as fixed points, but as elements within a fluid spectrum, more akin to interacting colors than rigid data. The study analyzes this spectrum through two interrelated concepts: “lunar date zones,” which capture spatial variation, and “lunar reference chains,” which trace historiographic transmission. Together, these tools provide a richer, more dynamic framework for analyzing temporal knowledge in premodern contexts, one that accounts for both geographic divergence and textual layering over time.

Finally, this study heeds contemporary calls in Ottoman historiography to consider the eighteenth century on its own terms. For decades, modern researchers have debated over whether this period represented a protracted decline or, more recently, a phase defined by evolving modes of centralization and decentralization.<sup>3</sup> While these interpretive models

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<sup>3</sup> Albert Hourani, “The Changing Face of the Fertile Crescent in the XVIIIth Century,” *Studia Islamica* 8 (1957), 89–122; Norman Itzkowitz, “Eighteenth Century Ottoman Realities,” *Studia Islamica* 16 (1962), 73–94; Cemal Kafadar, “The Question of Ottoman Decline,” *Harvard Middle Eastern and Islamic Review* 4/1–2 (98 1997), 30–75; Dror Ze'evi, “Back to Napoleon? Thoughts on the Beginning of the Modern Era in the Middle East,” *Mediterranean Historical Review* 19/1 (2004), 73–94; Rifa'at Ali Aboul-El-Haj, *Formation of the Modern State: The Ottoman Empire Sixteenth to Eighteenth Centuries* (New York: State University of New York, 1991); Linda Darling, *Revenue Raising and Legitimacy: Tax Collection and Finance Administration in the Ottoman Empire, 1560–1660* (Leiden: Brill, 1996). Jane Hathaway, “Rewriting Eighteenth-Century Ottoman History,” *Mediterranean Historical Review* 19/1 (2004), 29–53;

have enriched our understanding of various facets of Ottoman society, they remain too limited to illuminate the complex timekeeping practices and mentalities captured in primary sources. Indeed, the eighteenth century emerges here as a dynamic era that cannot be neatly categorized under a single rubric of either decay or administrative transformation. Recent scholarly interventions, such as Dana Sajdi's concept of "nouveau literacy" in a barber's diary<sup>4</sup> and Choon Hwee Koh's emphasis on "thickening governance" in the postal system,<sup>5</sup> suggest there are alternative ways to understand how individuals and institutions experienced and shaped their everyday realities. While the prevailing lenses of decline or centralization have confined the eighteenth century to a largely political framework, exploring cultural dimensions can illuminate new historiographical pathways, a primary goal of this study.<sup>6</sup>

By classifying diverse dating methods, tracking the frequency of notational variations, and analyzing the increasing use of precise time markers, this study argues that the eighteenth century marks a significant turning point in Ottoman timekeeping practices.

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Karl Barbir, "The Changing Face of the Ottoman Empire in the Eighteenth Century: Past and Future Scholarship," *Oriente Moderno* 18/1 (1999), 253–267. Ali Yaycıoğlu, *Partners of the Empire: The Crisis of the Ottoman Order in the Age of Revolutions* (Stanford: Stanford University, 2016). Also see for a critique of recent literature on the use of "transformation", Olivier Bouquet, "From Decline to Transformation: Reflections on a New Paradigm in Ottoman History," *The Journal of Ottoman Studies* 67 (2022), 27–60.

<sup>4</sup> "Nouveau literacy, then, is about the arrival of authors of unusual backgrounds into the space that had historically been arrogated to the 'ulamā', literally, 'the people who know.' These new authors chose to write contemporary chronicles, that is, records of the events that took place in their own lifetimes. Here, I will offer the conceptual contours of this phenomenon by considering the relationship between the social and literary dimensions of the genre, the intention behind and the conditions that facilitated its appropriation by these 'random' individuals, and the connection between literacy and appropriation of texts. I propose that the emergence of these new historians is not necessarily connected with an increase in the level of technical literacy, the 'mere' knowledge of how to read and write. Rather, it is a socially impelled appropriation connected to a subtly and significantly different quality: cultural literacy." Dana Sajdi, *The Barber of Damascus: Nouveau Literacy in the Eighteenth-Century Ottoman Levant* (California: Stanford University, 2013), 6.

<sup>5</sup> "The process of Ottoman state formation, which is conventionally narrated using the de/centralization framework. This framework views the Ottoman Empire as possessing a centralized state in the fifteenth and sixteenth centuries, a decentralized state in the seventeenth and eighteenth centuries, and finally a modernizing centralized state in the nineteenth. It assumes that a centralized state was a powerful state and, conversely, that a decentralized state was a weak state... Instead of the de/centralization framework, I argue that the paradigm of "thickening governance" not only offers a more precise account of Ottoman state formation, but also explains symbiotic developments in the Ottoman social order. Thickening governance, a metaphor first developed by the historian Molly Greene..." Choon Hwee Koh, *The Sublime Post: How the Ottoman Imperial Post Became a Public Service* (Connecticut: Yale University, 2024), 3. Also see, Molly Greene, *The Edinburgh History of the Greeks, 1453 to 1768: The Ottoman Empire* (Edinburgh: Edinburgh University, 2015), 182, 211.

<sup>6</sup> Dana Sajdi, "Decline, Its Discontents and Ottoman Cultural History: By Way of Introduction," *Ottoman Tulips, Ottoman Coffee: Leisure and Lifestyle in the Eighteenth Century* (London: I.B. Tauris, 2007), 1–40.

Whereas earlier periods relied predominantly on flexible, observation-based lunar reckoning, the eighteenth century witnessed growing pressures and efforts toward precision and uniformity. This shift was driven by multiple factors, including the expanding complexity of administrative systems, changes in economic and literary forms of recordkeeping, and evolving social expectations. As a result of administrative and individual demands for greater precision and consistency, solar calendar references began to appear more frequently alongside lunar dates, days of the week were increasingly recorded alongside days of the month, and hourly notations, sometimes with minutes, were added to traditional prayer-based time divisions.

To capture this transition, the study proposes a framework distinguishing between two broad phases of Ottoman timekeeping. The first, a “mono-style” era prior to the eighteenth century, was dominated by Hegira-based reckoning with minimal repertoire variation. The second, emerging during the eighteenth century, was a “dual-style” phase characterized by the coexistence of lunar and solar systems, a growing tendency to pair weekdays with Hegira dates, and a rise in precise hourly documentation. While exceptions and overlaps certainly existed, this framework highlights the eighteenth century as an era of a new type of time consciousness, being closer in many respects to the nineteenth than to the seventeenth century and marking a gradual break from earlier approaches to measuring time.

In sum, by bridging theory and practice, clarifying the internal hierarchy of time units, and mapping the alignment of month-days with weekdays within the broader contexts of lunar date zones and reference chains, this study reconsiders how the Ottoman world in general and the Muslim population in particular recorded, communicated, and managed time. It identifies the eighteenth century as the dawn of a dual-style timekeeping regime that would endure until the empire’s end.

This dissertation is structured across four chapters, moving from the problem’s foundations to its methodological deconstruction, macro-analysis, and final synthesis.

Chapter 1, “Unsynchronized Celebrations,” introduces the dissertation’s core problem through the 1739 Istanbul Eid crisis, where the capital became a patchwork of time (some fasting, some feasting). It establishes the research’s context within “multiple

temporalities,” contrasting the theoretical authority of astronomers with the practical power of local judges (*kadıs*) who validated sighting reports. A literature review critiques scholarship that corrects chronological discrepancies as errors rather than analyzing them as primary data. This chapter establishes the dissertation’s methodology and central argument, identifying the administrative, economic, cultural, and diplomatic catalysts driving the shift to a dual-style timekeeping regime.

Chapter 2, “Practice Beyond Theory,” details the core methodology, introducing the analytical concept of “lunar date alteration.” It operationalizes this through a two-tiered analysis (internal/external and silent/noted) of 1740s sources, primarily the sultanic diary of Ömer Ağa. This framework is applied to daily life scenarios (religious, official, economic) to show temporal negotiation in practice. The chapter explores the remarkable flexibility of the system by documenting impossible 28-day and 31-day lunar months. These astronomically false yet socially plausible practices are contrasted with the rigid 29.5-day average used in financial ledgers. It concludes by modeling the corrective process as four stages: Sighting, Communication, Negotiation, and Declaration.

Chapter 3, “Charting Timekeeping Practices,” maps systemic chronological discrepancies using two novel methods. The first section, “Mapping Lunar Date Zones” provides a synchronic analysis of 1746, revealing a lack of uniformity even within the imperial palace. The second section, “Tracing Lunar Reference Chains” exposes deep historiographical errors in modern scholarship by re-examining the death of Hacı Beşir Ağa (1746) and the arrival of an Iranian ambassador to Istanbul (1736). The chapter concludes by “Explaining Incoherent Chronologies,” categorizing their causes (e.g., administrative lag, misinterpretation) and providing a crucial “Three Levels of Calendar Conversion” (simple, weekday, and sunset style) toolkit for historians.

Chapter 4, “Dual Timekeeping Style,” reframes the entire study by arguing that these practices culminated in a “routinized co-presence” of multiple time systems. It analyzes this transformation across three scales: the year (lunar and solar calendar references), the month-day (the effort to synchronize the duration of lunar months), and the hour/minute (the division of the day by five, prayer times, or twenty-four). This chapter demonstrates how the very grammar of timekeeping changed in its variety, frequency, consistency, and continuity, concluding that the eighteenth century forged a new, dense temporal practice

where multiple time systems were deliberately layered within a single document. These changes can be located in an early nineteenth-century birth note that records the event using lunar, solar, weekday, prayer-based, and mechanical-clock time simultaneously. By offering this holistic view, the chapter situates the dissertation's findings within a larger picture, prioritizing new questions for a field that has, until now, focused more on theory than on the lived social practice of time.

# 1. Unsynchronized Celebrations

For most of human history, people told time by looking up. They learned to read the sky long before they learned to read script, and the motions of the Sun and Moon supplied the grammar of daily life. Today, our experience of time is profoundly different. It is a silent, invisible global infrastructure: atomic clocks hum in shielded laboratories, GPS satellites broadcast pulses timed to the nanosecond, and the entire world is neatly partitioned into time zones anchored to Greenwich, England. Time has become a standard piece of software embedded in every electronic device we own.

The apparent naturalness of this regime is deceptive. It is a very recent invention, built upon centuries of scientific experimentation, political negotiation, and cultural struggle over fundamental questions: which units to count, how to align them, and who had the authority to declare “what time it is.”

The agricultural revolution forged the first durable alliance between timekeeping and human subsistence. As societies settled, the coordination of time became a public necessity. Harvests had to be synchronized, taxes and tithes assessed, communal fasts observed, and long-distance journeys or campaigns planned. From these needs grew conventions, and from these conventions grew calendars, solar, lunar, stellar, and countless hybrid systems.

Each celestial body offered a different gift. The Sun, with its slow annual swing, was the master signal for planting and harvest. Its cycle of roughly  $365\frac{1}{4}$  days governed the seasons; long before precise instruments existed, the changing length of shadows, the position of sunrise on the horizon, and the timing of solstices and equinoxes provided a shared temporal vocabulary. The Moon, the sky’s second great luminary, offered a more intimate metronome. Its phases repeat in a cycle of about  $29\frac{1}{2}$  days, a period short enough to be counted by eye, reliable enough to anchor markets and festivals, and visible to anyone with clear skies.

Human life, bound to light and dark, turned around the day, the Earth’s rotation, so both year and month had to be expressed in whole days. There lay the ancient puzzle: neither

divides evenly into whole days. Those fractions created constant work and, with it, expertise. To reconcile the heavens with their earthly calendars, communities developed ingenious solutions. They alternated the lengths of months and inserted corrective “leap” days or even added “intercalary” months to the year. In doing so, they cultivated experts who could mediate between the rhythms of the cosmos and the demands of society. Their rules and tables were adopted, revised, debated, and resisted across generations, creating a complex tapestry of coexisting temporal systems.

The evolution of our modern solar calendar is a prime example of this ongoing process of adjustment. The Roman-era Julian calendar fixed the solar year as 365.25 days by introducing a leap year every four years. While a significant improvement, this calculation slightly exceeded the true solar year, causing the calendar to drift from the seasons by about one day per century. By the sixteenth century, this accumulated error had become a pressing liturgical problem for the Christian Church. The solution was the Gregorian reform of 1582. Pope Gregory XIII introduced a more accurate system with two key changes. First, it refined the leap year rule, making the average year 365.2425 days long, much closer to the true solar year. Second, and far more dramatically, it decreed that ten days be skipped from the calendar to instantly realign it with the solar seasons.

However, adopting this new system was anything but simple. In a world fractured by the Protestant Reformation, a decree from the Pope was not universally accepted. The introduction of a new timekeeping standard created a long period in Europe where two different solar calendars operated simultaneously, causing widespread confusion. Protestant Britain and its colonies, for example, resisted the change for nearly 200 years, finally adopting the Gregorian system in 1752. By then, the required adjustment had grown to eleven days, leading to public protests who felt their lives had been shortened. This messy, gradual adoption continued for centuries. It was not until the early twentieth century that nations like Russia, Turkey, and China officially joined the Gregorian system.

This struggle for a uniform calendar was part of a broader historical movement toward standardization. Before the Napoleonic era spurred the adoption of the metric system, measures for distance (like the mile), weight, and volume varied dramatically between

regions. Just as converting between different currencies is a modern reality, converting dates and measurements was a common necessity in the pre-modern world. And even today, our system is not perfect. It will drift out of sync by a full day by the 4900s, a problem left for future generations to solve.

Set against this long continuity of temporal negotiation, the eighteenth-century Ottoman world provides a particularly rich laboratory for observing how temporal order was managed in practice. Across a vast geography, from Belgrade to Baghdad, Crimea to Cairo, people measured and recorded time in more than one system at once. The dominant public frame for ritual, legal, and administrative usage remained the Hegira lunar calendar, whose months began with locally observed crescents. Alongside it, however, operated systems anchored in the Sun's yearly rhythm, such as the Rumi (Julian based) calendar,<sup>7</sup> especially in financial and agricultural contexts where seasonal stability mattered. None of this plurality was new. What is distinctive in the eighteenth century is how these regimes were combined, cited, and operationalized in writing, and the extent to which dual references migrated from specialist domains into everyday recordkeeping, becoming ordinary and legible to a much wider audience.

In many respects, this situation resembles global timekeeping before the standardization of time zones in the late nineteenth century. In that era, each city set its local time based on solar noon, leading to a diversity of times even within a single country.<sup>8</sup> The Ottoman context, however, presented an even greater degree of complexity. The elements of "local time" variation concerned not just hours and minutes, but entire days. The official start of a lunar month in Istanbul, for example, could differ from that in Cairo or Bursa. Its declaration was a contingent local event, dependent on a combination of factors: Weather conditions affecting the visibility of the new crescent moon, the testimony of local

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<sup>7</sup> Seyyed Hassan Taqizadeh, "Various Eras and Calendars Used in the Countries of Islam," *Bulletin of the School of Oriental Studies* 9/4 (1939), 903–922. Richard B. Rose, "The Ottoman Fiscal Calendar," *Middle East Studies Association Bulletin* 25/2 (1991), 157–167. Filiz Çalışkan, "Osmanlı Diplomáticasında Mali Tarihin Kullanılışı," *İstanbul Üniversitesi Edebiyat Fakültesi Tarih Dergisi* 14 (1994), 51–57. Bonnie Blackburn - Lofranc Holford-Strevens, *The Oxford Companion to the Year: An Exploration of Calendar Customs and Time-Reckoning* (New York: Oxford University, 1999), 738. Mustafa Özsaray, "Osmanlı Belgelerinde Kullanılan Tarih Türleri," *Hazine-i Evrak Arşiv ve Tarih Araştırmaları Dergisi* 1/1 (2019), 27–41. Mübahat S. Kütükoğlu, "Osmanlı Belgelerinin Tarihlerine Dair," *Belgeler* 38/42 (2023), 1–30.

<sup>8</sup> Ian R. Bartky, *Selling The True Time: Nineteenth-Century Timekeeping in America* (California: Stanford University, 2000).

observers, the speed and priorities of communication networks, and the outcomes of administrative negotiations between officials.

By foregrounding these themes, this study repositions the often-overlooked issue of temporal discrepancies at the center of historical inquiry. It invites a broader reflection on how premodern societies calibrated the need for precision with the necessity of flexibility in their daily frameworks. The phenomenon of calendar discrepancies was by no means confined to the Ottoman Empire. It extended beyond its geographical and chronological boundaries, as medieval Islamic sources frequently attest to similar uncertainties in determining the lengths of lunar months. Notable examples include disputes over the sighting of the Ramadan crescent among residents of Nishapur in the late eleventh century,<sup>9</sup> Morocco in 1301,<sup>10</sup> and Bukhara in 1370.<sup>11</sup>

What makes the Ottoman context an exceptional case study, however, is the extraordinary richness of its surviving bureaucratic and individual documentation. This wealth of records gives historians a unique window into how these temporal conflicts unfolded and were navigated in the course of daily life. By examining these records, we gain fresh insight into the empire's daily workings. We see a world where the coexistence of multiple valid dates for the same event was not a sign of systemic failure but a feature of a flexible and adaptable temporal landscape. This reality shaped everything from the collection of taxes to the enforcement of legal contracts. Acknowledging this reveals a temporal world shaped by continual negotiation and practical adjustment rather than the rigid, top-down uniformity we now take for granted.

Furthermore, this study aims to lay the groundwork for a more precise Ottoman chronology than previous efforts,<sup>12</sup> potentially reaching down to hours and even minutes

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<sup>9</sup> Ali b. Ebi Hafs b. Mahmoud Esfahani, *Tuhfatu'l-Muluk*, ed. Ali Akbar Ahmadi Darani (Tehran: Markaz-i Nashr-i Meras-i Maktub, 2003), 17–20.

<sup>10</sup> H. P. J. Renaud, “Notes Critiques d’histoire Des Sciences Chez Les Musulmans: Sur Les Lunes Du Ramadan,” *Hesperis* 32 (1945), 56.

<sup>11</sup> Zeynuddin Ibn Nuceym, *Al-Bahru'r-Raiq*, ed. Zekeriyya Umayrat (Beirut: Dar al-Kotob al-Ilmiyah, 2013), 2/467.

<sup>12</sup> For a year-by-year Ottoman chronology, see İsmail Hami Danişmend, *İzahlı Osmanlı Tarihi Kronolojisi* (İstanbul: Türkiye, 1972). For a more recent and detailed study focusing specifically on the reign of Mahmud I, see Melih Kayar, “I. Mahmud Dönemi Kronolojisi: 2 Ekim 1730-14 Aralık 1754 (19 Rebiyülevvel 1143-28 Safer 1168),” in *Gölgelenen Sultan, Unutulan Yıllar: I. Mahmud ve Dönemi (1730-1754)*, ed. Hatice Aynur, vol. 2 (İstanbul: Dergah, 2020), 606–89, and Hatice Aynur, “I. Mahmud

where source material allows. While pinpointing such fine details may seem like searching for a needle in a haystack, the research tools available to scholars today, particularly in history and Ottoman studies, have advanced significantly compared to previous decades, making such a pursuit increasingly viable.

This process begins by abandoning the assumption of a single, centralized lunar calendar. As the following chapters illustrate, the entrenched inconsistencies in Ottoman chronology, such as the conflicting reports surrounding the death of sultans, are not isolated anomalies but are instead a rich dataset. This study embraces this apparent chaos as an opportunity to uncover new perspectives rather than a barrier to accuracy. By navigating these complexities, it seeks to open fresh avenues of inquiry into Ottoman history, including mapping temporal networks across both geographical and historiographical landscapes, namely lunar date zones and lunar reference chains. Given that the Ottoman Empire maintained one of the most extensive and meticulously recorded lunar-based archival traditions in human history, this approach deepens our grasp of the relationship between the Moon and mankind.

While it is difficult to pinpoint a precise turning moment in the evolution of timekeeping practices rather than longer periods, focusing on certain events allows for a multi-source, comparative approach. Such moments provide opportunities for cross-referencing diverse records and help reveal broader patterns. The next section introduces such a case is located from the very center of Ottoman political and ceremonial life: Istanbul in December 1739, or Ramadan 1152. The city became a living diagram of how communities sharing the same province, even the same urban space, could drift out of sync while following the same lunar calendar that hinged on human sight, testimony, and the speed of news. The episode of Ramadan 1739 caught enough attention to be noted by contemporaries and preserved by later chroniclers in both passing remarks and extended accounts. More than an exception, it snapshots the fragile mechanics of coordination in an empire that began each month not by calculation but by human sights.

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Döneminde Kaleme Alınan Eserlerin Açıklamalı Kronolojik Dökümü,” *Gölgelenen Sultan, Unutulan Yıllar: I. Mahmud ve Dönemi (1730-1754)*, ed. Hatice Aynur (İstanbul: Dergah, 2020), 690–771.

## 1.1 The Problem of Synchronization

Autumn 1739 was a season of triumph for the Ottomans. Istanbul had celebrated decisive victories over Austria and Russia, resolved at once by battlefield success and diplomatic leverage. On Thursday, 29 October 1739, the grand vizier was granted the rare privilege of riding on horseback into the inner courtyards of Topkapı Palace.<sup>13</sup> It was a ceremonial gesture that signaled exceptional achievement, crowned by the reconquest of Belgrade two months prior. The capital swelled with ceremony and negotiation: ambassadors from Austria, Russia, and France were already in residence; the Khan of Crimea had arrived; an Iranian envoy was en route, bearing unresolved issues on borders, pilgrimage, and sectarian questions. In every sense, the state was alert, organized, and at its most performative.

It is against this scene that a small packet of information, news of when others had begun fasting, could abruptly unsettle the city's most sensitive communal schedule. By the capital's reckoning, Ramadan began on Wednesday, 2 December 1739. The usual uncertainty over whether the month would run to twenty-nine or thirty days was neither novel nor especially troubling. On the morning of Thursday, 31 December, most residents woke expecting a thirtieth and final day of fasting.

Before noon, the expectation collapsed. A courier from Edirne arrived bearing testimony that communities around Sofia had begun Ramadan earlier, on Tuesday, 1 December 1739. If that report were accepted, then Istanbul's current day could not be the thirtieth of Ramadan; it was already the first of Şevval. This report circulated among key officials, including the local judge, registrar, minister of canon law, and the grand vizier (*kadı*,

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<sup>13</sup> Thursday, 25 Receb 1152. Subhi writes, "...kendülere eslafdan ziyade ikram u riayet olunmak kasdıyla vüzera-yı izam hazeratının ez-kadim atlarından nüzul ve maşiyen duhul idegeldikleri bab-ı merkumdan saray-ı hüsrevaneye rakiben duhulleri babında izn ü ruhsat-ı cenab-ı tacdari sudur itmekle divanhane dek atlarından inmeyüp..." Subhi Mehmed Efendi, *Subhi Tarihi Sami ve Şakir Tarihleri İle Birlikte*, ed. Mesut Aydınar (İstanbul: Kitabevi, 2007), 602. While Subhi provides the specific month-day for this event, he does not note the weekday. This detail is confirmed by the contemporary diarist Göynüklü, who meticulously records the triumphant return of the Grand Vizier to Istanbul on the same date, specifying it as "...mah-ı Receb-i şerif'in yigirmi beşinci Pençşenbih günü..." (the twenty-fifth Thursday of the noble month of Receb). Göynüklü Ahmed Efendi, *Tarih-i Göynüklü*, ed. Songül Çolak - Metin Aydar (İstanbul: Türkiye Yazma Eserler Kurumu Başkanlığı, 2019), 455. Another contemporary, Mustafa Efendi, further corroborates the timing, stating simply that on "25 Receb Sadr-ı ali umumen Asitane-i devlet-i aşıyana dahil olmuşlardır" (25 Receb, the Grand Vizier entered the capital). Muammer Karan, *Humbaracıbaşılık Katibi Mustafa Efendi'nin Ruzmerre Mecmuası (1143-1180/1730-1767) İnceleme-Çeviriyazı* (İstanbul University, MA Thesis, 2022), 33.

*tezkireci*, *şeyhülislam*, and *sadrızam*), before being presented to the sultan. Faced with a dilemma, they had to decide whether to hold the feast the next day and preserve the capital's established rhythm, or acknowledge the testimony and bring Eid forward immediately, before the noon prayer. The sultan ordered the latter. A cannon fired from Topkapı to proclaim the switch. The officials, now in a rush, gathered at the Sultan Ahmed Mosque to commence the rituals, ensuring that the traditional observances of Eid were conducted in a timely manner.

In a matter of hours, the date at the center of the empire had changed from 30 Ramadan 1152 to 1 Şevval 1152. Beyond the core districts, alignment lagged. In Üsküdar, Eyüp, and other quarters, the Eid prayer was deferred to the following day. The city thus became a patchwork of time: a central zone feasting and peripheral zones still fasting, an urban mosaic mapped by dates. What transpired in Istanbul during the end of Ramadan 1739 was recorded in two chronicles, two personal diaries, and an archival document, which detail this confusion.<sup>14</sup>

None of this deviated from Ottoman timekeeping; it was how the system worked in practice. Lunar months began with the verified sighting of the crescent, not with a universal calculation broadcast in advance. That principle is participatory because it grounds public time in public witness, but it also makes the calendar exquisitely sensitive to weather, horizon, credibility, and speed of communication. Even when everyone shares the same norm that “lunar months begin with a sighting,” not everyone sees the same thing at the same time. This discrepancy raises significant questions about how to maintain synchronicity across a vast empire where religious, financial, and administrative activities all depended on accurate and mutually accepted dating.

Religious observances, particularly Ramadan, vividly illustrate these problems. Communal prayers and festivities required a shared understanding of precisely when the fasting month began and ended. The year 1739, for example, witnessed a scenario where certain Istanbul districts were informed of a recalibration from a 30-day to a 29-day

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<sup>14</sup> Göynüklü Ahmed Efendi, *Tarih-i Göynüklü*, 453; Karan, *Humbaracıbaşılık Katibi Mustafa Efendi'nin Ruzmerre Mecmuası (1143-1180/1730-1767) İnceleme-Çeviriyazı*, 33–34; Subhi Mehmed Efendi, *Subhi Tarihi Sami ve Şakir Tarihleri İle Birlikte*, 606–608. BOA, D.M.d, (Müteferrik Defterleri Katip El Defteri) 37315-U, 2-3.

Ramadan, aiming to align with sightings reported from Sofia and Edirne. However, other neighborhoods, lacking immediate notice, continued to mark the final day of Ramadan even as the capital's core switched to celebrating the beginning of Şevval. This disjunction not only disrupted communal worship schedules but also created an atmosphere of uncertainty around the most sacred rituals of the year.

Financial transactions were similarly vulnerable. If a creditor in the central districts demanded payment on the basis that the month had ended, while a debtor in the outskirts believed a day remained, negotiation and delay were almost guaranteed. Extend the same dynamic across provincial markets, ports, and tax-collectors each with its own relay of moon reports, and small temporal mismatches could ripple into schedules of trade and cash flow. These frictions often remain invisible in narrative sources precisely because they were mundane, yet they structure the texture of everyday exchange.

Recordkeeping added yet another layer of complexity. Scribes in palaces, clerks in courts, chroniclers at their desks, and private diarists at kitchen tables must choose a day number for each entry. On a day like 31 December 1739, that choice becomes consequential. A clerk who updated his date line immediately after the cannon shot leaves a different paper trail than one writing in Eyüp who had not yet heard.<sup>15</sup> These trails endure. They feed the archive that modern historians consult, making apparent the coexistence of multiple, sincere dates for the same slice of time.

To see the mechanics plainly, consider a hypothetical scenario. Suppose an earthquake struck an hour after the cannon fired. In the city center, recordkeepers aware of the announcement would date it as 1 Şevval 1152. In peripheral districts still observing the thirtieth day of the month, diarists would record 30 Ramadan 1152. Neither is an “error.” Each is the accurate expression of a local calendar at a particular moment in an information chain.

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<sup>15</sup> “Because it became evident that the twenty-ninth day, Thursday, was the noble Eid day, an order was dispatched to the admiral (*kapudan pasha*) and the chief of artillery (*topçubaşı agha*) to fire the cannons, and a decree was likewise sent to the chief of bazaar (*bedesten kethüda*). Town criers made their announcements, but as there was no time to prepare written notices (*tezkire*) for the scholars (*ulema*), the military corps (*ocak*), and others customarily informed of the Eid celebration, news was delivered orally by messengers (*çavuş*), summoning them to come together at the Imperial Palace to receive the holiday greetings in person. Meanwhile, on behalf of registrar (*kethüda bey*), a *tezkire* was composed and sent to the viziers...” BOA, D.M.d, (Müteferrik Defterleri Katip El Defteri) 37315-U, 2-3.

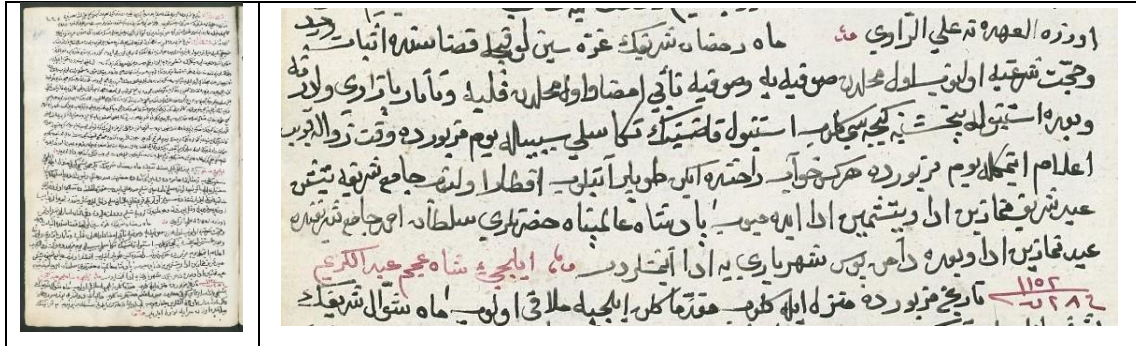
Such variability, however, posed significant challenges for Ottoman chroniclers, tasked with weaving together narratives from various sources. These sources often present conflicting dates for the same event, forcing chroniclers to navigate a series of methodological choices. Should they inform their readers of the discrepancies across sources, or leave them unmentioned? Should they clarify the reasoning behind favoring one date over another, or leave their choices unexplained? And as the scope and detail of their narratives expanded, should they attempt to reconcile conflicting timelines into a unified chronology, or preserve the contradictions as they appeared in the original accounts?

These questions remain highly relevant today. Modern scholars in Ottoman studies continue to rely heavily on primary sources that, in most cases include dates exclusively according to the Hegira calendar. This calendar, grounded in naked-eye moon sightings and allowing for flexible demarcation of lunar months, remained in use throughout the course of the empire. Yet to what extent do modern researchers account for this flexibility? Are they attentive to the coexistence of parallel dating systems and the possibility of legitimate variation in month demarcation? Or do they risk oversimplifying historical complexity by retroactively imposing a standardized calendar onto sources produced in a context that lacked such uniformity?

Determining the first day of each lunar month was both a practical necessity and a persistent source of debate within the Ottoman Empire. A close examination of a wide range of state and personal records reveals a striking pattern: hundreds of date changes were recorded across the eighteenth century. The primary drama of Ramadan 1739 arose from a last-minute declaration that abruptly ended the month, prompting the imperial entourage and wider public to rush to the Sultan Ahmed Mosque for performing the eid prayer and accompanying ceremonies before the noon prayer.

This dynamic emphasizes the crucial role of communication in maintaining calendar synchronization. What happened in Ramadan 1739 at the capital, a courier led to the recalibration of duration of month at the capital, 29 days instead of 30. The case is recounted in the diary of Göynüklü Ahmed Efendi, which reflects the empire's reliance on community interaction and public declarations to manage time. The entry reads:

Table 1.1: Göynüklü Ahmed Efendi's diary, Ramadan 1152



### Text

Mah-ı Ramazan-ı şerif'in guresin Lofca kazasında isbat ve hadd ü hüccet-i şeriyye olunup ol mahalden Sofya'ya ve Sofya naibi imza ve ol mahalden Filibe ve Tatarpazarı ve Edirne ve badehu İstanbul'a Pençşenbih gicesi gelüp İstanbul kadısının tekasülü sebebiyle yevm-i mezburda vakt-i zevale karib ilam itmekle yevm-i mezburda herkes hab-ı rahatda iken toplan atılup iftar olunup cami-i şerife yetişen iyd-i şerif namazın eda ve yetişemiyen eda idemeyüp padişah-ı alem-penah hazretleri Sultan Ahmed Cami-i şerifi'nde iyd namazın eda ve badehu damen-bus-ı şehriyariyi eda itmişlerdür.<sup>16</sup>

### Translation

The report of sighting the New Moon for Ramadan was recorded by the kadi in the town of Lovec. It was then sent to the court of Sofia, where it was signed by the deputy judge before being forwarded to Plovdiv, Pazardzhik, and Edirne. The report arrived in Istanbul on Thursday but was not announced until before noon due to the kadi's procrastination. The cannon fire caught people off guard as they were resting or taking a nap, and they broke their fast. Some rushed to the mosques for the Eid prayer while others missed it. The sultan performed the Eid prayer at the Sultan Ahmed Mosque, followed by the customary Eid ceremonies.

Subhi Efendi, the court chronicler of the era, also notes the episode. He labels the disruption as “unprecedented and without parallel in previous chronicles,”<sup>17</sup> highlighting its perceived uniqueness. Yet such a bold statement may well be hyperbolic: we know from other sources that date-related complications were neither a novelty nor confined to this episode. Two decades later, in 1759, the end-of-Ramadan celebrations in Damascus unfolded in precisely the same manner as those of 1739 in Istanbul, as recorded by the local diarist Budayri. He states:

<sup>16</sup> Göynüklü Ahmed Efendi, *Tarih-i Göynüklü*, 453.

<sup>17</sup> “Bu an-ı ferhunde-fercamda vuku bulan keyfiyyet-i iyd-i said, ki zaman-ı karibde misli gayr-i mesbuk ve tevarih-i Osmaniyye'nin birinde adili mukayyed ü mazbut olmayan vekayi-i latifeden olmağla bu mahalle ketb ü tahriri münasib ve muvafık görüldü.” Subhi Mehmed Efendi, *Subhi Tarihi Sami ve Şakir Tarihleri İle Birlikte*, 606.

Table 1.2: Budayri's diary, Ramadan 1172

| <u>Text</u>                                                                                                   | <u>Translation</u>                                                                                  |
|---------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| ...وثبت عيد الفطر قبل ظهر يوم الأحد ، و صلّوا العيد قبل الظهر ، و فطر الناس بعد أن كانوا صائمين <sup>18</sup> | ...and the Eid prayer was performed before noon. People broke their fast after having been fasting. |

Rather than treating the disruptions of 1739 in Istanbul or 1759 in Damascus as isolated missteps, it is more productive to read them as analytical models, compact temporal scenarios that invite comparison with other moments of calendrical uncertainty. Framed this way, they supply a practical method: they show what kinds of traces to collect, how to align them, and which questions clarify why a given community kept a given day. The approach privileges clusters of sources that are proximate in time, space, and function. Sources such as diaries, court registers, financial ledgers, imperial notices, mosque announcements, and private letters from the same locality and month, can provide pieces of puzzle to follow how the rhythms of the lunar calendar were interpreted, adjusted, and communicated on the ground.

In certain cases, these pieces carry the critiques lodged by eighteenth-century Ottomans about their own timekeeping systems. These critiques, whether in the form of explicit margin notes or embedded between the lines of official decrees and personal diaries, underscore the complex processes involved in determining the start of each month in the Hegira calendar. They also signal the extent to which the empire's sprawling geography and varied customs shaped both the successes and failings of lunar-based timekeeping.

An especially revealing incident occurred in Ramadan 1786, during the reign of Sultan Abdülhamid I. Faced with inconsistencies surrounding the starts of three consecutive holy months (Receb, Şaban, and Ramadan), he wrote to his grand vizier. In this decree, Abdülhamid I questioned the immediate discrepancy while raising broader concerns about the empire's prestige on the international stage. The fact that the same weekdays appeared two years in a row, despite the official calculations indicating otherwise, spoke to a deeper issue of reliability. He concluded with a directive: official practice must adhere to the religious (*şer'i*) guidelines, but it also must be consistent with the previous year's

<sup>18</sup> Ahmed Shihabaddin al-Budayri, *Hawadit Dimashq Ash-Sham al-Yawmiyya*, ed. Muhammad Said al-Qasimi - Ahmad Izzat Abdulkarim (Cairo: Al-Cemiyatu'l-Misriyye li'd-Dirasati't-Tarihiyye, 1959), 221.

records, underscoring the delicate balance between tradition, administrative uniformity, and external perceptions.

Table 1.3: An imperial decree by Sultan Abdülhamid I, Ramadan 1200

| <u>Text</u>                                                                                                                                                                                                                                                                                                 | <u>Translation</u>                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Benim vezirim, işbu şuhur-i selasede Receb-i şerif ve Şabanü'l-muazzam ve Ramazanü'l-mübarek gurreleri aynı sene-i sabık günlerine geldi ve hem takvimlerin yazılan günlerinin hilafıdır.                                                                                                                   | My vizier, in these three holy months, Receb the Noble, Şaban the Exalted, and Ramadan the Blessed, their beginnings (gurre) this year have coincided with the same days as in the previous year, and this contradicts the dates written in the calendars.                                                                                                                                                                                  |
| Sene-i sabıkda İstanbul kadısı Derviş Efendi bu sene de Aşır Efendi bu hesaplar üzere hata mı olmuştur? İki sene dahi gurre-i şuhur-ı selase bu günlere tesadüf eder mi? Düvel-i Nasara beyninde Devlet-i Aliyye'nin müneccimleri henüz ayların gurrelerini zabt edemiyorlar deyü halt-ı kelam etmezler mi? | In the previous year, Derviş Efendi, the judge ( <i>kadi</i> ) of Istanbul, and this year Aşır Efendi, based on these calculations, have they made a mistake? Is it possible for the first days of the three months to coincide on the same dates two years in a row? Would the Christian states not speak ill of us, saying that the astronomers of the Ottoman Empire are still unable to accurately record the first days of the months? |
| Elbet vech-i şeri sene-i sabıkın zabtı üzere bu senenin dahi zabtı muğayir olmamak üzere şeri tatbik öylece rabita verilmesi kati emrimdir. <sup>19</sup>                                                                                                                                                   | It is my absolute command that the proper religious procedure be followed in such a way that the recording of this year not contradict the record of the previous year, and that this alignment be strictly upheld.                                                                                                                                                                                                                         |

Another telling episode comes from Ramadan 1802, as recorded by Ahmed Faiz, the keeper of the sultanic diary of Selim III. In his entry, Faiz relates how cloudy weather obscured the sighting of the New Moon, yet the Istanbul judge still accepted the claims of individuals who alleged they had seen it. While Faiz refrained from overt condemnation, he highlighted the reality that Istanbul's judge accepted sighting reports of people, despite the inclement weather. The entry draws attention to the gap between religious obligations that require witness testimony and empirical limitations imposed by the weather.

<sup>19</sup> BOA., AE.SABH.I, (Ali Emiri Abdülhamid I), Gömlek:1, Dosya: 14.

Table 1.4: Ahmed Faiz’s sultanlic diary, Ramadan 1216

| <u>Text</u>                                                                                                                                                                                                                                                                            | <u>Translation</u>                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| İşbu bin iki yüz on yedi Şaban-ı şerif’inin selhi olan Cumartesi gecesi hava gaym ve rüyet-i Bedr dahi mümkün değil iken İstanbul Kadısı Süleyman Efendi “gördüm” diyenleri istima eyleyüp ilam eylemekle, saat iki buçukda kanadil ikad olunup Ramazan sabit olmağla... <sup>20</sup> | On the night of Saturday, the last day of Shaban in the year 1217, while the sky was overcast and the sighting of the crescent moon was impossible, Süleyman Efendi, the judge of Istanbul, heard from those who claimed to have seen it and declared it officially, resulting in the lanterns being lit at two and a half hours past sunset, thus marking the beginning of Ramadan. |

Almost a century later, in 1911, Gazi Ahmed Muhtar Paşa, a prominent Ottoman military commander and statesman, voiced a similar concern during a parliamentary address. By that time, rapid modernization and the increasing influence of global commerce placed growing pressure on the empire to harmonize its calendar with international norms. He candidly explained why a lunar system based on actual observation, even when performed with the best intentions, inevitably led to irregularities:

Table 1.5: Gazi Ahmed Muhtar Paşa’s speech in Ottoman parliament, 1911

| <u>Text</u>                                                                                                                                                                                                                                | <u>Translation</u>                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Şimdi nakledeyim. Hicri kameri yahut Arabi tarih esasen iyi bir tarihtir; çünkü diğer milletlerin tarihleriyle tekabül kabul eder. Yalnız üç büyük mahzuru vardır.                                                                         | Let us now explain. The Hegira lunar calendar, also known as the Arabic calendar, is essentially a good calendar, for it corresponds to the calendars of other nations. However, it has three major drawbacks.                                                                                                                                                                 |
| Bunun birisi, gurre ile, rüyet ile sabit olduğundan, ihtidaları muhtelifdir, hava mağmum bulutlu olursa görülemez. Bu cihetle her beldenin ayı tevafuk edemez; daima bir iki gün tehalüf eder.                                             | The first is that the beginning of the month ( <i>gurre</i> ) is established by moon sighting ( <i>rüyet</i> ), which leads to inconsistencies in its determination. If the sky is overcast and cloudy, the moon cannot be seen. For this reason, the beginning of the month cannot be synchronized across different regions; there is always a difference of one or two days. |
| Bu ihtilaf eski zamanda ehemmiyetsiz ise de fi zamanına böyle değildir. Umur-ı adliye dikkat ister, şahit, ispat ister. Biri sekizinci günü idi, diğeri yedinci günü idi der. İkisi de doğru; fakat nasıl içinden çıkılır... <sup>21</sup> | Although this discrepancy was insignificant in earlier times, it is no longer so in our day. Judicial matters require precision; they require witnesses and proof. One person says it was the eighth day, while another says it was the seventh. Both are correct, but how can one resolve the issue?                                                                          |

<sup>20</sup> Mehmet Ali Beyhan (ed.), *Saray Günlüğü* (İstanbul: Doğu Kütüphanesi, 2007), 111.

<sup>21</sup> Meclis-i Ayan Zabıt Ceridesi, Devre 1, Cilt 1, İctima Senesi 3, Yirmi sekizinci inikad, 17 Kanunusani 1326, Pazartesi, 414.

Even after the collapse of the empire, the newly founded Turkish Republic grappled with many of the same calendrical dilemmas. During a 1925 parliamentary debate on calendar reform, Rıza Nur Bey, one of the Turkish delegates to the Lausanne negotiations in 1923, gave a speech that echoed sentiments familiar to Göynüklü Ahmed Efendi or Ahmed Faiz Efendi:

Table 1.6: Rıza Nur Bey’s speech in the Turkish Grand National Assembly, 1925

| <u>Text</u>                                                                                                                                                                                                                                                                                                                                              | <u>Translation</u>                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Her millet, herkes bayramının ne vakit hangi günde olacağını bir ay evvel, bir sene evvel bilir. Biz bilemiyoruz, çünkü hayat-ı içtimaiyeyi tebdil eden mühim bir meseledir, tatil var, merasim var, birçok şeyler vardır.                                                                                                                               | Every nation, every person knows when their holiday will be, what day it will fall on, a month or even a year in advance. But we cannot know, because this is a serious matter that affects social life: there are holidays, ceremonies, and many other things involved.                                                                                                                                              |
| Bugün hazırlanıyoruz, Ay’ı göremiyorlar, olmuyor, haydi öbür gün gene görülmüyor. Belki üç gün tevhür ediyor. Yahut hesap ediyoruz, Cuma günü diyoruz, haydi görmüyorlar, Çarşamba oluyor. Bazen de görmeden şehadet ediyorlar. Haydi bayram iki gün evvel oluyor. Halbuki daha bayrama hazırlanmamıştık.                                                | We make preparations today, but they can’t see the Moon, then it doesn’t happen. We try again the next day, still not visible. Sometimes it’s delayed by three days. Or we calculate and say it will be on Friday, but when the Moon isn’t sighted, it ends up being Wednesday. Sometimes people testify without even seeing it, and the holiday ends up being two days earlier. Yet we weren’t even prepared for it. |
| Efendim, bunun daha fenası var. Ecnebler adama bayramınız ne vakittir diye soruyorlar. Halbuki söyleyebilerseniz söyleyiniz, ne mahcubiyettir. Bu, Lozan’da bizim başımıza geldi. Karşımızdaki murahhaslar bize bir cemile yapmak için tatil yapacaklardı, bayramınız ne vakittir diye bize sordular. Biz de söyleyemedik, çok ayıp oldu.” <sup>22</sup> | And sir, there’s something even worse. Foreigners ask: ‘When is your holiday?’ But if you can answer, then go ahead and do so, what an embarrassment it is. This actually happened to us in Lausanne. The delegates across from us wanted to do us a courtesy by observing a holiday break. They asked us, ‘When is your holiday?’ But we couldn’t tell them. It was truly shameful.                                  |

Viewed collectively, the concerns raised by Abdülhamid I in 1786, Ahmed Faiz in 1802, Gazi Ahmed Muhtar Paşa in 1911, and Rıza Nur Bey in 1925 illuminate the persistent and wide-ranging criticisms of the Hegira calendar. A mere day’s difference could unsettle the faithful, complicate court proceedings, or lead to diplomatic embarrassments on the international stage. Whether voiced by a sultan, a court diarist, a high-ranking military official, or a diplomatic delegate, each critique ultimately demanded a more reliable framework for recording the passage of time, underscoring a shared desire for temporal uniformity that transcended different eras and political regimes.

<sup>22</sup> TBMM Zabıt Ceridesi, Devre 2, Cilt 20, İçtima Senesi 3, İçtima 31, 26.12.1341, 279.

Yet these high-profile examples reveal only the tip of the proverbial iceberg. When the statistical examination of day-counting styles is combined with the close reading of handwritten and printed texts, one uncovers hundreds of lesser-known instances in which timekeeping ignited confusion and debate. The eighteenth-century Ottoman archival records demonstrate that adjustments to the Hegira calendar like last-minute announcement of Eid in 1739 were not exceptional but routine. These recalibrations reflect a persistent effort to align daily life with the rhythms of the Moon. Yet the results were far from uniform. Across the empire, even within the same province or, at times, the same city, communities often observed lunar-dependent events on different days. This lack of synchronization was a defining feature of Ottoman timekeeping, particularly in a system reliant on local moon sightings.

The broad argument of the study identifies the eighteenth century as a period of dual timekeeping, including a broadened repertoire of temporal markers and coexistence of multiple measurement systems (lunar dates alongside solar cues; prayer times alongside clock hours). Over the century, authorities would regularize channels of notification, while scribes and diarists would increasingly add cross-checks to entries like weekday, sometimes solar date, not to replace lunar time but to frame it. In this sense, the solution to lunar flexibility was not to eliminate it but to regularize communication on time and surround temporal markers with more reference points.

All of this reflects a broader change in time consciousness. The combination of expectations and references in the temporal realm differed from earlier centuries and rose in the practical priorities of everyday life. A focused look at the capital, Istanbul, after a significant disruption in 1739, reveals how this shift took institutional form. While date alterations in the lunar calendar persisted, the process became increasingly regimented. The imperial center refined its methods for communicating temporal decisions, especially for high-stakes moments like the end of Ramadan. Official notifications were issued earlier, phrased more consistently, and repeated more predictably.

In essence, Ramadan, the very season most vulnerable to moon-sighting disputes, became a laboratory for standardizing this new approach. The month of heightened temporal awareness was transformed into a proving ground for codifying practice and imposing order. The result was not empire-wide uniformity, which remained elusive. Instead, it was

the creation of a clearer administrative scaffolding around local variation, effectively narrowing the window for uncertainty within the capital itself.

## 1.2 Sources and Key Actors

Before turning to the specific dynamics of the evolving practices during the eighteenth century, it is worth pausing to consider a deeper issue raised by these repeated recalibrations of lunar time. Whether issued at the last moment or well in advance, these adjustments prompt a fundamental question: Who truly held the authority over the calendar in the Ottoman lands?

On the surface, the answer appears straightforward: the empire's chief astronomer, situated at the royal court, was theoretically charged with producing and certifying the annual framework in multiple calendars, such as Celali, Rumi, and Hegira. This figure, known as the *müneccimbaşı*, had a wide-ranging purview that encompassed determining how many days each month contained, identifying leap years, converting between solar and lunar calendars, and noting important celestial phenomena such as eclipses and auspicious astrological alignments. In addition, the chief astronomer's responsibilities extended to selecting the most favorable timings for imperial ceremonies, an influential task with political and cultural weight.<sup>23</sup> These duties conferred upon the royal court a centralized form of calendar authority, presumably intended to standardize timekeeping throughout the empire's vast territories.

In practice, however, the situation was far more nuanced. Although imperial astronomers and local timekeepers were capable of projecting the start dates for Hegira months, sometimes decades or centuries in advance,<sup>24</sup> the reality on the ground was far more complex. Current studies often emphasize the authority of these experts in regulating daily prayer schedules, highlighting the role of the *müneccimbaşı* and *muvaqqit* in

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<sup>23</sup> R. Hakan Kırkoğlu, *Sultan ve Müneccimi: 18. Yüzyılda Osmanlı Sarayında İlm-i Nücum* (İstanbul: Doğan, 2017). Ahmet Tunç Şen, *Astrology in the Service of the Empire: Knowledge, Prognostication, and Politics at the Ottoman Court, 1450s-1550s* (The University of Chicago, PhD Dissertation, 2016). Also see, Ahmet Tunç Şen, *Forgotten Experts Astrologers, Science, and Authority in the Ottoman Empire, 1450–1600* (Stanford: Stanford University, 2025).

<sup>24</sup> Günay Kut et al., *Boğaziçi Üniversitesi Kandilli Rasathanesi ve Deprem Araştırmaları Enstitüsü Astronomi, Astroloji, Matematik Yazmaları Kataloğu 1: Türkçe Yazmalar* (İstanbul: Boğaziçi Üniversitesi, 2007), 319–358.

maintaining temporal order. Yet this authority was not absolute when it came to setting the precise start of each new lunar month.

While scholars have often do not question the limits of state-sanctioned calculations dictated the calendar, a closer look at localized evidence suggests that many people felt empowered to challenge and reshape the timeline. Far from being a simple top-down system, the process of marking month-days was a dynamic negotiation, shaped by local sensibilities, direct observations, and communication. A striking illustration of this divergence appears in the diary of Göynüklü Ahmed Efendi, one of the key sources documenting both the Ramadan 1739 crisis and a later incident in 1753. In his entry on the latter, he remarked:

Table 1.7: Göynüklü Ahmed Efendi's diary, Ramadan 1166

| <u>Text</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <u>Translation</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Be-kavl-i ser-münecciman-ı şehriyari gurreyi 'Salı gündendür' diyü takvimlerinde tahrir olunmuş idi. Velakin beş hesabı Pazarirtesi olmak üzre yevm-i Salı gününe itibar olunmayup pazarirtesi saim olundu. Velakin Sofya'da ve Filibe'de ve Tatarpazarı'nda ve Edirne'de Ramazan-ı şerif ayını görüp yevm-i mezbura saim olmuşlar ve mecmu kazalarından ilam gelmeğin mah-ı mezburun yigirmi ikinci Pazar gicesi sadr-ı azam efendimiz hazretleri kanun-ı kadim üzre bütün ricali iftara davet olunup iftardan mukaddemce musahabe olundu. Bu hakir şikk-ı sani defterdarlığı mansubı üzerimizde bulunup kendülerinin yanında bulunmağla... <sup>25</sup> | According to the statement of the chief astronomer of his majesty, the first day of Ramadan was recorded in the calendars as Tuesday. However, it was not taken into consideration, and fasting was observed on Monday. Yet, in Sofia, Plovdiv, Tatar Pazarı, and Edirne, they sighted the New Moon and fasted on the aforementioned day. As reports came from all the districts, on the twenty-second night of the month, the grand vizier invited all the officers for dinner in tradition, where they discussed before breaking the fast. This humble servant, being appointed as the second-class treasurer, was present... |

Beyond the diaries of Göynüklü and Budayri, this study draws upon a wide range of sources to understand these divergences in timekeeping. The investigation centers around three concentric timelines: the year 1746, the decade of the 1740s, and the broader sweep from the late seventeenth to the early nineteenth century, collectively referred to here as the eighteenth century. Geographically, the research takes Istanbul as its primary focus but also extends to crucial urban centers such as Belgrade, Sarajevo, Sofia, Ruse, Plovdiv, Edirne, Bursa, Ankara, Sivas, Trabzon, İzmir, Aleppo, Damascus, and Baghdad. By mapping regional variations in records, it becomes clear that local adaptations to official

<sup>25</sup> Göynüklü Ahmed Efendi, *Tarih-i Göynüklü*, 526.

timekeeping were not isolated incidents but rather a persistent phenomenon across the empire.

This closer look at primary sources further expands our understanding of who played key roles in traditional timekeeping. Scholars have long highlighted the functions of both the imperial astronomer (*müneccimbaşı*), and local prayer timekeepers (*muvaqqit*) in managing and disseminating calendar information. Yet this research reveals that sultans and, more significantly, local judges often exerted crucial influence as well, a point that faded away from modern studies. For instance, during the 1739 Ramadan confusion in the capital, a complex network of observers, judges, and couriers worked in tandem: observers in Lovec near Sofia sighted the New Moon; local judges in Sofia, Plovdiv, and Edirne verified and forwarded these reports; couriers carried the messages; and high-ranking decision-makers in Istanbul, among them the sultan and the city's judge, officially declared the corrected date. Remarkably, neither the chief astronomer nor local prayer timekeepers played a central role in these corrections, underlining the ways that local authorities could override or amend the predetermined calculations by experts.

Priority is given two primary types of documentary evidence. Court registers, known as *kadı sicilleri*, scattered across various imperial cities and towns, provide a rich geographical and cultural mosaic of daily life and administrative practices. Additionally, sultanic diaries (*sultan ruznameleri*) maintained by the sultan's private secretaries, *sır katibi*, from 1730 to 1809, offer systematic insights into the timekeeping practices at the imperial court. The corpus further includes a diverse array of historical documents: chronicles (*tarih/tevarih*), ceremonial registers (*teşrifat defteri*), travelogues (*seyahatname*), ambassadorial reports (*sefaretname*), military campaign narratives (*gazavetname/sefername*), personal diaries (*ceride/ruzname*), and various archival documents, including an abundant number of financial daybooks (*ruzmançe/sergi/masraf defterleri*).<sup>26</sup>

Each of these historical sources, whether written by eyewitnesses or constructed later from various accounts, shares a common characteristic: a deliberate focus on daily

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<sup>26</sup> Erhan Afyoncu, *Tanzimat Öncesi Osmanlı Tarihi Araştırma Rehberi* (İstanbul: Yeditepe, 2022). Abdülkadir Özcan, *Osmanlı'da Tarih Yazımı ve Kaynak Türleri* (İstanbul: Kronik, 2023). Yusuf İhsan Genç et al., *Başbakanlık Osmanlı Arşivi Rehberi* (İstanbul: Başbakanlık Basımevi, 2010).

recording. This commitment to chronology aims not only to provide a precise narrative of events but also to serve various purposes, whether explaining failure or praising for success, for accountability to a higher authority, patronage, exemplary purposes, or simply for historical record-keeping.<sup>27</sup> This commitment ensures that each type of record provides unique insights, which furnishes a vast reservoir of chronological data.

Acknowledging the likelihood of differing counting styles in day among those responsible for recording dates, this study shifts the focus away from identifying specific individuals, referring to them collectively as “recordkeepers.” By doing so, the emphasis is placed on the data provided by these diverse actors, opening an interdisciplinary pathway that reveals the prominence of timekeeping across Ottoman sources. Timekeeping, after all, permeates nearly every type of document, from archival records and manuscripts to published works during the eighteenth century, appearing as an integral aspect of their content.

Thus, the research incorporates texts from known and anonymous recordkeepers who noted events by Hegira dates, including four units of time; year, month, day of the month and day of the week. These documents represent a broad spectrum of society and highlight the adherence to the lunar calendar, forming the ultimate cluster of this research. Although the study primarily addresses users of the Hegira calendar, predominantly the Muslim population of the empire, its findings are also applicable to adherents of other religions. This broader relevance arises because their writings frequently incorporate Hegira dates, reflecting the common calendar of the empire.<sup>28</sup>

### 1.3 Literature Review

In the Ottoman world, the prevailing temporal framework was the Hegira lunar calendar, a system codified in the mid-seventh century within the Arabian context from which Islam

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<sup>27</sup> For an examination of Ottoman chronicles, see Zahit Atçıl et al. (eds.), *Osmanlı'da İlm-i Tarih* (İstanbul: İSAR, 2023).

<sup>28</sup> “...many dates are given, either as Muslim hijri years (to which Lekhno refers as the “Ishmaelite” dates, or “their” era), or in accordance with the Jewish traditional counting since the creation of the world...” Krymchak Rabbi David Lekhno, *Debar Šepatayim: An Ottoman Hebrew Chronicle from the Crimea (1683-1730)*, ed. Yaron Ben-Naeh et al. (Boston: Academic Studies, 2021), 43. Also see, Tanburi Küçük Arutin Efendi, *Tahmas Kulu Han'ın Tevarihi*, ed. Esat Uras (Ankara: Türk Tarih Kurumu, 1942).

emerged. This calendar consists of twelve lunar months, each beginning with the visual sighting of the crescent moon. Days are reckoned from sunset to sunset, segmented into twenty-four hours, with each hour further divided into sixty minutes, a structure broadly inherited from late antique scientific traditions and shared across Mediterranean societies. Unlike earlier Arabian calendrical systems, which incorporated intercalary months to reconcile the lunar cycle with the solar year, the Hegira calendar dispensed with intercalation entirely, maintaining a strict adherence to lunar cycles.<sup>29</sup> Additionally, it uniquely marks the starting point of its yearly count from the Hegira, the migration of the Prophet Muhammad from Mecca to Medina in 622, highlighting its distinct cultural and religious origins.

The expansion of Islam after the seventh century played a pivotal role in advancing timekeeping practices, driven by the demands of religious obligations. These included the performance of five daily prayers at designated intervals oriented toward Mecca, the observance of fasting from sunrise to sunset during Ramadan (the ninth month), and the execution of pilgrimage rites and animal sacrifices on specific days of Zilhicce (the twelfth month). The accurate observance of these time-sensitive rituals necessitated precise temporal measurement and coordination, which in turn spurred the development and refinement of timekeeping techniques across the Islamic world.<sup>30</sup>

From the Mediterranean basin to the Indian Ocean and Central Asia, the first half of the second millennium witnessed the transmission, synthesis, and enhancement of diverse timekeeping traditions.<sup>31</sup> This body of expertise laid the foundation for the roles of both imperial astronomers and local *muvakkits* in the Ottoman world. Architectural and institutional structures, such as observatories and *muvakkithanes* (mosque-adjacent buildings dedicated to timekeeping), served as concrete embodiments of this specialized knowledge. These institutions stood at the forefront of timekeeping practice among their global contemporaries. Ahmad Dallal highlights the interconnected tradition of major observatories in Isfahan, Maragha, Samarkand, Istanbul, and Jaipur.<sup>32</sup> John Steele notes

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<sup>29</sup> Kevser Başar, *Cahiliye Dönemi Arap Takviminde Nesi* (Marmara University, MA Thesis, 2006).

<sup>30</sup> David A. King, *Astronomy in the Service of Islam* (Norfolk: Variorum, 1993).

<sup>31</sup> Stephen P. Blake, *Astronomy and Astrology in the Islamic World* (Edinburgh: Edinburgh University, 2016).

<sup>32</sup> Ahmad Dallal, *Islam, Science, and the Challenge of History* (Dordrecht: Yale University, 2010), 24–25.

in his study on historical observation and prediction of eclipses, the technical sophistication achieved in this era was remarkable.<sup>33</sup>

Despite the advancements in astronomy and the establishment of observatories and *muvaqqithanes* before and during the Ottoman era, a detailed review of these developments is beyond the scope of this discussion for two main reasons. First, the vast and expanding body of research on this topic deserves a separate, thorough examination beyond the confines of this dissertation.<sup>34</sup> Second, and crucial to the focus of this study, the practical influence of these scholarly advancements was somewhat limited. For instance, while imperial astronomers determine the start of the lunar month in advance, their decisions were not strictly enforced by administrative or financial officers.

In the Hegira lunar system, two primary methods were employed to determine the duration of months: “calculated” (ideal) and “sighting” (practical). While the total number of months and years followed a consistent sequence, the precise length of any given month often remained uncertain. This stemmed from the lunar cycle’s average length of approximately 29½ days, which required a decision about whether to round a month to 29 or 30 days.

The calculated method, which took shape in the centuries following the expansion of Islam, relied on astronomical calculations to predict the first visible appearance of the new moon. As Stephen Blake writes,<sup>35</sup> astronomers in the Islamicate world eventually

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<sup>33</sup> “Overall, the medieval Islamic astronomers of the Near East achieved a considerable level of accuracy in timing eclipses. At no earlier period of history, be it in Mesopotamia, Alexandria, or China, had it been possible for eclipses to be timed with an accuracy of better than 10 minutes.” John M. Steele, *Observations and Predictions of Eclipse Times by Early Astronomers* (Dordrecht: Kluwer Academic, 2000), 123.

<sup>34</sup> For an early twenty-first century study on this subject, see David A. King, *In Synchrony with the Heavens: Studies in Astronomical Timekeeping and Instrumentation in Medieval Islamic Civilization* (Leiden: Brill, 2004).

<sup>35</sup> “In the first centuries after the death of Muhammad, the beginning of the month and the number of its days varied. A new month could not be declared until the first slim crescent had appeared and predicting this event was a major motivation behind the early Muslim interest in astronomy. Soon, however, in order to simplify astronomical calculations and to establish specific dates for rituals and celebrations, Islamic astronomers adopted a schematic calendar in which the months were given a definite number of days: (1) Muharram, thirty days; (2) Safar, twenty nine days; (3) Rabi I, thirty days; (4) Rabi II, twenty nine days; (5) Jumada I, thirty days; (6) Jumada II; twenty nine days; (7) Rajab, thirty days; (8) Shaban, twenty-nine days; (9) Ramadan, thirty days; (10) Shawwal, twenty-nine days; (11) Zu al-Qada, thirty days; and (12) Zu al-Hijja, twenty-nine or thirty days. The extra day was sometimes necessary because twelve revolutions of the moon totaled about 354.25 days. In a thirty-year cycle, the additional day was added in the second, fifth, seventh, tenth, thirteenth, sixteenth, eighteenth, twenty-first, twenty-fourth, twenty-

adopted a schematic calendar in which the months were given a definite, alternating number of days: 30, 29, 30, 29, and so on.

The second, far more widespread method was the “sighting” approach, reflecting the deep connection to Islamic tradition, which places great importance on first-hand visual confirmation of the moon, wherein community members would gather at sunset to spot the moon’s slim arc, *rü’yet-i hilal*.<sup>36</sup> Should the sky be clear and the crescent plainly visible, the new month would begin; if not, observation would continue. This localized practice introduced a range of uncontrollable factors, from geographic vantage points and weather patterns to the subjective skill of the observers themselves.

The implications of such variability were substantial, regarding religious observances, communal gatherings, economic transactions and recordkeeping styles that demanded precision in timing. Despite their importance for understanding historical temporal regimes, calendrical variations have occupied a surprisingly marginal position in modern scholarship on the Ottoman Empire. This is particularly true in the field of political and administrative history, where the messy reality of temporal negotiation is often flattened to fit modern expectations of a uniform, centralized state.

Historians often acknowledge that the Hegira calendar, based on lunar cycles, exhibited a degree of flexibility, but rarely explore how this variability shaped practical life at the imperial center. Most studies treat these irregularities as incidental, either dismissing them as anomalies or assuming they were resolved by a centralized, standardized system. This tendency has resulted in a literature that is rich in theoretical exposition but limited in empirical depth and interpretive range. This section offers a critical reassessment of that literature, highlighting two major limitations that have constrained a broader exploration of timekeeping flexibility in the Ottoman context.

The first limitation concerns the brevity and generality with which calendrical variation is explained. Many handbooks, encyclopedias, and introductory texts note the existence of two parallel methods for determining the lunar month: the calculated method and the

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sixth, and twenty-ninth years.” Stephen P. Blake, *Time in Early Modern Islam: Calendar, Ceremony, and Chronology in the Safavid, Mughal, and Ottoman Empires* (New York: Cambridge University, 2013), 8.

<sup>36</sup> İrfan Yücel, “Hilal,” *Türkiye Diyanet Vakfı İslam Ansiklopedisi* (İstanbul: Türkiye Diyanet Vakfı, 1998).

sighting method.<sup>37</sup> However, these acknowledgments are rarely followed by detailed investigation. The theoretical distinction is thus presented without sufficient empirical grounding, fostering an illusion of coherence.

This tendency is reinforced by the routine default to the “ideal” alternating sequence of 30- and 29-day lunar months when modern editors or historians interpret dates in historical texts. A telling example appears in the editing of the 1596 Ottoman campaign diary of Eger in northeastern Hungary.<sup>38</sup> The diary’s anonymous scribe recorded an irregular month sequence, 30–30–29–30–29–29–30 days, for the period between Şevval 1004 and Rebiyülahir 1005. A modern editor, presuming error, retroactively corrected the sequence to the idealized pattern as 29–30–29–30–29–30–29. While the scribe may have committed certain dating mistakes, as carefully noted in the edited text,<sup>39</sup> yet his adherence to a non-ideal lunar month sequence was not among them.

A second major limitation in the existing scholarship lies in its narrow thematic scope, particularly its overwhelming focus on ritual months, most notably Ramadan and Zilhicce. Studies that address variability typically center on these months, highlighting their pivotal role in organizing religious observance.<sup>40</sup> This scholarly emphasis is further reinforced by the patterns found in archival records. Indeed, both months carried heightened significance, not only for individual believers but also for the functioning of imperial and local bureaucracies. Their visibility in the sources stems in part from the increased collective attentiveness to the synchronization of the calendar during these

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<sup>37</sup> Ferdinand Wüstenfeld, *Vergleichungs-Tabellen Der Muhammedanischen Und Christlichen Zeitrechnung* (Leipzig: F.A. Brockhaus, 1854). Ahmed Cevdet Paşa, *Takvimü'l-Edvar* (İstanbul: Ebüzziya, 1882). Ahmed Cevdet Paşa, *Takvimin Tarihi - Takvimü'l-Edvar*, ed. Mustafa Zahit Öner (İstanbul: Büyüyen Ay, 2023). Gazi Ahmed Muhtar Paşa, *Islahu't-Takvim* (Cairo: Muhammed Efendi Mustafa, 1891). Gazi Ahmed Muhtar Paşa, *La Reforme Du Calendrier* (Leiden: Brill, 1893). Sherrard Beaumont Burnaby, *Elements of the Jewish and Muhammadan Calendars* (London: George Bell & Sons, 1901). Gazi Ahmed Muhtar Paşa, *Takvimü's-Sinin* (İstanbul: Ceride-i Havadis, 1915). Wolseley Haig, *Comparative Tables of Mubammadan and Christian Dates* (London: Luzac, 1932). Faik Reşit Unat, *Hicri Tarihleri Miladi Tarihe Çevirme Kılavuzu* (Ankara: Maarif, 1940). Mihail Gueoglu, *Tabele Sincronice: Datele Hegirei Si Datele Erei Noastre Cu o Introducere in Cronologia Musulmana* (Bucharest: Directiunea Arhivelor Statului, 1955). Greville Stewart Parker Freeman-Grenville, *The Muslim and Christian Calendars* (London: Rex Collings, 1977). Yücel Dağlı - Cumhure Üçer, *Tarih Çevirme Kılavuzu* (Ankara: Türk Tarih Kurumu, 1997).

<sup>38</sup> Anonymous, *Macaristan'da Bir Osmanlı Padişahı: Sultan III. Mehmed'in Eğri Seferi Ruznamesi (1596)*, ed. Günhan Börekçi (İstanbul: Okur Kitaplığı, 2016).

<sup>39</sup> Anonymous, *Macaristan'da Bir Osmanlı Padişahı: Sultan III. Mehmed'in Eğri Seferi Ruznamesi (1596)*, nn. 42, 66, 79, 120, 139.

<sup>40</sup> Nesimi Yazıcı, “Osmanlı Dini Hayatından Bir Kesit: Rüyet-i Hilal Meselesi,” *Diyanet İlmi Dergi* 35/1 (1999), 55–82; Recep Çiğdem, “Osmanlı Mahkeme Kayıtlarına Göre Rüyet-i Hilal,” *Türk Hukuk Tarihi Araştırmaları* 9 (2010), 23–36.

periods. Ramadan, in particular, generated heightened expectations for precision, leading to more frequent documentation and recalibration of dates.<sup>41</sup>

These moments of recalibration are often treated in isolation, as if such synchronization efforts were temporally confined to Ramadan alone. As a result, the determination of the first day of fasting period has become the centerpiece of much of the literature on Islamic timekeeping.<sup>42</sup> Within this framework, the topic is frequently approached through the lens of theology, as scholars examine how scriptural interpretation, religious authority, and legal pluralism intersect with astronomical knowledge and geographic difference in the determination of sacred time.

This approach has fostered a rich, interdisciplinary dialogue, particularly among scholars of Islamic law, astronomy, and the history of science. Debates often center on whether the start of Ramadan should be established through naked-eye observation, astronomical calculation, or a hybrid of the two. The credibility of moon-sighting reports, the admissibility of witnesses, and the reconciliation of different legal schools' positions with empirical data from astronomers continue to generate extensive scholarly discussion. These debates are not only historically rooted but also ongoing in many contemporary Muslim societies, reflecting the continued relevance of temporal authority and religious legitimacy in the public sphere.<sup>43</sup>

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<sup>41</sup> Ertuğrul Yıldırım, *Arşiv Belgelerinden Hareketle 18. Yüzyıl İstanbul'unda Ramazan* (Marmara University, MA Thesis, 2013); Gül Bezci, *Osmanlı Toplumunda Ramazan Kültürü* (Dumlupınar University, MA Thesis, 2018); Mutlu Toparslan, *XIX. Yüzyıl İstanbul Kültüründe Ramazan Eğlenceleri* (İstanbul University, MA Thesis, 2018); Fadime Aşık, *Osmanlı İstanbulunda Ramazan Kültürü ve Ramazan Sofraları* (Sakarya University, MA Thesis, 2019).

<sup>42</sup> Jakob Skovgaard-Petersen, *Defining Islam for the Egyptian State: Muftis and Fatwas of the Dar al-Ifta* (Leiden: Brill, 1997), 80–99; Barbara Freyer Stowasser, *The Day Begins at Sunset: Perceptions of Time in the Islamic World* (New York: I.B. Tauris, 2014), 20–25; Vanessa Ogle, *The Global Transformation of Time, 1870-1950* (Massachusetts: Harvard University, 2015), 149–176. On Barak, *On Time: Technology and Temporality in Modern Egypt* (Los Angeles: University of California, 2013), 115–126. Daniel A. Stolz, *The Lighthouse and the Observatory: Islam, Science, and Empire in Late Ottoman Egypt* (Cambridge: Cambridge University, 2018), 243–270.

<sup>43</sup> Baltacı, “Rüyet-i Hilal Münakaşaları”; Ekrem Keleş, “Rüyet-i Hilal Meselesi,” *Marife*, no. 2 (2002): 35–52; İsmail Köksal, “Rüyet-i Hilal Meselesi,” *Fırat Üniversitesi İlahiyat Fakültesi Dergisi* 13, no. 1 (2008): 1–11; Ahmet Özdemir, “Kameri Ayların Tespitindeki İhtilafın Sebepleri ve Çözüm Önerileri,” *Çukurova Üniversitesi İlahiyat Fakültesi Dergisi* 10, no. 1 (2010): 195–206; Mustafa Karataş, “Rereading the Hadith From the Perspective of Observing the Crescent,” *Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi* 16, no. 3 (2012): 85–93; Mehmet Bulut, “Türkiye Büyük Millet Meclisi’nde Takvimler ve ‘Rüyet-i Hilal’ Üzerine Bir Müzakere,” *Diyanet İlmî Dergi* 49, no. 3 (2013): 95–112; Hafız Salihuddin, “Modern Teknolojilerle Hilalin Gözetlenmesi Problemine Eleştirel Bir Bakış,” trans. Abdullah Acar, *Eskişehir Osmangazi Üniversitesi İlahiyat Fakültesi Dergisi* 2, no. 2 (2015): 259–68; Abdullah Acar, “Kameri Ayların Tespitinde Hesap Metodunun Meşruiyeti ve Uluğbey Takvimi,” *İslam Hukuku Araştırmaları Dergisi*, no. 31 (2018): 443–67; Nihat Tosun, “Dini Gün ve Geceleri Tespitte Yöntem Problemi,” *Uşak Üniversitesi İslami İlimler Fakültesi Dergisi* 1, no. 2 (2021): 224–41; Fatih Mehmet Yılmaz, “Hadislerde Yevm-i Şek (Şek Günü) Orucu,” *Tasavvur - Tekirdağ İlahiyat Dergisi* 8, no. 1 (2022): 107–32.

This focus, however nuanced, has had unintended consequences. By concentrating so heavily on certain times of the lunar calendar, the current scholarship has inadvertently sidelined equally important temporal variations occurring in non-ritual months and non-religious contexts. The assumption that calendrical irregularities were confined to religious months does not hold up. Lunar discrepancies almost certainly influenced a wide spectrum of activities central to imperial administration and public life, including tax collection, judicial procedures, salary disbursements, debt deadlines, and the recordkeeping practices of state officials and literate individuals, all depended on the demarcation of Hegira months.

The neglect of cases beyond Ramadan reflects a broader tendency in the literature to prioritize theological or scientific interpretations over social and administrative realities. For example, Necati Akgür's often-cited entry in the *Diyanet İslam Ansiklopedisi* asserts that, "...except for Ramadan and the month of Zilhicce, which is also the time of Eid al-Adha, no adjustments were usually made in other months."<sup>44</sup> While this claim captures the conventional wisdom, it is contradicted by a growing body of empirical evidence from Ottoman archival sources. Numerous documents, ranging from court registers and financial ledgers to imperial correspondence, include corrections, annotations, and retrospective changes in dates that span the entire lunar year.

Together, these two limitations reinforce a portrayal of Ottoman timekeeping as a theoretically nuanced but practically static field that governed by scholarly experts and religious authorities whose prescriptions were uniformly accepted and applied. In reality, however, timekeeping in the Ottoman Empire was a negotiated practice, subject to regional variation, conflicting testimony, and the uneven exercise of authority. A more accurate conceptual framework would treat flexibility not as an anomaly but as an embedded feature of the system, one shaped by layered practices, overlapping jurisdictions, and continual recalibration.

Even specialized studies of institutional actors have not sufficiently addressed this complexity. David King's extensive research on Islamic astronomical instruments and

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<sup>44</sup> "Hicri takvimde gün sayısının belirlenmesi, özellikle rü'yet farklılıkları olması ve otuza tamamlama değişiklikleri yapılması sebebiyle karışık bir durum gösterir. Eskiden ramazan ile kurban bayramı ayı olan zilhiccenin dışındaki diğer aylarda pek düzeltme yapılmadığından..."A. Necati Akgür, "Takvim," *Türkiye Diyanet Vakfı İslam Ansiklopedisi* (İstanbul: Türkiye Diyanet Vakfı, 2010), 39/489.

prayer-time computation has illuminated the intellectual sophistication of Muslim timekeeping traditions. Yet, in this study, the lunar calendar and its observation-based nature receive only cursory treatment, and the lived tensions between theoretical models and sighting practices remain largely unexplored.<sup>45</sup> Likewise, Salim Aydüz's research on Ottoman *muvaqqits* outline their official duties, such as preparing annual calendars and announcing Ramadan,<sup>46</sup> but rarely probe the constraints they faced when recordkeepers made decisions independently of their recommendations.

Fortunately, recent historical research has begun to challenge this overly coherent portrayal by foregrounding the empirical diversity of Ottoman timekeeping. Colin Heywood's 2006 study of the 1678 Chyhyryn campaign offers a compelling demonstration of the kinds of inconsistencies that proliferated in contemporary sources.<sup>47</sup> His work compares multiple narratives of the same event and reveals significant variation in the recorded lunar dates. This evidence strongly suggests that such discrepancies were not isolated errors, but systemic features of Ottoman temporal life. Similarly, Ali Akyıldız's 2021 investigation into nineteenth-century Ottoman administrative documents highlights widespread calendrical inconsistencies, even within a period of increasing bureaucratic centralization.<sup>48</sup> These findings underscore the need to treat temporal inconsistency as a historical phenomenon worthy of serious investigation.

What is required, then, is a fundamental shift in focus, from a top-down, prescriptive view of timekeeping to a bottom-up, descriptive approach that emphasizes temporal negotiation. Such reorientation would allow historians to better understand how time was experienced, not just how it was intended to be measured. It reframes discrepancies not

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<sup>45</sup> King, *In Synchrony with the Heavens: Studies in Astronomical Timekeeping and Instrumentation in Medieval Islamic Civilization*, 1/465–468.

<sup>46</sup> "The precise calculation of the prayer times, as well as of the beginning and the end of the daily fast in the month of Ramadan, also fell naturally within the province of the astronomer... The main occupation of the *muvaqqits* was to provide precise information not only about the astronomically determined times of prayer, but also about the regulation of the lunar calendar and the determination of the direction of qiblah when this was needed... Some timekeepers would prepare annual calendars and determine the precise day to begin the Ramadan fasting." Salim Aydüz, "Office of The *Muwaqqit* and the *Munajjim* bashi," *The Oxford Encyclopaedia of Philosophy, Science and Technology in Islam*, ed. İbrahim Kalın et al. (New York: Oxford University, 2014), 2/66–67. Also see, Salim Aydüz, "Ottoman Time Keeping Houses: *Muwaqqit* khānas," *Etudes Balkaniques* 8/2 (2017), 214–229.

<sup>47</sup> Colin Heywood, "The Shifting Chronology of the Chyhyryn (Çehrin) Campaign (1089/1678) According to the Ottoman Literary Sources, and the Problem of the Ottoman Calendar," *The Ottoman Empire: Myths, Realities and 'Black Holes' (Contributions in Honor of Colin Imber)*, ed. Eugenia Kermeli - Oktay Özel (New York: Gorgias, 2012), 283–295. Also see, Kahraman Şakul, *Çehrin Kuşatması* (İstanbul: Timaş Akademisi, 2022), 18–19.

<sup>48</sup> Ali Akyıldız, "19. Yüzyıl Belgelerinde Hicri Takvim Sorunu: Hicri Tarihler Doğru Zamanı Mı Gösterir?," *Tarihçilik ve Yöntem Üzerine* (İstanbul: Timaş Akademisi, 2021), 91–110.

as anomalies or editorial problems to be corrected, but as core features of the Ottoman temporal infrastructure. Temporal discrepancies are not signs of failure, but rather windows into the adaptive and negotiated character of Ottoman temporal infrastructure, where theory and practice met, clashed, and recalibrated in response to institutional priorities, regional variations, and individual choices.

The current historiography often fails to treat these discrepancies as meaningful historical evidence. Instead, when inconsistencies between dates are mentioned at all, they tend to be relegated to footnotes, briefly noted, rarely analyzed, and almost always interpreted as simple mistakes. This editorial instinct to “correct” dates, often guided by modern assumptions of standardization and accuracy, obscures the tensions between theoretical models of timekeeping and their practical enactment.

Examples abound of scholars encountering such discrepancies in their source material yet failing to analyze them as meaningful data points. Orhan F. Köprülü, for instance, compares the Hegira dates of high-ranking bureaucratic appointments provided by a treatise of the imperial chief astronomer during Sultan Ahmed III’s reign with those found in the chronicle of Raşid Efendi, the court historian. He notes minor discrepancies, often just a single day, but dismisses their significance, writing: “Since Mustafa Zeki Efendi’s treatise explicitly provides the day [of the week], it is possible to determine the date by prioritizing the more precise record. Therefore, we will not dwell on such dates.”<sup>49</sup> Rather than probing why two authoritative sources might differ, even by a day, Köprülü bypasses the issue.

In another case, Mehmet Ali Beyhan, while editing sultanic diaries, *sultan ruznameleri*, from the early nineteenth century (1802–1809), notes a recalibration of dates during Ramadan 1220 (December 1805) in Istanbul. Initially, fasting began on a Saturday, but news arrived from Bursa that the crescent moon had been seen a day earlier, prompting a retrospective adjustment. The scribe recorded this correction mid-Ramadan, but the

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<sup>49</sup> “Bazı tarihlerde her iki eser tam bir mutabakat halindedir. Bir kısım tarihler, bizdeki Risale’de Raşid’e nazaran yalnız bir gün farketmektedir. Fakat Mustafa Zeki Efendi’nin risale’sinde gün de tasrih olduğundan yalnız bir gün farkı olduğu zaman günü esas tutarak tarihi bulmak kabildir. Bundan dolayı burada bu gibi tarihler üzerinde durmayacağız.” Orhan F. Köprülü, “İlm-i Nücuma Aid Bir Risalenin Tarihi Kaynak Olarak Ehemmiyeti,” *İstanbul Üniversitesi Edebiyat Fakültesi Tarih Dergisi* 1/2 (1950), 321.

editor's discussion is again relegated to a footnote, cautioning readers only to be attentive when converting Hegira to Gregorian dates.<sup>50</sup> Here, the editor recognizes the recalibration but treats it as a technical matter rather than an entry point for analysis into the workings of Ottoman time consciousness or calendar negotiation.

Similarly, Selman Soydemir, in his extensive dissertation on sultanic diaries from 1730-1754, identifies inconsistencies between days of month and days of the week in Şevval 1148 (March 1736). He explains that the scribe skipped or repeated dates and then corrected the pattern later in the month.<sup>51</sup> However, Soydemir "fixes" these inconsistencies in his edition, erasing the traces of misalignment and thereby the opportunity to engage with how such mistakes, and their later corrections, reflect internalized understandings of calendar structure, error tolerance, and corrective authority. This editorial intervention prioritizes chronological clarity over historical authenticity, similar to the editing practices applied to the 1596 Eger campaign diary, discussed above.

Yunus Irmak, in his master's thesis on sultanic diaries from 1757–1763, takes a similar approach. He highlights a date discrepancy in Cemaziyelevvel 1172 (January 1759), where the dates recorded in the text does not align with parallel accounts in chronicles such as those of Şemdanizade Süleyman Efendi and Vasıf Ahmed Efendi. Irmak notes that the number of days in the month was likely miscounted, assuming a 30-day month instead of 29, which led to a misalignment by one day.<sup>52</sup> Yet again, this observation remains buried in a footnote, unexamined as a symptom of broader issues of calendar regulation and synchrony between different chroniclers.

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<sup>50</sup> "Ramazan orucuna İstanbul'da Cumartesi günü başlanmış, fakat ramazanın ondukuzuncu Çarşamba günü, Ramazan hilalinin Cuma günü Bursa'da görüldüğü, dolayısıyla Ramazan ayının Cuma gününden başladığı haberi gelmiştir. Bu haberi de kaydeden sır katibi, Perşembe gününü, ramazanın yirmi birinci günü olduğunu yazmaktadır. Dolayısıyla, hicri tarihler miladi tarihe çevrilirken gün adı için bu ayrıntıya dikkat edilmelidir." Beyhan, *Saray Günlüğü*, 185.

<sup>51</sup> "Metinde bir gün atlayarak "yirmi ikinci" yazılmış. Sır katibi yirmi altıncı güne kadar bu yanlışlığı devam ettirip sonra fark ederek düzeltmiştir. Yirmi altıncı güne kadarki günleri dipnotta belirterek düzelttik." Selman Soydemir, *Sultan I. Mahmud Ruznameleri (1730-1754) (İnceleme ve Çeviriyazı Metin)* (İstanbul University, 2022), 152.

<sup>52</sup> "Burada tarihlemeye bir hata vardır. Şemdanizade C. II.A, s. 25'de belirtilen "Receb'in on beşinde, hamis gecesi" Hibetullah Sultan'ın doğumuna göre hatanın Cemaziyelevvel'in 30 gün yerine 29 gün olduğu, 25 yerine 26 yazıldığı görülür. Daha öncesi için bk. Vasıf, C.I- II, s. 147." Yunus Irmak, *III. Mustafa Ruznamesi (H. 1171-177/ M. 1757-1763)* (Marmara University, MA Thesis, 1991), 38.

This interpretive tendency is not confined to sultanic diaries or chronicles; it extends into other contexts such as diplomacy. A study on Seyfullah Ağa's ambassadorial mission to Vienna in 1711, identifies a discrepancy in the reported date of Emperor Joseph I's death. While the emperor died on Friday, 17 April, the Ottoman account records the date as Friday, 29 Safer 1123. According to theoretical lunar models, however, the 29th of Safer should have fallen on a Saturday, making 28th Safer the accurate lunar equivalent. Rather than considering the possibility that the ambassador may have been following a localized or personalized counting style, one that diverged from the idealized calendar structure, the authors simply label the mismatch as a calendrical error.<sup>53</sup> This assumption of uniformity in timekeeping overlooks the very flexibility that characterizes Ottoman temporal practices.

A similar interpretive pattern appears in Hüseyin Onur Ercan's study of the 1718 Treaty of Passarowitz. Ercan notes that Raşid Efendi, the court chronicler, dates the beginning of the negotiations as 5 Receb 1130 (4 June 1718), while, according to calculated projections, the correct date should have been 6 Receb. He describes this one-day difference in Raşid's text as "incomprehensible," implying that it must result from a mistake.<sup>54</sup> Yet, as with the example of Seyfullah Ağa, the possibility that this discrepancy reflects differing temporal regimes is never seriously considered. Once more, the variation is noted but not explored, reinforcing the broader scholarly tendency to treat such mismatches as editorial problems rather than as entry points into the lived, negotiated nature of timekeeping in the Ottoman world.

All these examples reflect a persistent trend: discrepancies in timekeeping are noticed, sometimes acknowledged, but rarely explored for what they reveal about the mechanics of Ottoman chronology. A reframed historiographical approach would elevate these moments from marginalia to central evidence. Rather than privileging coherence and consistency, it would embrace irregularity as a sign of active negotiation between celestial observation, human perception, bureaucratic mediation, and political authority. This shift

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<sup>53</sup> "18 Nisan 1711. Ancak 29 Safer belirtildiği gibi Cuma değil Cumartesi günüdür. Kaiser I. Joseph 17 Nisan Cuma günü vefat etmiştir. Dolayısıyla Safer'in 28'i olmalıdır." Kemal Beydilli - İsmail E. Erünsal, "Prut Savaşı Öncesi Diplomatik Bir Teşebbüs Seyfullah Ağa'nın Viyana Elçiliği (1711)," *Belgeler* 22/26 (2001), 26.

<sup>54</sup> "Vakanüvis Raşid bu mühim tarihi anlaşılabilir bir şekilde 5 Receb (4 Haziran) olarak vermektedir." Hüseyin Onur Ercan, *Passarofça Antlaşması, 1718: Diplomasi ve Barış* (Ankara: Türk Tarih Kurumu, 2022), 149.

would entail not just recognizing discrepancies but also cataloguing them systematically, tracing their patterns, and analyzing their meanings. It would encourage scholars to treat the scribe's corrections, the *kadi*'s rulings, and the ambassador's records not as problems to be smoothed out, but as voices in a polyphonic conversation about time. It would mean seeing Ottoman temporality as a lived, evolving system, regulated not only by theoretical models, but also by communal experience, interpretive flexibility, and adaptive recalibration.

## 1.4 Methodology

During the fast month of Ramazan it occurred to Nasreddin Hoca to put a pebble in a jar for each day that passed. This way he would avoid prolonging his suffering and having to rely on the inaccurate and conflicting accounts of his neighbors. After he had done this for a few days his little daughter, who loved to imitate her father, gathered a handful of pebbles and deposited them in the Hoca's jar as he was performing his prayers. That evening the Hoca invited a number of friends to break the fast, and conversation turned to the number of days left in the month. Proud of the scientific method he had invented, the Hoca announced that he could supply the correct answer, and he absented himself to the garden to count his stones. They came to one hundred and twenty, which seemed a large number. "If I tell them the true count," thought Nasreddin, "they will never believe me. I'd better cut it in half." When he announced that the sixtieth day of the month had arrived, his visitors howled with laughter: "Since when does a month have more than thirty days?" they cried.

Nasreddin drew himself up with dignity and said, "You have no right to mock me. For your sakes I cut the number in half; in actual fact it is the one hundred-twentieth day of the sacred month. You had best be satisfied with the answer I gave you."<sup>55</sup>

In undertaking this study, the central objective is to investigate the complexities of Ottoman timekeeping practices by meticulously examining all textual references to the passage of time. Adopting a method reminiscent of the folkloric Nasreddin Hoca, who famously counted items one by one to avoid confusion, the research focuses on four specific units of time measurement: year, month, day of the month (according to the Hegira calendar), and day of the week. By systematically "counting them one by one," it offers a window into the practical realities and cultural attitudes surrounding time measurement, bridging the gap between official guidelines and the day-to-day practices

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<sup>55</sup> Cornell H. Fleischer, *Bureaucrat and Intellectual in the Ottoman Empire, The Historian Mustafa Ali (1541-1600)* (New York: Princeton University, 1986), 3.

that left their mark on the historical record. Any document missing one or more of these components is largely excluded from the primary corpus. While this strict criterion significantly limits the number of usable samples, it also guarantees that each selected entry offers the clearest possible window into the chronometric habits of its compiler. In turn, inconsistencies among these four units, whether within a single source (internal analysis) or across multiple records (external analysis), can be identified with greater confidence.

The first step in this inquiry is to assemble a broad array of materials that include all four units of time. This approach bypasses typical genre boundaries, permitting the inclusion of diverse texts such as private diaries, court registers, and military narratives. The decision to focus on any text, regardless of genre or authorship, reflects the overarching goal: to capture timekeeping practices that span different social strata, geographical locations, and administrative contexts. The identity of the recordkeeper, whether a high-ranking bureaucrat, a court official, a storyteller, or an anonymous scribe, thus becomes secondary to the information they provide. By casting a wide net, the investigation can assemble a diverse picture of Ottoman timekeeping, illuminating differences and similarities among a range of voices and circumstances. In other words, a personal diary by a barber in Damascus may be as significant as an imperial decree when both record the day of the month and the weekday in a manner that illuminates dating practices.

Through the analysis of daily entries, this study establishes two overarching classifications that yield four distinct analytical groups. The first classification assesses whether a given text can be corroborated externally or only examined internally:

1. **External Examination:** Some documents contain only a single daily entry for a given month, such as a note about a significant event on “Monday, 8 Safer.” Because these isolated entries provide only one reference point, they cannot be cross-checked for internal consistency. Verification, therefore, becomes entirely dependent on external sources. To analyze these entries, researchers must find other contemporary documents that reference the same month and year. By comparing the single entry against corresponding dates in other sources, it’s possible to uncover valuable clues about different dating practices used during the period.

2. Internal Examination: Texts featuring multiple entries for a single month (e.g., “Tuesday, 2 Safer; Wednesday, 3 Safer”) allow for an internal examination of their consistency. A source is considered coherent if the weekdays align logically with the advancing days of the month. Inconsistencies arise from issues like chronological gaps (e.g., jumping from “Thursday, 4 Safer” to “Saturday, 5 Safer”) or date repetitions (e.g., “Thursday, 4 Safer” and “Friday, 4 Safer”).<sup>56</sup> These discrepancies suggest that the record-keeper may have changed their counting method or that multiple authors were involved. When these patterns are analyzed across extended timelines (months, years, or even decades), this method reveals the long-term reliability of a single source. An internally consistent record thus becomes a benchmark, providing a framework for evaluating and contextualizing isolated entries from other documents of the same period.

The second classification, which is a sub-category of internal examination, addresses whether a document’s author openly acknowledges alterations in timekeeping. This reveals the recordkeeper’s awareness of chronological issues and their approach to resolving them. Preliminary observations reveal two categories:

1. Noted Alterations: A minority of sources feature noted alterations, where the author explicitly comments on corrections or revisions. The authors might comment on why a date was changed or how the lunar-month calculation was adjusted. These annotations are invaluable, as they shed light on the decision-making process behind the chronology and show how scribes actively navigated the complexities of a lunar calendar.
2. Silent Alterations: Far more common are silent alterations. These are unremarked-upon discrepancies, such as a mismatch between the day of the week and the numbered date, for which the record-keeper offers no explanation. This silence suggests either a lack of concern for strict accuracy or a tacit acceptance of flexible dating conventions. Preliminary findings indicate that silent alterations greatly outnumber noted ones, illuminating the degree to which unchallenged irregularities permeated the Ottoman recordkeeping landscape.

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<sup>56</sup> For such cases, see Section 2.1.3, “Four Sources from the 1740s.”

By employing this two-tiered classification, the study clarifies how inconsistencies can be located and the extent to which recordkeepers themselves acknowledged, corrected, or ignored them.

To sum up, the methodology addresses two pivotal questions. First, do the sources specify the day of the week alongside the Hegira date? The presence of a weekday is critical because it allows for cross-verification. Comparing the weekday against the numbered days of the month provides a valuable clue about how strictly (or loosely) the author adhered to a particular method of lunar observation. An alignment suggests consistency, while a mismatch signals a deviation that requires further investigation. Second, when discrepancies appear, such as two entries identifying different start dates for the same month, do the recordkeepers clarify or rectify them, or do they leave such contradictions unresolved? This distinction reveals much about the recordkeepers' priorities and awareness. Some authors actively justify adjustments. This indicates a conscious effort to maintain an accurate and coherent timeline. More commonly, authors present a series of discordant records without any explanation. This silence suggests that such inconsistencies were either unremarkable or so commonplace that they were considered normal.

While this study focuses primarily on the documentation of month-days and weekdays, it also examines other units of time to provide a more comprehensive picture of Ottoman practices. These supplementary measurements, such as hours and years, each carried their own unique conventions and challenges, which will be explored in the fourth chapter. Including these elements, while not the central focus, is crucial for two reasons. First, it offers a more holistic view of Ottoman timekeeping culture. Second, it highlights the evolution of chronometric precision and the changing attitudes of recordkeepers during the eighteenth century.

## 1.5 Central Argument

Instead of viewing the eighteenth century primarily as a transitional precursor to the modern age, this study posits that the period stands on its own as a time of remarkable change in Ottoman time consciousness. Examining temporal measurements from year to

hour reveals a complex interplay between tradition and reform, as society increasingly sought a more standardized and shared framework for time. This drive for synchronization is reflected in historical records, which began integrating more precise markers like solar dates alongside lunar ones, weekdays with days of the month, and specific hours and minutes in addition to traditional prayer times.

This proliferation of dual dating systems signaled a deeper cultural shift toward viewing time as something that could (and should) be measured and recorded with greater uniformity. What had once been sporadic or rare, the practice of noting time with such precision, became regular and systematic, slowly displacing older, more variable modes of dating events. Subtle changes in how individuals recorded events foreshadowed an emerging culture of precision, standardized systems, and punctuality, developments that would continue into the nineteenth century and beyond.

The enduring use of traditional calendars and conventions, however, did not disappear overnight. For instance, the Ottoman bureaucracy continued to anchor its chronology in the Hegira dating system, a centuries-old practice that served as a core reference point for legal, religious, and administrative records. When one surveys eighteenth-century Ottoman records, it is impossible to overlook the near-ubiquity of Hegira dating references. Legal codes, fatwas, ceremonial accounts, diaries, travelogues and chronicles consistently used the lunar-based Hegira calendar in much the same way they had for centuries. At first look, this lends the impression that Ottomans were largely uninterested in adopting any sort of solar-based system, or that if such ideas existed, they gained little traction. This view, however, underestimates the complexity of the administrative challenges the empire faced and the bureaucratic ingenuity that arose to meet them.

A core motivation for change originated in the financial arena, where taxation and treasury management increasingly exposed the problems of relying exclusively on a purely lunar calendar. The fundamental issue was a mathematical mismatch: the lunar year is approximately eleven days shorter than the solar year.<sup>57</sup> This meant that tax collection, tied to the lunar calendar, was chronically desynchronized from the agricultural economy, which is governed by the solar seasons. Key economic activities

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<sup>57</sup> Halil Sahillioğlu, “Sıvış Yılı Buhranları,” *İstanbul Üniversitesi İktisat Fakültesi Mecmuası* 27/1 (1967), 75–111.

like harvests, grazing schedules, and especially the leasing periods that formed a primary source of treasury income, could not be reliably pegged to a calendar that drifted backward through the seasons each year. This misalignment created persistent inconsistencies in revenue collection and made long-term financial planning exceedingly difficult.<sup>58</sup> The fluidity of time references in financial recordkeeping led to a lack of accountability, frustrating higher bureaucrats in the capital, who found provincial administrators unable to meet their expectations.

To address the growing challenges of taxation and fiscal management, some Ottoman officials began advocating for the systematic adoption of a solar-based calendar, which would provide greater predictability in tax collection. Long before the central government formally endorsed solar reckoning in 1794 with Moralı Osman Efendi's reform proposal,<sup>59</sup> bureaucrats had already recognized the need for change. Their treatises, *risale*, written across different periods, subtly or explicitly proposed reforms aimed at synchronizing taxation with the more stable rhythms of the solar year. One early example is Seyfi Efendi, a financial officer in 1572 who later became treasurer of the Anatolian province and served as a financial inspector for other regions in the 1580s.<sup>60</sup> In his writing, he proposed revisions to fiscal records calculated under the lunar system. His text was copied in 1623 and later reworked and presented anew by Fındıklılı İsmet Efendi in 1726, reflecting a long-standing bureaucratic awareness of the issue.<sup>61</sup>

A more explicit call for reform came in 1739 from Mustafa Atıf Efendi, head of the financial office, who wrote a treatise outlining the negative consequences of using a strictly lunar calendar for budgeting and taxation.<sup>62</sup> His work is particularly significant for two reasons. First, it came directly from the highest financial authority of the time, giving it substantial weight. Second, unlike earlier writings that only implied the need for reform, Atıf explicitly advocated for integrating solar reckoning into financial

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<sup>58</sup> Azize Çakır, "Defterdar Seyfullah Efendi'nin Takvimler Hakkındaki Risalesi: Osmanlı Maliyesinde Tefâvüt-i Sene ve Tedâhül Sorunu" (publishing in progress).

<sup>59</sup> Mehmet Zeki Pakalın, *Maliye Teşkilatı Tarihi (1442-1930)* (Ankara: Maliye Bakanlığı Tetkik Kurulu, 1978), 2/374–386.

<sup>60</sup> Azize Çakır, "Defterdar Seyfullah Efendi'nin Takvimler Hakkındaki Risalesi: Osmanlı Maliyesinde Tefâvüt-i Sene ve Tedâhül Sorunu."

<sup>61</sup> Salim Aydın, "İsmet Mehmed Efendi (ö. 1747) ve Tedâhül-i Seneye Dair Risalesi," *Kutadgubilig* 15 (2009), 223–264.

<sup>62</sup> Nurettin Gemici, "Atıf Mustafa Efendi ve Sıvış Yılları Sorununun Halline Dair Telhisi," *İslam Araştırmaları Dergisi* 21 (2009), 51–74.

calculations. Though his proposals whether immediately implemented or not, as there is short of research on the subject, and he was removed from office after a short tenure, his treatise, along with those before him, signaled a growing administrative shift toward greater precision in recordkeeping. These cumulative efforts laid the intellectual groundwork for later reforms, ultimately shaping the fiscal policies of the late Ottoman period.

The gradual shift toward integrating solar reckoning was not confined to fiscal matters. In 1752, a significant development occurred in the sultanic diaries, which had been maintained from 1730 to 1809. Whereas earlier entries had relied exclusively on lunar dates, these records began incorporating both lunar and solar references, signaling an important step toward standardizing temporal notation. Over time, dual calendrical notation spread beyond financial records to a broader range of state documents and even personal writings, reflecting a deeper change in temporal consciousness, ultimately dominated the recordkeeping style in the second half of the nineteenth century and early twentieth century. Thus, what initially arose out of practical, administrative needs slowly garnered a cultural legitimacy. The mere act of referring to years in both systems or specifying that a certain event took place in a solar month, signaled to literate Ottoman society that time could be measured more precisely and in multiple ways.

While the annual scale thus reveals an ongoing tension between devotion to religious tradition and the practical demands of administrative reform, the hourly scale exemplifies a more decisive break with older conventions. In the sixteenth and seventeenth centuries, Ottoman society typically referred to daily time by phrases such as “the fifth hour of the day (*günün beşinci saati*).” The dawn of eighteenth century saw this language evolve into the phrase of “at five o’clock. (*saat beşte*)” By the mid-century, references to half hours began to appear more frequently, further refining the way time was communicated. This trend continued with the appearance of quarter-hour intervals in records, and by the final decades of the century, the use of minutes became increasingly common in daily discourse. This change reveals more than a mere cosmetic adjustment in phrasing; it indicates a new conceptual framework emphasizing standardized, mechanical points of reference.

The availability and popularity of mechanical clocks and watches imported from European countries in major Ottoman urban centers played a role, but it would be overly simplistic to attribute the change solely to technology. Rather, the new modes of expression point to an evolving social appreciation for exact timing and synchronization. Half-hour intervals (*beş buçukta / saat beş buçukta*), quarter-hour notations (*saat beşi çeyrek geçe*), and even precise minutes (*saat beşi on bir dakika geçe*) gradually crept into both administrative and everyday discourse. These references signaled not only an ability but also a desire to segment time with finer granularity, reflecting a society increasingly concerned with punctuality, scheduling, and the mutual coordination of daily activities. Artisans, merchants, and provincial officials alike began using phrases indicating smaller temporal increments, suggesting that the changing linguistic habits took hold at multiple levels of Ottoman society. Such concepts, once confined to small urban elites or palace circles, began to spread through broader Ottoman society, leaving linguistic and social legacies that still echo in modern Turkish.

Third, and focal point of this study, the duration of months, offers another lens through which we can observe both continuity and the seeds of innovation. Reliance on the naked-eye sighting of the New Moon to mark the start of each month remained a traditional Ottoman practice, leading to familiar synchronization issues when weather or human error caused discrepancies among different regions. Yet in the eighteenth century, efforts to mitigate these problems intensified. Couriers were dispatched to carry moon-sighting reports between the capital and the provinces with greater frequency, as the central government demanded reports even in the lack of sighting, ensuring that localized observations could be reconciled more efficiently.

Equally significant was the growing inclusion of weekly references. A comparative analysis of registers from the seventeenth and eighteenth centuries reveals that the earlier records may include mentioned only a handful of weekday references scattered among hundreds of lunar dates.<sup>63</sup> By contrast, eighteenth-century sources increasingly

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<sup>63</sup> A late-seventeenth-century register clearly illustrates this argument by providing a baseline for earlier scribal practice. This register, spanning over three hundred pages, meticulously lists hundreds of Hegira dates by their month-day, yet includes a corresponding weekday in only a handful of entries. This specific recordkeeping style, daily logs spanning hundreds of pages that almost entirely omit the day of the week, is precisely what appears to change in the subsequent period. While similar examples can still be found in the eighteenth century, preliminary findings suggest this practice drastically decreased. See, Berna

documented weekdays alongside lunar days, reflecting a broader inclination to harmonize the traditional Islamic lunar calendar with a more regular, weekly rhythm familiar to other calendrical systems.

Taken together, these shifts at the yearly, daily, and hourly scales reveal a broader change in Ottoman temporal consciousness during the eighteenth century. The empire's continued commitment to Hegira dating did not vanish; it remained a crucial economic, religious and cultural pillar, vital for payment of salaries, ceremonies, legal enactments, and spiritual life. Nonetheless, increased dissatisfaction with the misalignment caused by strictly lunar reckoning propelled bureaucrats to incorporate solar references, striving for greater consistency and efficiency in taxation and administrative planning. This trend found parallel expressions in the daily realm (more centralized moon-sighting procedures, frequent weekday references) and at the hourly level (the transition from “the fifth hour of the day” to “at five o'clock” and beyond).

Viewed in this light, it becomes clear that what might appear to be a minor linguistic or procedural change was, in fact, part of a more profound cultural pivot. Society was beginning to see time less as a fluid entity dictated entirely by religious calendars and local custom and more as a measurable resource that required uniform markers and language. Such changes did not eliminate older practices. Indeed, the eighteenth-century Ottoman Empire was a tapestry of overlapping traditions and innovations, but they laid the groundwork for the more sweeping synchronization reforms of the nineteenth century. By then, telegraphs and steamships would amplify the need for standardized time, but the conceptual foundations had already been laid much earlier.

In recognition of these developments, it is helpful to characterize Ottoman timekeeping history as unfolding in two general phases: a “mono-style” period preceding the eighteenth century, during which Hegira-based reckoning dominated with few sustained challenges, and a “dual-style” period emerging from the eighteenth century onward, defined by the increasing coexistence of lunar and solar calendars, a rise in weekly references, and the proliferation of precise hourly and even minute-based notations. While there are always exceptions and overlaps between any such periodizations, this

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Mert, *17. Yüzyıl Sonunda Bir Kaftan Defteri, IV: Mehmed Devri Bir Kaftan Defteri (H.19 B.1058-24 N. 1086/9 Ağustos 1648-12 Aralık 1675)* (Marmara University, MA Thesis, 2022).

conceptual division underscores the eighteenth century as a turning point. It points to a moment when Ottoman society, pressured by administrative demands and facilitated by evolving social norms, began to incorporate new timekeeping methods in tandem with the old.

Ultimately, these evolving practices of measuring and labeling time reflect deeper changes in the empire's administrative structures, economic imperatives, and cultural sensibilities. Far from being a passive recipient of modern technologies, the Ottoman Empire of the eighteenth century was actively rethinking how time should be managed and conceptualized, seeking a balance between religious tradition and practical innovation. The story of Ottoman timekeeping was neither abrupt nor a mere byproduct of European influence; instead, it emerged from a complex interplay of internal and external forces, cultural, bureaucratic, religious, and technological, that collectively steered the empire toward what later became its "dual-style" period of timekeeping. By situating the shift toward precision in this broader eighteenth-century context, we can better appreciate the nuanced and gradual processes that prepared the empire (and later, the Turkish Republic) to embrace the even more stringent temporal standardizations that would characterize the modern era.

A notable outcome about this shift is that, in most cases, it did not occur through top-down directives from the central government but rather through organic adaptation by calendar users, particularly the recordkeepers. These individuals navigated the inconsistencies inherent in the lunar calendar by employing dual reference systems, enabling the coexistence of both lunar and solar units. While the royal chief astronomer annually prepared an official lunar calendar, the central government typically did not enforce its exclusive use, thus allowing local customs, shaped by naked-eye sightings of the crescent moon, to remain valid. This tolerance stemmed partly from the authorities' desire to avoid antagonizing communities for whom the lunar calendar was religiously and culturally integral. The result was a live-and-let-live approach in which local observation and centrally calculated calendars coexisted.

The rise of a shared temporal framework during the eighteenth century marks a significant shift in time consciousness, a phenomenon this research seeks to both demonstrate and explain. The study's primary objective is to document this phenomenon by mapping the

contours of the transformation. It focuses on the crucial questions of what changed in the perception and recording of time, as well as how and when this new consciousness evolved. In pursuing this, the research aims to achieve two overarching goals: first, to establish a preliminary trajectory of this eighteenth-century temporal shift, and second, to highlight the vastly underexplored richness of Ottoman timekeeping practices as a field for historical inquiry.

While mapping the specifics of the eighteenth-century shift from flexible to standardized timekeeping is central to this study, a comprehensive answer to the question of why it occurred is a vast undertaking. The causality behind such a society-wide change is inherently multifaceted, rooted in a complex ecology of practices that defy any single explanation. A complete account would require a deep, micro-historical analysis of sources ranging from the incidental timekeeping habits of an anonymous scribe to an imperial edict reforming an entire bureaucratic class.

This investigation, however, does not defer the question of why. Instead, it puts forward a complex, multi-causal framework for understanding the catalysts of this transformation. Drawing upon and synthesizing existing scholarship, this study argues that a common, synchronized, and precise temporal framework became increasingly essential to the Ottoman state and society. This growing need was not driven by a single factor but by a set of interlocking and mutually reinforcing pressures. These pressures may have emerged from four key domains:

- **Administrative Consolidation:** The need for a more predictable and efficient bureaucracy to manage communication, logistics, and governance over a vast territory.
- **Economic Restructuring:** The shift toward a monetized, cash-based economy built on contracts, credit, and precisely scheduled financial obligations.
- **Cultural Reorientation:** A new social and intellectual preoccupation with demarcating, standardizing, and preserving ephemeral experiences, from lived time and musical sound to accumulated knowledge.
- **Diplomatic Demarcation:** A new geopolitical imperative to define and fix imperial borders in space, which created a parallel need to define and fix events in time.

One of the clearest indicators of the drive for standardization was the changing administrative approach to communication and transport. The Ottoman Empire, like other large premodern polities, had long measured distance in units of time. However, traditional markers like *menzils* or *konak* (a day's journey or a stop at a caravanserai) were inherently flexible, local, and empirical. They were experiential units, tied to the physical landscape, the endurance of specific animals, the season, and the availability of resources. A *konak* was not a fixed, abstract measure; it was a description of a lived reality.

The eighteenth century reveals a significant shift toward a more abstract and standardized system. While the older terms remained in use, a surge in the detail and volume of Ottoman postal registers (*menzil defterleri*) around the 1690s points to a new managerial ethos. This expanded recordkeeping was not merely an act of accounting; it was a concerted effort to impose predictability on the movement of people and information, a thickening of governance.<sup>64</sup>

This shift is visible in the increasing use of the hour (*saat*) as a unit of distance a horse could travel. Unlike the *konak*, the hour was a modular, divisible, and abstract unit. It divorced the measurement of distance from the immediate, sensory experience of the traveler and placed it onto a mathematical, uniform grid. This cognitive leap allowed administrators in Istanbul to do something new: to forecast, calculate, and schedule travel times with a paper-based precision that was previously impossible. It allowed for the creation of timetables.

As the empire's bureaucracy grew more complex, this ability to manage and synchronize schedules became indispensable for effective governance. The dissemination of time-sensitive information, an imperial decree, a call for tax revenues, or, critically for this study, reports of a new moon sighting, depended on this logistical network. A state that could more accurately predict the flow of its own information was a state that could project its power more effectively, respond to crises more rapidly, and enforce a more uniform administrative will across its vast territories. The standardization of time, therefore, began as a practical tool for the standardization of governance itself.

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<sup>64</sup> Koh, *The Sublime Post: How the Ottoman Imperial Post Became a Public Service*.

A parallel development occurred in the economy, where the need for temporal precision became equally urgent. Around the same period, the imperial mint (*Darbhane-i Amire*) sought expertise to create more precise, standardized coinage and launched a new copper currency, the *kuruş*.<sup>65</sup> This initiative was a symptom of a much wider economic restructuring: the gradual but relentless shift from an economy based on in-kind taxation and barter to one increasingly dominated by cash-based transactions.

This transition fundamentally altered the role of time in economic life and imposed a new temporal discipline on the populace. A tax paid in goods (“10 percent of your wheat at harvest”) is tied to the flexible, cyclical, and natural rhythms of the agricultural season. It is a negotiation with nature. A tax paid in currency (“100 kuruş due on March 15”) is tied to an abstract, rigid, and irreversible calendar date. It is a negotiation with a ledger.

This new economic model introduced and amplified the importance of financial concepts that are entirely dependent on temporal precision: due dates, payment schedules, and interest. The concurrent rise of powerful financial brokers, known as *sarrafs*, underscores this new reality.<sup>66</sup> These *sarrafs* managed vast, complex credit networks, issued promissory notes, and financed state operations, including tax-farming (*iltizam*) and military campaigns.

Their entire business was built on the precise management of time. A loan is a contract that binds a future payment to a specific date. Interest is a calculation of value over time. The ledgers of these *sarrafs* were, in essence, powerful temporal documents that governed flows of capital. An economy built on such instruments, and a state that relied on them for its revenue, could no longer tolerate the ambiguity of a lunar calendar where the correct date might be debated for a day or two. The coordination of financial flows, the management of state debt, and the enforcement of contracts all demanded a shared, predictable, and standardized temporal framework.

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<sup>65</sup> Bölükbaşı Ömerül Faruk, *XVIII. Yüzyılın İkinci Yarısında Darbhane-i Amire* (İstanbul: İstanbul Bilgi Üniversitesi, 2013).

<sup>66</sup> Ertan Ünlü, *18. Yüzyılın İkinci Yarısında Osmanlı'da Sarraflar ve İlişki Ağları* (İstanbul: Timaş Akademi, 2024).

This new consciousness of precision and standardization was not confined to administrators and financiers; it is vividly reflected in the empire's cultural and intellectual output. This era saw a new, widespread impulse to demarcate, codify, and preserve forms of cultural knowledge that had previously been transmitted flexibly, orally, or in an embedded fashion. This impulse is visible in three key domains: the memorialization of lived time, the notation of musical sound, and the institutionalization of written knowledge.

The eighteenth century witnessed a remarkable surge in the production of chronograms (*tarih düşürme*), a genre of poetry where the numerical values of the Arabic letters in a final line add up to the year of a specific event. While a comprehensive statistical analysis comparing this genre to earlier periods has yet to be undertaken, the sheer increase in volume is notable. More significant than the quantity, however, was the qualitative expansion of the chronogram's thematic coverage.

In previous centuries, chronograms were a “monumental” genre, reserved for events of high state and historical significance: a major battlefield victory, the enthronement of a new sultan, the appointment of a grand vizier, or the construction of an imperial mosque. It was a tool for marking “dynastic time.”

In the eighteenth century, this practice fundamentally changed. While monumental chronograms continued to be written, the genre expanded dramatically to record the details of personal, everyday elite, and even non-elite life. New chronograms were composed for the birth of a scribe's child, the opening of a humble neighborhood fountain, the completion of a private home, or the death of a local scholar.

The spread of memorable time, in the form of verse, is a profound cultural shift. It suggests a new, widespread social preoccupation with locating and memorializing individual lives within a precise, recorded historical moment. Time was no longer just a backdrop for dynastic events; it was becoming a finite, measurable resource that defined the contours of a personal, biographical self. This new desire to mark and demarcate a personal lifespan on the permanent record of history created a new social value for knowing, recording, and agreeing upon the exact date.

This same impulse, to capture the ephemeral and fix it in a stable, transmissible form, is seen in the realm of Ottoman music. For centuries, Ottoman classical music was a profoundly oral/aural tradition, transmitted directly from master to apprentice through the *meşk* system of rote memorization and performance. It was a flexible art, existing in performance and memory rather than on a written page.

The eighteenth century, however, is characterized by repeated experiments to codify this sound. This effort was not without precedent. Figures such as Ali Ufki Bey (d. 1675), the Moldavian prince Dimitri Kantemir (d. 1723), and Osman Dede (d. ca. 1730) all developed transcription methods.<sup>67</sup> Yet, these early attempts were often personal, idiosyncratic, or too specialized to gain widespread adoption. They were fragmented solutions, akin to the local, un-standardized timekeeping practices of different cities.

The critical turning point came at the turn of the nineteenth century, when the Armenian composer Hamparsum Limonciyan (d. 1839), with the encouragement of the reformist Sultan Selim III, developed a notation system that finally succeeded. The “Hamparsum” notation provided a structured, comprehensive, and relatively simple way to transcribe the intricate melodies (*makam*) and rhythms (*usul*) of Ottoman music.

The success of Hamparsum’s system was not just that it worked, but that it was standardized. It crystallized an emerging tradition of codification and offered a much-needed, common system for preserving and disseminating musical works beyond a small circle. This formalization of musical notation, culminating a century of experimentation, reflects the same desire for precision, continuity, and preservation seen in timekeeping. It was part of the same movement to bring an ephemeral, flexible, and locally-negotiated practice into a structured, uniform, and permanent system.

This need for a stable cultural record is also evident in the formalization of key rhythmic hymns that defined a common Ottoman-Islamic identity. The *tekbir* (praise of God) and *salat-ı ümmiye* (praise of the Prophet) composed by Buhurizade Mustafa Itri Efendi (d. 1710s) became foundational. Itri’s melodies helped shape a distinct imperial musical identity that resonated from Anatolia to the Balkans, and their preservation as uniform

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<sup>67</sup> Ahmet Bülbül, *Tarihten Bugüne Türk Makam Müziğinde Kullanılan Nota Yazım Teknikleri ve Udi Ahmed Rifat’ın Miftah-i Nota’sı (Tahkik ve Transliterasyon)* (İstanbul University, MA Thesis, 2017), 35–85.

pieces (rather than as fragmented local variations) was a key concern for the cultural project of standardization.

A third, parallel demarcation was occurring in the management of knowledge itself. According to the research of İsmail Erünsal, the late seventeenth and eighteenth centuries witnessed a flourishing of independent libraries as standalone public institutions. Previously, most libraries were ancillary adjuncts, physically and administratively embedded within larger religious or educational complexes like mosques and medreses. Their collections were often managed part-time by an imam or a teacher.

The new institutions that emerged in this period, funded not only by sultans like the bibliophile Mahmud I but also by grand viziers, chief black eunuchs, and even provincial governors, were organizationally distinct.<sup>68</sup> As Erünsal notes, they had their own buildings and, more importantly, their own professional staff “...whose sole responsibility was dealing with books and readers... It is the status of the staff which defines the status of the independent library.”<sup>69</sup>

This shift is a profound example of the eighteenth-century standardizing impulse. It represents a spatial and professional demarcation of knowledge. By creating a dedicated, autonomous institution for dealing with books, the Ottomans were separating the management of knowledge from the performance of religious rites or the act of teaching. The new, independent library, run by a professional librarian, was a specialized technology for classifying, preserving, cataloging, and circulating manuscripts with greater efficiency and accessibility. These libraries became vital hubs of scholarly activity, reflecting the same core logic seen in timekeeping, music, and finance: a move away from embedded, multi-purpose, and flexible systems toward specialized, standardized, and precise ones.

This new impulse to record, fix, and professionalize, whether a date, a melody, or a book found its most powerful expression in the realm of statecraft and diplomacy. Here, the

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<sup>68</sup> “Of all the sultans, Mahmud I truly deserves the epithet of bibliophile.” İsmail E. Erünsal, *A History of Ottoman Libraries* (Boston: Academic Studies, 2022), 65.

<sup>69</sup> Erünsal, *A History of Ottoman Libraries*, 51.

shift is visible in the rise of the *sefaretname* (ambassadorial report) as a distinct and prolific literary genre.

Diplomacy and the exchange of ambassadors, of course, were centuries-old practices, essential for announcing new enthronements, negotiating trade treaties, or declaring war. In earlier periods, however, the process was often less textual. An ambassador's oral report upon returning to Istanbul, delivered to the sultan or grand vizier, was often deemed sufficient, with the event living on in memory and oral transmission.

The eighteenth century, by contrast, can be labeled the "Age of the Sefaretname." This period saw the production of a large, new corpus of texts in which ambassadors, and even other members of their diplomatic missions, began to meticulously record their travels, observations, and negotiations from an Ottoman perspective.

These were not mere travelogues; they were sophisticated instruments of state. Crucially, these texts reveal an intense, new preoccupation with the demarcation of borders. The Ottoman Empire was entering a new diplomatic era, one defined by prolonged, face-to-face negotiations with European powers. In this new world, the traditional, flexible frontier (*serhad*), a vague, contested, and permeable zone of influence, was being replaced by the modern concept of a border (*hudud*), a precise, surveyed, and permanent line on a map.

The *sefaretname*, along with the complementary texts like peace treaties, was the documentary technology for creating this new spatial precision. It was a tool for documenting in permanent, citable, written form the exact location of borderlines, the minute-by-minute protocols of diplomatic meetings, and the precise, mutually-agreed-upon terms of a treaty. A main argument is that the new imperative for spatial demarcation was directly mirrored by, and dialectically linked to, a new imperative for temporal demarcation.

The same administrative, economic, and diplomatic mindset that could no longer tolerate the ambiguity of a frontier could also no longer tolerate the ambiguity of a floating date. The two concepts were, in fact, inseparable. A modern treaty that establishes a fixed border also establishes a fixed duration ("This treaty shall be in effect for twenty-five

years”). An economic contract that specifies a delivery of goods to a location is meaningless without a due date. An administrative order to a provincial governor requires a time frame for compliance.

The foundational, practical questions “Where exactly does the borderline pass?” and “What exactly is the first day of the month?” emerged from the same root system. Both were symptoms of a broader societal shift away from a flexible, negotiated, and oral world toward one governed by fixed, recorded, standardized, and citable data.

This raises the question of technology. It is tempting to see the increased importation of European clocks during this period as the cause of this change. However, this study argues against such technological determinism. The relationship was almost certainly the reverse: a new social, administrative, and economic need for precision created a market for, and seized upon, the available technology of the clock. The clock was a powerful facilitator and a public symbol of this new consciousness, but it was not its primary cause.

The most compelling evidence for this argument is the emergence and endurance of the very indigenous documentary and linguistic practices this study analyzes. The creation of the Hamparsum notation, the professionalization of libraries, the new *sefaretname* genre, and the abstract *menzil* schedules were not imported technologies; they were local solutions to new, pressing local problems.

Ultimately, the proof of this cognitive shift is found in the very sources at the heart of this study: the new prevalence of hour and minute references in narrative texts, the meticulous effort to align lunar and solar calendars, and the new insistence on pairing the unstable month-day with the stable weekday. These were not fleeting scribal quirks. They were the linguistic and documentary foundations of a new temporal regime, one that endured and evolved. They show us that the eighteenth century was the pivotal moment when the very texture of time, its social meaning, its political function, and its constituent units, was irrevocably altered.

## 1.6 The Limitations

Let us return to the end of Ramadan in 1739, when celebrations in the imperial capital were unsynchronized. This disruption was not only experienced by residents but also observed by foreign representatives from France, Austria, Russia, and Iran, who were awaiting court meetings. Did they take note of this anomaly in their reports? This study primarily draws on Ottoman sources that reference the Hegira Lunar system, recognizing this both as a foundation and a limitation. To further develop the field, future research should expand its scope both externally and internally, while also extending the study's chronological focus from the late seventeenth to the early nineteenth centuries.

Externally, a comparative analysis with other Muslim societies (such as the Safavids in Iran, the Mughals in India,<sup>70</sup> and various dynasties in Central and Southeast Asia) would offer a broader perspective on how Hegira-based timekeeping was managed across different regions in the eighteenth century. Additionally, placing Ottoman practices in dialogue with other historical civilizations that relied on lunar calendars, including the Sumerians, Babylonians, Greeks, Romans, Chinese, and Japanese,<sup>71</sup> could reveal broader patterns of adaptation, synchronization, and innovation in tracking time across cultures.

Internally, the Ottoman Empire's diverse population included not only Muslims but also Christian and Jewish communities, each of whom observed religious festivals based on their own lunar calendars. Events such as Easter among Orthodox, Catholic, and Protestant Christians, as well as significant Jewish holidays, could serve as valuable reference points for examining how different religious communities within the empire navigated the complexities of lunar timekeeping. A more comprehensive study that incorporates these perspectives would provide a richer and more nuanced understanding of the Ottoman temporal system, moving beyond a strictly Islamic framework to embrace the full cultural and religious diversity of the empire.

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<sup>70</sup> Blake, *Time in Early Modern Islam: Calendar, Ceremony, and Chronology in the Safavid, Mughal, and Ottoman Empires*.

<sup>71</sup> Jonathan Ben-Dov et al. (eds.), *Living the Lunar Calendar* (Oxford: Oxbow Books, 2012).

## 1.7 Conclusion

This chapter has argued that the eighteenth-century Ottoman world was the crucible for a profound recalibration of time consciousness. Far from being a stagnant “mono-style” system awaiting European modernity, this period saw the emergence of a sophisticated “dual-style” framework. This was not a simple replacement of lunar time with solar but a deliberate, internally driven layering of multiple temporal systems. The traditional sighting-based Hegira calendar was increasingly annotated with solar Rumi dates, anchored by the stable seven-day week, and fragmented by the new mechanical language of hours and minutes.

This shift was not a mere technological byproduct of imported clocks. Instead, a new, society-wide need for precision created a market for these technologies. While numerous factors contributed to this imperative for standardization, it was powerfully driven by a convergence of four interlocking pressures. First, a growing bureaucracy required predictable logistics, transforming the measurement of distance from the experiential *konak* (a day’s journey) to the abstract, calculable *saat* (hour). Second, the rise of a cash-based, contractual economy (*kuruş*, *sarrafs*) demanded fixed, irreversible due dates that the drifting lunar calendar could not seasonally provide. Third, a new impulse to codify and preserve ephemeral knowledge manifested in the expansion of chronograms from “dynastic time” to “personal time,” the standardization of oral music (*meşk*) into written notation (Hamparsum), and the professionalization of independent libraries. Fourth, the negotiation of fixed state borders (*hudud*) in treaties created a parallel, dialectical need for fixed, citable dates.

To analyze this shift, this chapter has proposed a new methodology that breaks from the historiographical tendency to dismiss temporal discrepancies as errors. By “counting the pebbles” like Nasreddin Hoca, systematically tracking the weekday alongside the month-day, it embraces these inconsistencies as the primary dataset. This bottom-up approach moves beyond the literature’s narrow focus on ritual months to reveal a system in constant, active negotiation.

This investigation has recentered the key actors, revealing that the authority of the expert (*müneccimbaşı*) was often secondary to the legal-social power of the local judge (*kadı*). As Göynüklü's entries in Ramadan 1739 and 1753 demonstrate, a calculated calendar could be instantly overruled by sworn witness testimony. Time in the Ottoman Empire was not simply an astronomical fact; it was a social, legal, and negotiated reality. Understanding this flexible, pluralistic system is the foundational task of this study and the key to mapping the "lunar date zones" and "lunar reference chains" that structured the empire. This approach allows us to move beyond a search for the one correct date and, instead, to reconstruct the rich, negotiated, and human-centered relationship between the Moon, mankind, and the extraordinary Ottoman archive.

## 2. Practice Beyond Theory

A closer look at Ottoman sources such as chronicles, travelogues, diaries, payment documents or court registers suggests that many people felt empowered to challenge and reshape the timeline. The conventional image of a monolithic, top-down calendar gives way to a more complex reality. Far from being a rigid system, the process of marking the days of Hegira months was a dynamic social practice, shaped by religious custom, communal consensus, and environmental contingency. Differing local conditions, such as cloud cover or the vantage points of observers, frequently resulted in inconsistent sightings of the crescent moon. Consequently, one district might clearly see the crescent moon, announcing a new month, while a neighboring area might detect nothing, prolonging the current month. This divergence was not an anomaly but a normal feature of the system, shaping daily rhythms from fasting and feasting to contract deadlines and salary payments.

This chapter explores this dynamic negotiation by introducing the concept of “lunar date alteration” as an analytical framework for understanding these adjustments. To uncover these practices, the study employs a two-tiered research methodology: an internal examination of consistency within single sources and an external comparison across multiple contemporary documents. This approach allows for the identification of both “silent” alterations, where scribes made adjustments without comment, and “noted” ones, where discrepancies were explicitly acknowledged and explained.

The analysis then unfolds across three key domains of Ottoman daily life; each illustrated with case studies. The first explores the religious sphere, focusing on how contested moon sightings affected the start and end of Ramadan fasting. The second moves to the recordkeeping realm, examining inconsistencies in the recorded death dates of sultans, highlighting the challenges of establishing a definitive official timeline. The third scenario delves into the economic world, demonstrating how the fluidity of the calendar influenced payment calculations and debt contracts. Together, these examples reveal how the inherent flexibility of lunar timekeeping permeated nearly every aspect of Ottoman society.

To illustrate the system's remarkable flexibility, the following section examines extreme instances where lunar date alterations allowed months to be recorded as 28 or 31 days. While such figures are astronomically impossible, they were entirely plausible within the lived and administrative reality of the time. These cases were not born of ignorance; on the contrary, payment records and other documents demonstrate that scribes were well aware of the lunar cycle's average of 29.5 days. Their work reveals a deliberate balancing act, where the practical demands of governance and commerce often took precedence over theoretical astronomical precision.

The final section investigates the mechanisms that brought coherence to this seemingly chaotic system. It deconstructs the process of lunar date alteration into four distinct stages: sighting, communication, negotiation, and declaration. By analyzing episodes from various years and locations across the eighteenth-century Ottoman world, this section demonstrates that a traceable, recurrent pattern governed these temporal adjustments, extending far beyond the imperial capital. This process ultimately ensured that local variations were reconciled, and a functional, empire-wide timeline was maintained.

In summary, this chapter details the study's core methodology and provides a source-based analysis of temporal negotiation. The analysis here sets the stage for broader questions, such as "whether all date variations stem from the sighting method?" or "How patterns might change over time?", which will be explored in the next chapter.

## 2.1 Lunar Date Alterations

The research sample focuses on four essential temporal units as they appear in Ottoman sources: the year, the lunar month, the day of the month according to the Hegira calendar, and the day of the week. Among these, special emphasis is placed on the interplay between the last two, the alignment of month-days and weekdays, since it is here that the most dynamic negotiations of time can be observed.

The counting styles for the year and month provide a relatively stable chronological frame. Every century consists of one hundred years, and every year contains twelve months, neither more nor less, and without retroactive revision either backward or

forward.<sup>72</sup> A similar stability characterizes the weekly cycle: seven days repeat continuously without alteration. In contrast, the duration of a lunar month is inherently variable around 29 or 30 days. This variability creates a tension between the flexible count of lunar days and the fixed sequence of weekdays, generating a field of negotiation in which Ottoman timekeeping took place.

To capture this subtle interplay, the research adopts a deliberately narrow scope through a strict inclusion criterion. Only records containing all four temporal markers are admitted to the primary corpus. Entries missing even one of these indicators are excluded or marked with an asterisk (\*), signaling that the date offered is approximate rather than reliable. While this approach significantly narrows the number of usable texts, it maximizes the internal clarity of each entry, allowing for a more confident assessment of both the regularities and anomalies in timekeeping. In doing so, it privileges quality and consistency over quantity, thereby offering a sharper lens for detecting discrepancies, revealing a layered and often negotiable chronometric culture in the Ottoman world.

### 2.1.1 Internal and External Analysis of Sources

The methodology employed in this study rests on two complementary modes of analysis: internal and external. Both are designed to reconstruct eighteenth-century timekeeping practices from the perspective of the recordkeepers themselves. By examining how scribes, diarists, and administrators paired the fluid progression of lunar month-days with the unyielding rhythm of the seven-day week, we can uncover the logic behind their temporal records.

Internal analysis assesses the chronological consistency within a single source. It scrutinizes how an individual scribe or institution maintained the alignment between month-days and weekdays over time. For example, when a document contains a series of dates such as “Tuesday, 2 Safer 1159,” “Wednesday, 3 Safer 1159,” and “Monday, 8 Safer 1159,” a researcher can trace the sequence. If the weekdays and month-days advance in perfect harmony, the source demonstrates internal coherence and can be treated as a stable chronometric record.

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<sup>72</sup> The exception is the anomaly of the sıvış yılı, skippage years. See, Sahillioğlu, “Sıvış Yılı Buhranları.”

External analysis, in contrast, situates an individual document within a broader constellation of sources. By comparing multiple texts from the same period, it becomes possible to identify shared conventions, regional divergences, or administrative discrepancies. This comparative approach is essential for interpreting sources with limited data. A document containing only a single date entry (e.g. “Monday, 8 Safer”) is like an isolated puzzle piece. While one can infer that the month must have begun on a Monday, this conclusion remains provisional. Without other entries for verification, we cannot know if the scribe maintained this alignment or later made an adjustment. It is only through external comparison, placing this fragment alongside other records from the same time and place, that its reliability and significance can be fully assessed.

The value of this dual approach is most apparent when dealing with sources of varying chronological density. Documents rich with date entries can be subjected to rigorous internal analysis. If they maintain their day-weekday alignment over months or even years, they achieve the status of chronological benchmarks. These reliable sources then serve as a reference standard, providing the necessary context to evaluate more fragmentary records and strengthening the entire web of external comparison.

The most revealing insights often emerge from moments of inconsistency within these otherwise reliable benchmark sources. These are not simple mistakes but rather tangible evidence of a timekeeping system in action. Consider the perspective of a meticulous Ottoman diarist who makes the following entries a few days apart: First, he records an event on “Thursday, 4 Safer.” Later, he records another event on “Saturday, 5 Safer.”

This appears to be a clear-cut error. The seven-day week was an immutable cycle; the scribe did not simply forget that Friday follows Thursday. The anomaly must therefore lie not in his understanding of the week but in his reckoning of the lunar month. This discrepancy signals that a recalibration has occurred. Initially, the diarist was operating under the assumption that the first day of Safer was a Monday. However, between his first and second entry, he received new information (perhaps a delayed report of the crescent moon sighting or an official announcement) that established the month as having begun on a Tuesday. To align his records with this new consensus, he adjusted his timeline, effectively “skipping” a weekday in his sequence to catch up. The entire chronological structure of the month was shifted forward.

This process, which this study terms “lunar date alteration,” could also work in reverse. Imagine the same scribe records an event on “Thursday, 4 Safer” and, a day later, logs another on “Friday, 4 Safer.” Here, the weekday advances correctly, but the lunar month-day is repeated. This indicates a retroactive adjustment in the opposite direction. The scribe’s initial timeline was based on the month starting on a Monday. He later learned that the month had, in fact, begun a day earlier, on Sunday. He then corrected his record by pushing the entire month’s timeline back one day, resulting in two distinct events occurring on the same lunar date.

These alterations were not arbitrary errors, but a logical outcome of a system based on physical observation. The start of any Hegira month was contingent on a confirmed sighting of the new crescent moon, a practice subject to weather, geography, and the integrity of communication networks. A recordkeeper might begin a month based on local observation or calculation, only to revise his calendar upon receiving a more authoritative report from a regional judge or the imperial capital.

For the historian, these seemingly minor corrections are invaluable. They are the documentary traces of a dynamic social process. A simple mismatch between a Thursday and a Friday, when carefully analyzed, opens a window onto the circulation of information, the negotiation of authority, and the complex rhythms of communication that defined the temporal landscape of the Ottoman Empire. This methodology allows us to move beyond a static view of the calendar and see time as it was truly experienced, as a subject of constant counting, interpretation, and flexible adjustment.

### 2.1.2 Silent and Noted Date Alterations

While external examination of sources reveals broad, regional variations in timekeeping across the Ottoman Empire, it is through internal analysis that we can access the deliberate actions of the individual recordkeeper. When two different sources from different cities show a one-day discrepancy, the cause could be anything from delayed communication to local sighting conditions. However, when two conflicting date pairings appear within the same document, the cause is much more specific: it signals a conscious adjustment made by the scribe to reconcile his record with new information.

These adjustments, or lunar date alterations, are the footprints left by a recordkeeper navigating a fluid temporal system. They fall into two distinct categories: silent and noted.

Silent alterations are chronological inconsistencies that appear without any comment or explanation from the scribe. These were often routine corrections, not errors in need of justification. Imagine a court clerk who records an event on “Thursday, 4 Safer.” A day or two later, he receives an official dispatch confirming that the crescent moon was sighted a day later than he had initially assumed. To bring his register into alignment, his next entry might read “Saturday, 5 Safer,” skipping Friday entirely relative to the lunar date. He does not add a note explaining the jump because, within his professional context, such recalibrations were an expected part of the job. His goal was not to preserve his initial, incorrect timeline but to maintain a record consistent with the official consensus.

In another scenario, a scribe might log a payment on “Thursday, 4 Safer” and later record an unrelated matter on “Friday, 4 Safer.” This repetition of the lunar date indicates a retroactive shift. The scribe has learned that the month began a day earlier than he first thought, and he corrects his ledger accordingly. The very silence surrounding these changes is telling. It suggests that the flexibility of the lunar calendar was a deeply embedded and widely understood norm.

By contrast, noted alterations are instances where the scribe explicitly acknowledges and explains a chronological change. Though far rarer, these entries are immensely valuable because they turn the recordkeeper into an informant. They provide a direct glimpse into the decision-making process that was normally left unspoken.

In these cases, a scribe might correct a date and add a marginal note explaining the reason. For example, an entry could be amended with a comment like, “The month of Safar was declared to have begun on Tuesday, per the judge’s decree based on the testimony of the witnesses from Üsküdar, not Monday as was first thought, hence the dates are corrected from this day forward.” Such notes are the “smoking gun” of temporal negotiation. They confirm that alterations were conscious choices, often driven by the reception of new information or the need to align with a higher administrative or religious authority. Noted alterations transform the abstract concept of calendar flexibility into a documented, deliberate act.

Preliminary findings indicate that silent alterations vastly outnumber noted ones. This imbalance reinforces the conclusion that calendar flexibility was not a flaw in the system but a functional, normalized feature. For the Ottoman scribe, administrator, or diarist, timekeeping was not a passive act of transcription but an active, cognitive process of maintaining coherence. They were not simply copying dates; they were agents of temporal order, using corrections and recalibrations to align their individual records with a shifting communal consensus, as in the example of Ömer Ağa's sultanic diary. By learning to read these chronological flaws and corrections, we move beyond a static calendar and begin to understand time as it was truly lived, managed, and negotiated in the Ottoman world.

### 2.1.3 Four Sources from the 1740s

To demonstrate this study's methodology in practice, this section examines a curated selection of sources from the mid-eighteenth century: an anonymous archival fragment, the official chronicle of İzzî, the personal diary of Göynüklü Ahmed Efendi, and a sultanic diary kept by Ömer Ağa. Chosen from the same 1740s context, these texts represent a single generation of recordkeeping. However, their diverse formats, from a single, torn leaf to a comprehensive decade-long diary, provide an ideal testing ground for applying the principles of internal and external analysis.

The first source is a short, untitled document from the Topkapı Palace Archive. It appears to be a stray leaf from a larger register. The document contains just three entries on unrelated topics: a solar eclipse, a bureaucratic appointment, and a note on livestock. Of these, only the eclipse record includes all the necessary temporal units, year, month, month-day, and weekday. From the perspective of its anonymous scribe, this was likely a simple memorandum. For the historian, however, its value lies in its limitations.

With only a single usable date, internal analysis is impossible. However, for external analysis, this single, precise timestamp is an invaluable anchor. It represents one person's record of a specific day. When placed alongside other sources from the same month, it acts as a litmus test. Does it align with the timeline recorded by the court chronicler or the sultan's diarist? Or does it diverge, hinting at a different local consensus? This lone

entry forces us to ask what this individual scribe saw or heard that day, a question that can only be answered by comparing his record to those of his contemporaries.

In contrast, the chronicle of the official historian İzzi Efendi, the diaries of Ahmed Efendi and Ömer Ağa are rich texts that allow for deep internal analysis. All three contain evidence of silent lunar date alterations, but they reveal them in different ways, highlighting the varied practices of Ottoman scribes and the interpretive labor required of the modern researcher to uncover them.

In İzzi's chronicle, the alterations are subtle. An inconsistency might only become apparent when a reader carefully tracks the sequence of dates across several pages or chapters. Uncovering them requires more forensic reading from the modern researcher.

The diary of Göynüklü Ahmed Efendi, spanning 1711 to 1759, serves as a primary example. It is a complex source for two reasons. First, its structure is inconsistent: the earlier sections provide a detailed, day-by-day record of events, but the entries become increasingly sparse in later years, sometimes skipping entire months. Second, and more importantly, the diary is rich with both silent and explicitly noted lunar date alterations. These subtle temporal adjustments, hidden within the sparse entries, require careful detective work to identify and analyze.

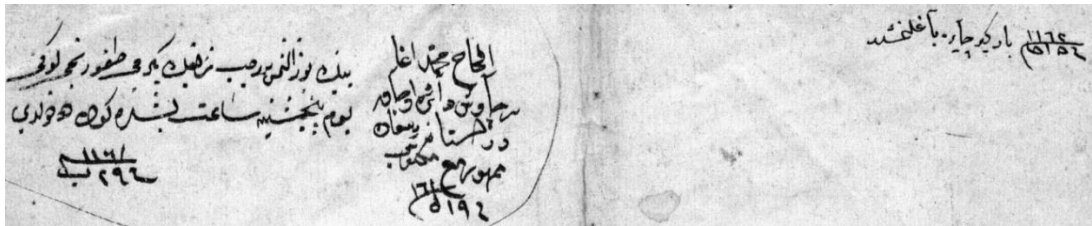
The richest case emerges from Ömer Ağa's sultanic diary. Spanning over a decade, it is a key witness to the mechanics of temporal negotiation, containing at least sixteen clear instances of lunar date alterations. Because Ömer Ağa was often recording events in near real-time, an adjustment is often immediately visible. A correction might appear on the very same page as the original entry, offering a direct glimpse into his workflow. Critically, his diary contains sixteen lunar date alterations. Of these, only three are silent, which makes him an exceptional case in the broader context of timekeeping habits in the century. Showing a continuous 3486 daily entries over 3489 days and this exceptionality makes his diary an invaluable chronological benchmark, a dense, reliable, and self-aware record against which more fragmentary sources can be judged.

Together, these four sources illustrate the methodology in its entirety. The anonymous fragment provides a fixed point for external comparison. İzzi's chronicle and Göynüklü's

diary reveal the subtle, ongoing work of maintaining a timeline. Ömer Ağa's sultanic diary offers a masterclass in temporal negotiation, showing us the choices, challenges, and solutions from the recordkeeper's own perspective.

As the table below shows, the anonymous text covers a ten-month span from July 1748 to May 1749. et a single fragment cannot carry interpretation on its own. Its eclipse entry, in particular, only becomes meaningful when set within an external analytic frame, by placing it alongside contemporary accounts of the same event. Fortunately, the solar eclipse of 28 July 1748 drew attention and was noted in several Ottoman works, including İzzi Efendi's official chronicle.

Table 2.1: A document with three entries, 1748-1749

|                                                                                     | Text                                                                                                                                                                                                                                                                                       | Translation                                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>Bin yüz altmış bir Receb-i şerifin yirmi dokuzuncu günü yevm-i Perşembe saat beşte gün tutuldu.<br/>29 B 1161</p> <p>El-Hac Mehmed Ağa ser-çavuş daire-i ocak der Asitane-i saadet memhur ma mektubi.<br/>19 L 1161*</p> <p>Bargir çayıra bağlanmıştır<br/>15 CA 1162*<sup>73</sup></p> | <p>On Thursday, the twenty-ninth day of blessed Rajab in the year 1161, at five o'clock, the Sun was eclipsed.</p> <p>El-Hac Mehmed Ağa, chief sergeant of the corps in Istanbul, with a sealed letter.</p> <p>The packhorse has been tied to the meadow.</p> |

When the two records are set side by side, İzzi's notice aligns exactly. He, too, dates the eclipse to Thursday, 29 Receb 1161, confirming both the weekday and the lunar day. Yet his entry does more than corroborate: it expands the event into a layered chronology. He provides the solar equivalent (14 July 1161 in the Rumi calendar) and records the event

<sup>73</sup> TSMA.D, (Topkapı Sarayı Müze Arşivi Defterleri), 5066.

with astronomical precision, noting the Sun's position in the constellation of Leo and tracking the eclipse's progression in hours and minutes relative to sunrise:

On the twenty-ninth Thursday of the sacred month of Receb in the year 1161, which corresponds to the fourteenth of July in the Rumi calendar, at six hours and three minutes past sunrise, the world-illuminating sun began to eclipse at the zenith node in the constellation of Leo. When the time reached seven o'clock, more than one-third of the sun was eclipsed, and it gradually started to clear, becoming fully visible again by eight o'clock.<sup>74</sup>

This parallel account is doubly significant. First, it validates the anonymous fragment, demonstrating how even a sparse entry can be anchored within a broader temporal consensus. Second, İzzi's detailed entry showcases the sophisticated chronological awareness available to elite Ottoman recordkeepers, who seamlessly integrated lunar, solar, astrological, and mechanical time.

As an official history compiled retrospectively, one would expect İzzi's chronicle to be a model of chronological consistency. A historian writing after the fact has the opportunity to harmonize dates, resolve contradictions, and present a unified timeline. Yet, a close internal examination of İzzi's work reveals the opposite: it contains surprising and unacknowledged inconsistencies in its lunar dating. These discrepancies suggest that İzzi was likely stitching his narrative together from various source documents, each with its own timeline, and did not feel compelled to reconcile them.

A revealing example can be found in his account of an Iranian ambassador's visit to Istanbul in early 1746. He records three related events during the month of Muharrem 1159: The ambassador's reception by the sultan is dated "Tuesday, the 9<sup>th</sup> of Muharrem." A high-level meeting to discuss the peace proposal is dated "Thursday, the 12<sup>th</sup> of the month. The death of a prominent religious figure is dated "Tuesday, the 16<sup>th</sup> of the month."

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<sup>74</sup> "...işbu bin yüz altmış bir senesi şehr-i Recebül'l-müreccenin yirmi dokuzuncu pençşenbih günü ki şuhur-i Rumiyye'den Temmuz'un on dördüncü ruz-i dehşet-enduzda tulu-i Şems'den altı saat üç dakika mürurunda afitab-ı alem-tab ukde-i zenebde ve burc-ı Esed'de inkisafa ağaz edüp, saat yediye reside oldukda, sülusanı mikdarından ziyadesi münkesif olup, der-akab incilaya tahvil ve saat sekizde külliyyen munceli oldu." İzzi Süleyman Efendi, *İzzi Tarihi*, ed. Ziya Yılmaz (İstanbul: Türkiye Yazma Eserler Kurumu Başkanlığı, 2019), 598.

When analyzed together, these entries expose a clear contradiction. The seven-day week provides a fixed framework against which we can check the lunar dates. If the 9<sup>th</sup> of the month was a Tuesday, then the 1<sup>st</sup> of Muharrem must have been a Monday. However, if the 12<sup>th</sup> was a Thursday, then the 1<sup>st</sup> must have been a Sunday. In other words, the third entry aligns with the first, implying a Monday start, but it directly conflicts with the timeline established by the second entry.

Table 2.2: Inconsistent Hegira dates in İzzi Efendi's chronicle, 1746

| Subject                                   | Hegira Date <sup>75</sup>                  | First Day of the Month |
|-------------------------------------------|--------------------------------------------|------------------------|
| Royal Reception of the Iranian Ambassador | on the ninth day of Muharrem, Tuesday      | Monday                 |
| Meeting at Grand Vizier's Palace          | on the twelfth day of the month, Thursday  | Sunday                 |
| The Death of Sheikh Mustafa Efendi        | on the sixteenth day of the month, Tuesday | Monday                 |

This shifting timeline offers a fascinating glimpse into the historian's craft. From İzzi's perspective, he was likely working with different source materials, perhaps a palace ceremonial log for the reception, a report from the grand vizier's office for the meeting, and a notice from the religious establishment for the death. Rather than forcing these disparate records into a single, artificial timeline, he seems to have transcribed the dates as he found them in his sources.

The fact that he offers no explanation for this one-day shift categorizes it as a silent date alteration. For him, this was not necessarily an "error" to be corrected but a reflection of the documentary reality he was working with. The inconsistency was not a flaw in his narrative but a seam showing where different pieces of the historical record were joined together. What makes this case particularly difficult for a modern reader to detect is that the conflicting entries are dispersed across thirty-five pages of his chronicle. Without systematic, cross-referential reading, these subtle but meaningful shifts in timekeeping would go completely unnoticed. They remain hidden in plain sight, revealing the flexible and source-dependent nature of time in Ottoman historiography.

Fortunately, not all silent alterations are so deeply buried, and the Iranian ambassador's visit to Istanbul in early 1746 is also noted in contemporary materials, like Göynüklü

<sup>75</sup> "...şehir-i Muharremü'l-Haramın dokuzuncu Sülesa günü...", "...mah-ı merkumun on ikinci mübarek hamis günü...", "...ruz-i Şeşenbe ki mah-ı merkumun on altıncı günüdür..." İzzi Süleyman Efendi, *İzzi Tarihi*, 150, 156, 186.

Ahmed Efendi's diary. As a contemporary Istanbul diarist, Göynüklü registers the same diplomatic sequence and provides two anchor points, on the same page, showcasing a silent lunar date alteration:

On the first of Muharrem, year 1159, Tuesday. On this date, the ambassador of the Iranian Shah came to the imperial council and delivered his letter to His Majesty, the world-sheltering Sultan. And on the same day, the grand vizier also had an audience [with the sultan]. The ambassador's gift was of little value. Thirty of his men were dressed in splendid robes of honor.

On the 11<sup>th</sup> of Muharrem, Thursday. A consultation was held in the presence of the grand vizier. The imperial letter from the Shah of Iran, one copy for the sheikh al-Islam Efendi, and one copy for the grand vizier, which had been translated, was read by the Reisül-Küttab Efendi (Chief Scribe).<sup>76</sup>

An internal analysis of Göynüklü's diary for Muharrem 1159 reveals a clear contradiction. Although he explicitly states the month began on a Tuesday, a later entry dating the 11<sup>th</sup> as a Thursday implies it was altered as a Monday. This unacknowledged shift is a classic example of a silent lunar date alteration.

What is remarkable is that both Göynüklü, likely recording events in near-real-time, and İzzi, compiling his chronicle retrospectively, present conflicting timelines for the very same events (the ambassador's reception and the grand vizier's meeting). Are these silent alterations by-products of a date alteration announcement in Istanbul during the early Muharrem 1159, or merely coincidental artifacts of individual recordkeeping practices? While a definitive answer requires further forensic reading, asking this question is crucial. It forces us to see these discrepancies not as mistakes to be dismissed but as evidence of how temporal consensus was actively negotiated.

Considered collectively, such examples highlight the prevalence of silent alterations in Ottoman recordkeeping. While many recordkeepers allowed quiet temporal shifts to stand without editorial comment, a smaller number foregrounded their adjustments, offering the modern reader rare windows onto the mechanics of timekeeping and its mid-

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<sup>76</sup> "Fi gurre-i Muharrem, sene 1159, yevm-i Salı. Tarih-i mezburda Şah-ı Acem ilçisi divan-ı hümayuna gelüp namesin Hazret-i Padişah-ı alem-penah hazretlerine teslim eyledi. Ve yevm-i mezbûrda vezir-i azam dahi arza girdi. Hediyyesi şey-i kalil idi. Otuz aded ademisine hilat-i fahire ilbas olundu.

Fi 11 M, yevm-i Pençsenbih. Sadr-ı ali huzurında meşveret olundu. Acem Şahı tarafından gelen name-i hümayun aded 1, eş-Şeyhu'l-İslam Efendi'ye aded 1, Sadr-ı ali'ye aded 1, tercüme olunmuş idi, der-kıraat-i Reisü'l-Küttab Efendi." Göynüklü Ahmed Efendi, *Tarih-i Göynüklü*, 492.

eighteenth-century negotiations. Among this select group, no one is more valuable than Ömer Ağa, private secretary (*sır katibi*) to Sultan Mahmud I. His diary is not just a record of events but a candid account of the very process of recording time itself.

To appreciate the significance of Ömer Ağa's work, it is essential to understand the genre to which it belongs: the sultanic diaries (*sultan ruznameleri*). From 1730 to 1809, the private secretaries of the sultans maintained daily records of the monarch's activities. These diaries, covering the reigns of six sultans (Ahmed III, Mahmud I, Osman III, Mustafa III, Abdülhamid I, and Selim III), provide an unparalleled view into the daily life of the court and the administrative rhythms of the imperial center. In total, at least twelve diarists contributed to this invaluable corpus of imperial history.

Table 2.3: Duration and entry counts of the sultanic diaries, 1730-1809

| No                                   | Author                     | Dates                                 | Dates (H.)                                   | # of day | # of entry | %     |
|--------------------------------------|----------------------------|---------------------------------------|----------------------------------------------|----------|------------|-------|
| 1                                    | Mustafa Ağa                | 28 September 1730<br>2 July 1731      | 15 Rebiyülevvel 1143<br>28 Zilhicce 1143     | 278      | 125        | 44,96 |
| 2                                    | Ahmed Ağa                  | 20 June 1734<br>6 November 1734       | 18 Muharram 1147<br>9 Cemaziyelahir 1147     | 140      | 137        | 97,85 |
| 3                                    | Hıfzi Ağa                  | 23 May 1735<br>10 June 1738           | 1 Muharram 1148<br>22 Safer 1151             | 1115     | 1112       | 99,73 |
| 4                                    | Salahi Ağa                 | 11 June 1738                          | 23 Safer 1151                                | 92       | 92         | 100   |
|                                      |                            | 10 September 1738                     | 25 Cemaziyelevvel 1151                       |          |            |       |
|                                      |                            | 14 May 1739<br>4 June 1739            | 6 Safer 1152<br>27 Safer 1152                | 22       | 22         | 100   |
| 5                                    | Ömer Ağa                   | 17 September 1740<br>6 April 1750     | 25 Cemaziyelahir 1153<br>28 Rebiyülahir 1163 | 3489     | 3486       | 99,91 |
| 6                                    | Yenişehirli Ağa            | 1 May 1752<br>24 September 1752       | 16 Cemaziyelahir 1166<br>15 Zilkade 1165     | 147      | 147        | 100   |
| 7                                    | Ustazade Ağa               | 25 September 1752<br>13 December 1754 | 16 Zilkade 1165<br>28 Safer 1168             | 810      | 810?       | 100   |
| 8                                    | Abdullah Ağa<br>and others | 30 October 1757<br>3 October 1763     | 16 Safer 1171<br>25 Rebiyülevvel 1177        | 2165     | 2165       | 100   |
| 9                                    | Mustafa Ağa                | 11 July 1774<br>2 March 1775          | 2 Cemaziyelevvel 1188<br>29 Zilhicce 1188    | 235      | 235        | 100   |
| 10                                   | Ahmed Faiz                 | 14 March 1791<br>27 July 1806         | 9 Receb 1205<br>11 Cemaziyelevvel 1221       | 5614     | 5605       | 99,83 |
| 11                                   | Arif Muhit                 | 20 February 1808<br>26 July 1808      | 23 Zilhicce 1222<br>2 Cemaziyelahir 1223     | 158      | 132        | 83,54 |
| 12                                   | Feyzullah                  | 28 July 1808<br>23 January 1809       | 4 Cemaziyelahir 1223<br>7 Zilhicce 1223      | 180      | 180        | 100   |
|                                      |                            |                                       |                                              | 14445    | 14248      | 98,63 |
| 28 September 1730<br>23 January 1809 |                            |                                       |                                              | 28607    | 14248      | 49,8  |

The first of these diaries, kept by Mustafa Ağa, begins on 28 September 1730, while the last one, maintained by Feyzullah Bey, ends on 23 January 1809. Despite covering a span of 28,607 days, these diaries do not account for every day within this period. Significant gaps remain due to certain diaries either not being kept, being lost over time, or perhaps still awaiting discovery.

Over the past five decades, scholars have gradually unearthed and published these texts. Based on a comprehensive survey conducted for this study, the existing diaries collectively document 14,248 days (with a margin of error of thirty days). This figure, presented here for the first time, quantifies the extent of this remarkable resource. These diaries, with their consistent geographical focus on the capital and their near-complete inclusion of weekdays, form one of the longest and most stable chronological benchmarks for the eighteenth-century Ottoman world, making them an ideal data set for both internal and external analysis.

Ömer Ağa's diary, which runs from September 1740 to April 1750, is one of the cornerstones of this study. Within this decade-long record, he documents sixteen distinct instances of lunar date alteration. What makes his diary truly exceptional is that thirteen of these are noted alterations. Instead of silently correcting his timeline, Ömer Ağa frequently adds marginalia or comments within the text to explain why a date has been changed, citing a new moon sighting, a revised official announcement, or another piece of information.

This practice sets him apart from contemporaries like İzzi and Göynüklü, whose silent alterations require forensic reconstruction. Ömer Ağa, in contrast, shows his work. His notations provide a transparent, real-time view into the cognitive and administrative process of resolving chronological uncertainty. We are not just observing a discrepancy; we are watching a skilled recordkeeper actively manage and synchronize the official timeline. His diary moves beyond a simple record of events to become a record of timekeeping itself. From his perspective, maintaining an accurate and justifiable timeline was a critical part of his duty, and his notes are the evidence of that professional diligence.

The unique value of the sultanic diaries is further highlighted when they are contrasted with official chronicles. Chronicles were typically compiled years after the events they

describe, allowing the author to shape a polished narrative with the benefit of hindsight. Key events could be emphasized, inconvenient details omitted, and chronological inconsistencies smoothed over.

The diaries, however, capture an unfiltered immediacy. Phrases like “I wrote this evening,” which appear in the texts, signal a daily recording process. The diarist was immersed in the present, documenting history as it unfolded. This proximity to events results in a different kind of record, one that blends the monumental with the mundane. An entry describing a major state ceremony might be followed by a brief note about the sultan’s health or the theft of jewels from the palace. The length of the entries themselves, varying from a full page to just a few words, reflects the scribe’s daily judgment of what was significant. This texture and granularity are largely absent from the curated narratives of official histories. For the study of timekeeping, this immediacy is crucial, as it allows us to see how chronological information was processed and corrected on a day-to-day basis, from the perspective of the palace itself.

Some diary entries are expansive, spanning more than a page, while others are brief, consisting of just a few words. This variation frames both the common and unique themes present in the diaries, as well as the individual choices made by the scribes. The length of each entry often correlates with the perceived significance of the event, creating a patchwork of royal life that blends both the monumental and the trivial. Such patterns are essential for understanding the daily rhythms of the court and the priorities of the scribes in recording history as it unfolded.

With very few exceptions, nearly every entry in the sultanic diaries includes the day of the week. This remarkable consistency makes them one of the richest chronological benchmarks for the period. Their stability is striking: they are anchored in a single location, the imperial capital and its palace, and offer a continuous, long-term perspective covering 40 years within an 80-year span.

This unique combination of consistency and focus makes the diaries a perfect laboratory for studying lunar date alterations. Close analysis reveals clear patterns of both noted and silent adjustments, offering a rare glimpse into the timekeeping process from the palace’s perspective. Notably, these alterations often cluster around the ninth month, Ramadan,

when precise timing was most critical. This specificity allows us to trace how temporal shifts were managed within the empire's most elite circles, significantly broadening the scope of date-related research in Ottoman historiography.

The frequency and distribution of lunar date alterations in Ömer Ağa's diary will be examined in by tables aligning each case across both the Hegira and Gregorian calendars. These cases will not only shed light on the mechanics of date correction but also help delineate a broader framework for understanding how Ottoman recordkeepers conceptualized and implemented temporal accuracy in practice.

Ömer Ağa's sultanic diary runs from 17 September 1740 to 6 April 1750, (25 Cemaziyelahir 1153 and 28 Rebiyülahir 1163) This decade-long record is remarkably complete, containing 3,486 entries over a span of 3,489 days. Only three days are missing: Ramadan 5, 1156 (Tuesday, 22 October 1743), 4 Cemaziyelevvel 1162 (Tuesday, 22 April 1749), and 1 Rebiyülevvel 1163 (Sunday, 8 February 1750).

The following tables detail the diary's chronological structure. The first table shows the recorded duration of each Hegira month, highlighting anomalies such as Şaban 1159, lasting 28 days, and Şevval 1162, which extended to 31 days. These irregularities are evidence of the calendar being recalibrated in real-time. Subsequent tables provide a full distribution of entries per month and identify the specific missing dates within the source.

Table 2.4: Duration of months in Ömer Ağa's sultanic diary, 1740-1750

|           | Hegira Months |    |    |    |    |    |    |    |    |    |    |    |       |
|-----------|---------------|----|----|----|----|----|----|----|----|----|----|----|-------|
| Year (H.) | 1             | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | Total |
| 1153      |               |    |    |    |    | 30 | 29 | 29 | 30 | 30 | 29 | 30 | ?     |
| 1154      | 29            | 29 | 30 | 29 | 30 | 29 | 29 | 30 | 30 | 30 | 30 | 30 | 355   |
| 1155      | 29            | 29 | 29 | 30 | 29 | 30 | 29 | 29 | 30 | 30 | 30 | 30 | 354   |
| 1156      | 29            | 30 | 29 | 29 | 30 | 29 | 29 | 29 | 30 | 30 | 30 | 30 | 354   |
| 1157      | 30            | 30 | 29 | 29 | 29 | 30 | 29 | 29 | 30 | 30 | 29 | 30 | 354   |
| 1158      | 30            | 30 | 29 | 30 | 29 | 29 | 30 | 29 | 30 | 29 | 30 | 29 | 354   |
| 1159      | 30            | 30 | 29 | 30 | 29 | 30 | 30 | 28 | 30 | 29 | 30 | 30 | 355   |
| 1160      | 29            | 30 | 29 | 30 | 30 | 29 | 29 | 29 | 30 | 30 | 30 | 29 | 354   |
| 1161      | 30            | 30 | 29 | 29 | 30 | 29 | 30 | 29 | 30 | 29 | 30 | 30 | 355   |
| 1162      | 29            | 29 | 30 | 30 | 29 | 29 | 30 | 29 | 30 | 31 | 29 | 30 | 355   |
| 1163      | 29            | 29 | 30 | ?  |    |    |    |    |    |    |    |    | ?     |

Table 2.5: Number of entries in Ömer Ağa's sultanic diary, 1740-1750

| Entry        | Hegira Months |    |    |    |    |    |    |    |    |    |    |    |       |
|--------------|---------------|----|----|----|----|----|----|----|----|----|----|----|-------|
| Year<br>(H.) | 1             | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | Total |
| 1153         |               |    |    |    |    | 6  | 29 | 29 | 30 | 30 | 29 | 30 | 183   |
| 1154         | 29            | 29 | 30 | 29 | 30 | 29 | 29 | 30 | 30 | 30 | 30 | 30 | 355   |
| 1155         | 29            | 29 | 29 | 30 | 29 | 30 | 29 | 29 | 30 | 30 | 30 | 30 | 354   |
| 1156         | 29            | 30 | 29 | 29 | 30 | 29 | 29 | 29 | 29 | 30 | 30 | 30 | 353   |
| 1157         | 30            | 30 | 29 | 29 | 29 | 30 | 29 | 29 | 30 | 30 | 29 | 30 | 354   |
| 1158         | 30            | 30 | 29 | 30 | 29 | 29 | 30 | 29 | 30 | 29 | 30 | 29 | 354   |
| 1159         | 30            | 30 | 29 | 30 | 29 | 30 | 30 | 28 | 30 | 29 | 30 | 30 | 355   |
| 1160         | 29            | 30 | 29 | 30 | 30 | 29 | 29 | 29 | 30 | 30 | 30 | 29 | 354   |
| 1161         | 30            | 30 | 29 | 29 | 30 | 29 | 30 | 29 | 30 | 29 | 30 | 30 | 355   |
| 1162         | 29            | 29 | 30 | 30 | 28 | 29 | 30 | 29 | 30 | 31 | 29 | 30 | 354   |
| 1163         | 29            | 29 | 29 | 28 |    |    |    |    |    |    |    |    | 115   |
|              |               |    |    |    |    |    |    |    |    |    |    |    | 3486  |

Table 2.6: Missing entries in Ömer Ağa's sultanic diary, 1740-1750

|              | Hegira Months |   |   |   |   |   |   |   |   |    |    |    |       |   |
|--------------|---------------|---|---|---|---|---|---|---|---|----|----|----|-------|---|
| Year<br>(H.) | 1             | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | Total |   |
| 1153         |               |   |   |   |   |   |   |   |   |    |    |    |       |   |
| 1154         |               |   |   |   |   |   |   |   |   |    |    |    |       |   |
| 1155         |               |   |   |   |   |   |   |   |   |    |    |    |       |   |
| 1156         |               |   |   |   |   |   |   |   |   |    |    |    | 1     | 1 |
| 1157         |               |   |   |   |   |   |   |   |   |    |    |    |       |   |
| 1158         |               |   |   |   |   |   |   |   |   |    |    |    |       |   |
| 1159         |               |   |   |   |   |   |   |   |   |    |    |    |       |   |
| 1160         |               |   |   |   |   |   |   |   |   |    |    |    |       |   |
| 1161         |               |   |   |   |   |   |   |   |   |    |    |    |       |   |
| 1162         |               |   | 1 |   |   |   |   |   |   |    |    | 1  |       |   |
| 1163         |               | 1 |   |   |   |   |   |   |   |    |    |    | 1     |   |
|              |               |   |   |   |   |   |   |   |   |    |    |    | 3     |   |

The table below presents the starting days of each month in Ömer Ağa's sultanic diary. A meticulous analysis of the correspondence between the month-days and the weekdays reveals sixteen instances of altered dates. Thirteen of these alterations are noted, while three are silent. The subsequent tables illustrate the distribution of these date changes across both the Hegira and Gregorian systems.

Table 2.7: First days of months in Ömer Ağa's sultanîc diary, 1740-1750

| Year<br>(H.) | Hegira Months     |     |                   |     |                   |     |                   |                   |                   |     |                   |     | First -<br>Last<br>Days |
|--------------|-------------------|-----|-------------------|-----|-------------------|-----|-------------------|-------------------|-------------------|-----|-------------------|-----|-------------------------|
|              | 1                 | 2   | 3                 | 4   | 5                 | 6   | 7                 | 8                 | 9                 | 10  | 11                | 12  |                         |
| 1153         |                   |     |                   |     |                   | Wed | Fri               | Sat               | Sun <sup>77</sup> | Tue | Thu               | Fri | ?-Sat                   |
| 1154         | Sun               | Mon | Tue               | Thu | Fri               | Sun | Mon <sup>78</sup> | Tue               | Thu               | Sat | Mon               | Wed | Sun-Thu                 |
| 1155         | Fri               | Sat | Sun               | Mon | Wed               | Thu | Sat               | Sun               | Mon <sup>79</sup> | Wed | Fri               | Sun | Fri-Mon                 |
| 1156         | Tue               | Wed | Fri               | Sat | Sun               | Tue | Wed               | Thu <sup>80</sup> | Fri <sup>81</sup> | Sun | Tue               | Thu | Tue-Sun                 |
| 1157         | Sat               | Mon | Wed               | Thu | Fri               | Sat | Mon <sup>82</sup> | Tue               | Wed               | Fri | Sun               | Mon | Sat-Tue                 |
| 1158         | Wed               | Fri | Sun               | Mon | Wed               | Thu | Fri               | Sun               | Mon               | Wed | Thu               | Sat | Wed-Sat                 |
| 1159         | Sun               | Tue | Thu               | Fri | Sun               | Mon | Wed               | Fri               | Fri <sup>83</sup> | Sun | Mon               | Wed | Sun-Thu                 |
| 1160         | Fri               | Sat | Mon               | Tue | Thu               | Sat | Sun               | Mon               | Tue <sup>84</sup> | Thu | Sat               | Mon | Fri-Mon                 |
| 1161         | Tue <sup>85</sup> | Thu | Sat               | Sun | Mon               | Wed | Thu               | Sat               | Sun               | Tue | Wed               | Fri | Tue-Sat                 |
| 1162         | Sun               | Mon | Tue <sup>86</sup> | Thu | Sat <sup>87</sup> | Sun | Mon               | Wed               | Thu <sup>88</sup> | Sat | Tue <sup>89</sup> | Wed | Sun-Thu                 |
| 1163         | Fri <sup>90</sup> | Sat | Sun <sup>91</sup> | Tue |                   |     |                   |                   |                   |     |                   |     | Fri-?                   |

<sup>77</sup> The first day of Ramadan 1153 is considered as Monday (1<sup>st</sup> count), and later altered as Sunday (2<sup>nd</sup> count). In the latest count, it is Sunday, 20 November 1740.

<sup>78</sup> The first day of Receb 1154 is considered as Tuesday (1<sup>st</sup> count), and later altered as Monday (2<sup>nd</sup> count). In the latest count, it is Monday, 11 September 1741.

<sup>79</sup> The first day of Ramadan 1155 is considered as Tuesday (1<sup>st</sup> count), and later altered as Monday (2<sup>nd</sup> count). In the latest count, it is Monday, 29 October 1742.

<sup>80</sup> The first day of Şaban 1156 is considered as Friday (1<sup>st</sup> count), and later altered as Thursday (2<sup>nd</sup>&3<sup>rd</sup> count). In the latest count, it is Thursday, 19 September 1743.

<sup>81</sup> The first day of Ramadan 1156 is considered as Saturday (1<sup>st</sup>&2<sup>nd</sup> count), and later altered as Saturday (3<sup>rd</sup> count). In the latest count, it is Saturday, 18 October 1743.

<sup>82</sup> The first day of Şaban 1157 is considered as Sunday (1<sup>st</sup> count), and later altered as Monday (2<sup>nd</sup> count). In the latest count, it is Monday, 10 August 1744.

<sup>83</sup> The first day of Ramadan 1159 is considered as Saturday (1<sup>st</sup> count), and later altered as Friday (2<sup>nd</sup> count). In the latest count, it is Friday, 16 September 1746.

<sup>84</sup> The first day of Ramadan 1160 is considered as Wednesday (1<sup>st</sup> count), and later altered as Tuesday (2<sup>nd</sup> count). In the latest count, it is Tuesday, 5 September 1747.

<sup>85</sup> The first day of Muharrem 1161 is considered as Monday (1<sup>st</sup> count), and later altered as Tuesday (2<sup>nd</sup> count). In the latest count, it is Tuesday, 2 January 1748.

<sup>86</sup> The first day of Rebîyülevvel 1162 is considered as Wednesday (1<sup>st</sup> count), and later altered as Monday (2<sup>nd</sup> count). In the latest count, it is Monday, 18 February 1749.

<sup>87</sup> The first day of Cemaziyelevvel 1162 is considered as Friday (1<sup>st</sup> count), and later altered as Saturday (2<sup>nd</sup> count). In the latest count, it is Saturday, 19 April 1749.

<sup>88</sup> The first day of Ramadan 1162 is considered as Friday (1<sup>st</sup> count), and later altered as Thursday (2<sup>nd</sup> count). In the latest count, it is Thursday, 14 August 1749.

<sup>89</sup> The first day of Zilkade 1162 is considered as Monday (1<sup>st</sup> count), and later altered as Tuesday (2<sup>nd</sup> count). In the latest count, it is Tuesday, 14 October 1749.

<sup>90</sup> The first day of Muharrem 1163 is considered as Thursday (1<sup>st</sup> count), and later altered as Friday (2<sup>nd</sup> count). In the latest count, it is Friday, 12 December 1749.

<sup>91</sup> The first day of Rebîyülevvel 1163 is considered as Monday (1<sup>st</sup> count), and later altered as Sunday (2<sup>nd</sup> count). In the latest count, it is Sunday, 18 February 1750.

Table 2.8: The distribution of Ömer Ağa's date alterations in Hegira Calendar

|           | Hegira Months |   |   |   |   |   |   |   |   |    |    |    |       |
|-----------|---------------|---|---|---|---|---|---|---|---|----|----|----|-------|
| Year (H.) | 1             | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | Total |
| 1153      |               |   |   |   |   |   |   |   | 1 |    |    |    | 1     |
| 1154      |               |   |   |   |   |   | 1 |   |   |    |    |    | 1     |
| 1155      |               |   |   |   |   |   |   |   | 1 |    |    |    | 1     |
| 1156      |               |   |   |   |   |   |   | 1 | 1 |    |    |    | 2     |
| 1157      |               |   |   |   |   |   | 1 |   |   |    |    | 1  | 2     |
| 1158      |               |   |   |   |   |   |   |   |   |    |    |    | 0     |
| 1159      |               |   |   |   |   |   |   |   | 1 |    |    |    | 1     |
| 1160      |               |   |   |   |   |   |   |   | 1 |    |    |    | 1     |
| 1161      | 1             |   |   |   |   |   |   |   |   |    |    |    | 1     |
| 1162      |               |   | 1 |   | 1 |   |   |   | 1 |    | 1  |    | 4     |
| 1163      | 1             |   | 1 |   |   |   |   |   |   |    |    |    | 2     |
|           |               |   |   |   |   |   |   |   |   |    |    |    | 16    |

Table 2.9: The distribution of Ömer Ağa's date alterations in Gregorian calendar

|      | Months |   |   |   |   |   |   |   |   |    |    |    |       |
|------|--------|---|---|---|---|---|---|---|---|----|----|----|-------|
| Year | 1      | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | Total |
| 1740 |        |   |   |   |   |   |   |   |   |    |    | 1  | 1     |
| 1741 |        |   |   |   |   |   |   |   |   | 1  |    |    | 1     |
| 1742 |        |   |   |   |   |   |   |   |   |    | 1  |    | 1     |
| 1743 |        |   |   |   |   |   |   |   |   | 2  |    |    | 2     |
| 1744 |        |   |   |   |   |   |   |   | 1 |    |    |    | 1     |
| 1745 | 1      |   |   |   |   |   |   |   |   |    |    |    | 1     |
| 1746 |        |   |   |   |   |   |   |   |   | 1  |    |    | 1     |
| 1747 |        |   |   |   |   |   |   |   | 1 |    |    |    | 1     |
| 1748 | 1      |   |   |   |   |   |   |   |   |    |    |    | 1     |
| 1749 |        | 1 |   | 1 |   |   |   | 1 |   |    | 1  | 1  | 5     |
| 1750 |        | 1 |   |   |   |   |   |   |   |    |    |    | 1     |
|      |        |   |   |   |   |   |   |   |   |    |    |    | 16    |

Table 2.10: Lunar date alterations in Ömer Ağa's sultanic diary, 1740-1750

| Gregorian Date    | Days of the Week | No | Hegira Date             |
|-------------------|------------------|----|-------------------------|
| 14 December 1740  | Wednesday        | 1  | 24-25 Ramazan 1153      |
| 5 October 1741    | Thursday         | 2  | 24-25 Recep 1154        |
| 23 November 1742  | Friday           | 3  | 25-26 Ramazan 1155      |
| 18 October 1743   | Friday           | 4  | 29-30 Şaban 1156        |
| 31 October 1743   | Thursday         | 5  | 13-14 Ramazan 1156      |
| 4 September 1744  | Friday           | 6  | 27-27 Recep 1157        |
| 15 Ocak 1745      | Friday           | 7  | 11-12 Zilhicce 1157     |
| 11 October 1746   | Tuesday          | 8  | 25-26 Ramazan 1159      |
| 30 September 1747 | Saturday         | 9  | 25-26 Ramazan 1160      |
| 11 January 1748   | Thursday         | 10 | 11-11 Muharrem 1161     |
| 28 February       | Friday           | 11 | 10-11 Rebiyülevvel      |
| 22 April          | Tuesday          | 12 | 4-4 Cemaziyelevvel 1162 |
| 28 August 1749    | Thursday         | 13 | 14-15 Ramazan           |
| 8 November        | Saturday         | 14 | 26-26 Zilkade           |
| 20 December       | Saturday         | 15 | 10-10 Muharrem 1163     |
| 18 February       | Wednesday        | 16 | 10-11 Rebiyülevvel      |

The following table analyze the specific language Ömer Ağa used when altering dates in his diary. It categorizes the phrases he employed for corrections, revealing distinct linguistic patterns and offers a practical glossary of the terminology used in eighteenth-century temporal negotiation.

Table 2.11: Linguistic patterns of date alterations in Ömer Ağa's sultanic diary

| No | Linguistic Pattern                                                                                             |
|----|----------------------------------------------------------------------------------------------------------------|
| 1  | ...müşahede olunmamağla.... itibar olunmuş idi, hilal ... müşahede olunup... sabit olmağla... vaki oldu.       |
| 2  | ...itibarıyla... vaki olmuş idi ... sabit olmağla... vaki oldu.                                                |
| 3  | Rüyet-i hilal-i... vaki olmamağla... hilal ... olmuş idi... rüyet-i hilalin sübut... vaki olacak... vaki oldu. |
| 4  | ...sabit olup tekmil-i selasin... ilam vürud etmekle... olduğu işaa olundu.                                    |
| 5  | ...sübutu muhakkak olmağla... vaki oldu                                                                        |
| 6  | ...zabt-ı takvim itibarıyla... olunup                                                                          |
| 7  | (silent date alteration)                                                                                       |
| 8  | ...sübutu mütehakkık olup... vaki oldu.                                                                        |
| 9  | ...sübutu ilamı ... olup...                                                                                    |
| 10 | ...sabit olmağla... vaki olduğundan...                                                                         |
| 11 | ...sübutu ilamı... vaki oldu.                                                                                  |
| 12 | (silent date alteration)                                                                                       |
| 13 | ...sübutu ilamı... vaki oldu.                                                                                  |
| 14 | (silent date alteration)                                                                                       |
| 15 | ... sabit olmağla ... vaki oldu.                                                                               |
| 16 | ...sübutu mütehakkık olmağla... vaki olmağla...                                                                |

The final table reveals a striking pattern: Ömer Ağa's date alterations were not randomly distributed across the week. A clear majority occurred at the end of the week, with five on Fridays and four on Thursdays. Tellingly, no alterations were ever recorded on Mondays or Sundays.

This distribution strongly suggests that official announcements of chronological adjustments followed a deliberate schedule. Preliminary findings suggest that the residents of Istanbul learned to anticipate potential calendar shifts toward the end of the week, perhaps timed to coincide with the major public gathering for Friday prayers. The data, therefore, does more than just document instances of change; it reveals the underlying administrative and cultural pulse of Ottoman timekeeping at the capital, a system where even flexibility had a discernible and predictable rhythm.

Table 2.12: Lunar date alterations in Ömer Ağa's Sultanic diary by weekdays

| Year  | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday | Total |
|-------|--------|---------|-----------|----------|--------|----------|--------|-------|
| 1740  |        |         | 1         |          |        |          |        | 1     |
| 1741  |        |         |           | 1        |        |          |        | 1     |
| 1742  |        |         |           |          | 1      |          |        | 1     |
| 1743  |        |         |           | 1        | 1      |          |        | 2     |
| 1744  |        |         |           |          | 1      |          |        | 1     |
| 1745  |        |         |           |          | 1      |          |        | 1     |
| 1746  |        | 1       |           |          |        |          |        | 1     |
| 1747  |        |         |           |          |        | 1        |        | 1     |
| 1748  |        |         |           | 1        |        |          |        | 1     |
| 1749  |        | 1       |           | 1        | 1      | 2        |        | 5     |
| 1750  |        |         | 1         |          |        |          |        | 1     |
| Total | 0      | 2       | 2         | 4        | 5      | 3        | 0      | 16    |

While the findings from Ömer Ağa's diary require comparison with other cases, his text provides a powerful model for future research. Crucially, this study advocates for a fundamental methodological shift: from a prescriptive, top-down view of what should have happened in timekeeping to a descriptive, bottom-up approach that reveals what actually happened. This reframing opens new avenues for research, allowing scholars to investigate how the empire's temporal infrastructure functioned not through rigid decrees alone, but through a dynamic interplay of local observation, regional custom, and institutional response.

The following section takes up that challenge by systematically analyzing documented cases of lunar-date discrepancies across a range of social and administrative contexts in the eighteenth century. It begins with an examination of the beginning and end of Ramadan in the year of 1711 in Edirne and the comparison 1740s in Istanbul and Damascus. It then investigates contradictory accounts of the deaths of two Ottoman sultans, in 1703 and 1739, to show how even the most high-profile events were subject to conflicting temporal accounts. Finally, it turns into two court cases, from 1663 and 1788, in which disagreements over lunar dates directly impacted legal rulings concerning debt repayment. These examples reveal how temporal flexibility was not merely a theoretical construct, but a lived reality with profound consequences for Ottoman subjects. Far from being anomalies, such variations were foundational to the workings of Ottoman time, shaping decisions, structuring disputes, and revealing the constant recalibration required to navigate a world governed by the Moon.

## 2.2 Daily Life Scenarios

Unlike modern standardized and uniform timekeeping methods, Ottoman society embraced a dynamic and locally responsive approach, which valued immediate observation over abstract calculation, creating multiple chronologies for the same events. To illustrate their effects in daily life, this section presents six case studies drawn primarily from eighteenth-century sources, including court registers, chronicles, and diaries. These examples are categorized into three types of scenarios, each revealing different facets of the empire's flexible temporal culture.

In the context of communal gatherings, the comparison of the beginning of Ramadan in Istanbul and Damascus during the 1740s highlights how geographical distance could influence the divergence in local calendars. In contrast, the case of the end of Ramadan in Edirne in 1711 underscores the central role of negotiation in shaping communal timekeeping, regardless of spatial proximity.

In the sphere of death records, the study examines the passing of Sultan Mustafa II in 1703 and Sultan Ahmed III in 1736, both in Istanbul, to emphasize that even figures located at the very center of the administrative system were not immune to discrepancies

in the dating of events. These variations point to the limits of centralized authority in enforcing uniform temporal standards.

In the realm of debt repayment arrangements, two court cases from Istanbul, one from 1663 and the other from 1788, are analyzed to demonstrate how divergent counting practices could impact legal and financial transactions. These cases also extend the chronological scope of the study beyond the eighteenth century, suggesting that the observed patterns were not confined to a single period.

Across all six cases, a consistent pattern emerges: the same event is often associated with different days of the Hegira month, depending on the source. This recurring divergence highlights the coexistence of multiple, locally grounded temporal frameworks in Ottoman society. However, the current scholarship often overlooks these complexities or confines its discussion to a few select months of heightened religious importance, such as Ramadan and Zilhicce, when precision in lunar sighting was crucial for ritual observances. Moreover, analyses tend to summarize these phenomena in passing, without engaging in a detailed, case-based exploration of how such discrepancies played out in everyday practice throughout the entire lunar year.

### 2.2.1 Beginning of Fast

The Hegira calendar has long exhibited notable flexibility in marking the beginnings and ends of its months, owing to its fundamental reliance on the visual sighting of the lunar crescent.<sup>92</sup> Among the most sensitive and consequential moments in the calendar year were the onset and conclusion of Ramadan. These dates not only governed the fasting period but also determined the timing of Eid al-Fitr, celebrated on the first day of the following month, Şevval. As a result, Ramadan became one of the most frequently

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<sup>92</sup> A striking example occurred in 1978 when Muslim-majority countries began Ramadan on four separate dates and ended it on three different dates, underscoring the profound challenges of establishing a universally accepted lunar reckoning. Libya, Kuwait, and Iraq began on August 4; Algeria, Saudi Arabia, Egypt, Jordan, Indonesia, Lebanon, Syria, and Tunisia on August 5; Turkey, Malaysia, Nigeria, Morocco, Iran, and Afghanistan on August 6; and Pakistan on August 7. The same inconsistency occurred with the Eid al-Fitr celebrations. Saudi Arabia, Egypt, Iraq, Jordan, Kuwait, Libya, Lebanon, and Syria celebrated on September 3, while Turkey, Malaysia, Tunisia, Nigeria, Morocco, Indonesia, Afghanistan, Algeria, and Iran marked it on September 4, with Pakistan following on September 5. This ongoing disparity highlights the challenges of unifying the lunar-based calendar users across the Muslim world. See Baltacı, “Rüyet-i Hilal Münakaşaları,” 43.

recorded and scrutinized months in Ottoman sources, its demarcation offering a window into the empire's complex and often fragmented timekeeping practices.

The variability in Ramadan's observance across different periods and places reveals a rich tapestry of localized interpretations of a shared calendrical system. By analyzing its duration and the shifting demarcation of its start and end, historians can better understand the broader dynamics of Ottoman temporal culture. This section explores two illustrative cases. The first examines discrepancies between Istanbul and Damascus in the 1740s by comparing the diaries of two contemporaries. The second focuses on Edirne in 1711, where residents of the same city celebrated Eid on different days, highlighting how even within a shared geographic space, temporal experiences could diverge.

As mentioned in the previous section, sultanic diaries, offer invaluable chronological benchmarks from the perspective of the imperial court.<sup>93</sup> When read alongside contemporary sources from the provinces, such as the diary of Ahmed ibn Budayri, a barber in Damascus whose records span from 1741 to 1762,<sup>94</sup> Ömer Ağa's sultanic diary provides a powerful comparative framework. Budayri's documentation, grounded in local practice, captures the rhythms of time as experienced in a provincial urban setting, far from the imperial court. The juxtaposition of these two sources enables an illuminating comparison between the temporal cultures of Istanbul and Damascus, highlighting the coexistence and negotiation of multiple temporalities within the broader Ottoman world.

Ömer Ağa's sultanic diary records ten consecutive Ramadan cycles. Characterized by its uninterrupted and precise style, the text offers a daily account of the imperial court's routines, including moon sightings, religious observances, and official proclamations. In contrast, Budayri's entries are more sporadic and vary in frequency, from multiple notes in a single month to long gaps without entries. His recordkeeping, though less consistent, spans a longer period: from Muharrem 1154 (March 1741) to Muharrem 1175 (August 1761). Despite its irregularity, Budayri's diary remains an invaluable local chronicle,

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<sup>93</sup> Fikret Sarıcaoğlu, "Ruzname," *Türkiye Diyanet Vakfı İslam Ansiklopedisi* (İstanbul, 2008). Soydemir, *Sultan I. Mahmud Ruznameleri (1730-1754) (İnceleme ve Çeviriyazı Metin)*.

<sup>94</sup> Ahmed Shihabaddin al-Budayri, *Hawadit Dimashq Ash-Sham al-Yawmiyya*. Also see, Sajdi, *The Barber of Damascus: Nouveau Literacy in the Eighteenth-Century Ottoman Levant*.

especially in its attention to the beginning of Ramadan, a date he often records based on communal moon sightings or local announcements.

The overlapping years of the two diaries allow for comparative analysis across nine potential Ramadan cycles (1154–1162). However, Budayri does not provide Ramadan dates for the years 1157, 1158, and 1162, reducing the sample to six years. Within this set, the comparison of the recorded beginning and ending dates of Ramadan reveals a telling pattern: in three cases, the dates align between Istanbul and Damascus; in the other three, notable discrepancies appear. These divergences, detailed in Table 2.13 below, offer concrete evidence of the temporal disjunctions that could arise between center and periphery due to differing moon-sighting practices, communication delays, or local interpretations of religious timing.

Table 2.13: The comparison of the first days of Ramadans, 1741-1750, excluding corrections

| <b>Hegira<br/>Year</b> | <b>Sources</b>                           |                                         | <b>Date<br/>Discrepancies</b> |
|------------------------|------------------------------------------|-----------------------------------------|-------------------------------|
|                        | Ömer Ağa's Sultanlic Diary<br>(Istanbul) | Ahmed ibn Budayri's Diary<br>(Damascus) |                               |
| 1154                   | Thursday                                 | Friday                                  | ±1                            |
| 1155                   | Tuesday                                  | Monday                                  | ±1                            |
| 1156                   | Saturday                                 | Saturday                                | 0                             |
| 1157                   | Wednesday                                | -                                       | ?                             |
| 1158                   | Monday                                   | -                                       | ?                             |
| 1159                   | Saturday                                 | Monday                                  | ±2                            |
| 1160                   | Wednesday                                | Wednesday                               | 0                             |
| 1161                   | Sunday                                   | Sunday                                  | 0                             |
| 1162                   | Friday                                   | -                                       | ?                             |

This table reflects the initial dating of the beginning of Ramadan in each source and does not account for subsequent corrections. As previous sections have discussed, Ottoman timekeeping allowed for retroactive calendar adjustments based on delayed or conflicting sighting reports. These revisions could take place days or even weeks after the original entry, typically once more authoritative or widespread confirmations arrived from other regions. They involved redefining the first day of the month and realigning lunar dates with the corresponding days of the week. Overlooking these modifications risks producing a distorted picture of temporal synchronization across different regions and sources.

Ömer Ağa's diary offers a particularly vivid illustration of this process. Among the nine Ramadan cycles recorded between 1153 and 1162, five underwent retroactive correction in the diary. An illustrative example comes from Ramadan 1155 (October–November 1742). Initially, the scribe recorded that no crescent moon had been sighted in Istanbul on Monday evening, and accordingly, Tuesday was declared the first day of Ramadan. Yet by the final week of the month, reports from other locales confirmed that the moon had in fact been observed on Monday. In response, the court retroactively recalibrated the calendar: the day initially recorded as Friday the 25th of Ramadan was revised to Friday the 26th. This correction is noted in the diary as follows:

Yevm-i İsneyn'de rüyet-i hilal-i Ramazan vaki olmamağla gurre-i hilal-i Ramazan yevm-i Sülâsa olmuş idi. Lakin bazı mahalde rüyet-i hilalin yevm-i İsneyn'de sübut haberi vürud etmekle yirmi beşinci vaki olacak yevm-i Cuma yirmi altıncı yevm vaki oldu.<sup>95</sup>

Such recalibrations were not isolated to 1155. Similar remarks, ranging from full explanatory entries to brief notes, appear in other years as well, suggesting a systematic practice of calendar correction. These annotations, translated and contextualized, are presented in Table 2.14. By examining both the initial entries and their subsequent modifications, it becomes possible to reconstruct how multiple timekeeping practices coexisted, occasionally diverging, and ultimately converging through ongoing acts of communication, interpretation, and revision.

While Ömer Ağa's records contain five documented corrections to the beginning of Ramadan during the 1740s, Budayri's chronicle from Damascus includes only a single correction among the six Ramadans he recorded between 1741 and 1750. In his entry for Ramadan 1154 (1741), Budayri writes: "And in this year, the fasting of Ramadan began on a Friday, but by the end of the month it was confirmed that the first day had actually been Thursday..."<sup>96</sup> This single correction may seem modest when compared to Ömer Ağa's more frequent adjustments, yet the disparity is revealing. It invites further research into the differing styles and intentions behind recordkeeping in Istanbul and Damascus,

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<sup>95</sup> Soydemir, *Sultan I. Mahmud Ruznameleri (1730-1754) (İnceleme ve Çeviriyazı Metin)*, 752.

<sup>96</sup> "و في هذه السنة كان صوم رمضان الجمعة، ثم ثبت في آخره أن الشهر كان أوله الخميس..." Ahmed Shihabaddin al-Budayri, *Hawadit Dimashq Ash-Sham al-Yawmiyya*, 10.

as well as the broader dynamics of local timekeeping practices. Table 2.15 shows the last counting, including the later corrections by both recordkeepers.

Table 2.14: Initial dating and corrections of beginning of Ramadans in Ömer Ağa's sultanlic diary

| Text <sup>97</sup>                                                                                                                                                                                                                                        | Hegira Year | First Day of Ramadan | Translation                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| İkinci yevm-i Cuma'da...                                                                                                                                                                                                                                  | 1154        | Thursday             | 2 <sup>nd</sup> Ramadan Friday...                                                                                                                                                                                                                       |
| Gurre-i Ramazan... olan yevm-i Sülâsa'da...                                                                                                                                                                                                               | 1155        | Tuesday, Monday      | 1 <sup>st</sup> Ramadan Tuesday...                                                                                                                                                                                                                      |
| Yevm-i İsneynde rüyet-i hilal-i Ramazan vaki olmamağla gurre-i hilal-i Ramazan yevm-i Sülâsa olmuş idi. Lakin bazı mahalde rüyet-i hilalin yevm-i İsneynde sübut haberi vürud etmekle yirmi beşinci vaki olacak yevm-i Cuma yirmi altıncı yevm vaki oldu. |             |                      | With the non-sighting of the Ramadan crescent on Monday, the first day of Ramadan became Tuesday. However, when news arrived that the crescent was seen on Monday in some places, the 25 <sup>th</sup> Friday became 26 <sup>th</sup> day of the month. |
| Gurre-i Ramazan-ı şerif olan yevm-i Sebt'de...                                                                                                                                                                                                            | 1156        | Saturday, Friday     | 1 <sup>st</sup> Ramadan Saturday...                                                                                                                                                                                                                     |
| On üçüncü yevm-i Hamis... gurre-i Ramazan yevm-i Cuma'dan sübutu muhakkak olmağla on üçüncü yevm-i Hamis on dördüncü vaki oldu.                                                                                                                           |             |                      | 13 <sup>th</sup> [Ramadan] Thursday... with the confirmation that the 1 <sup>st</sup> day of Ramadan would be Friday, the 13 <sup>th</sup> Thursday became the 14 <sup>th</sup> day.                                                                    |
| Gurre-i Ramazan... olan yevm-i Erbaa'da...                                                                                                                                                                                                                | 1157        | Wednesday            | 1 <sup>st</sup> Ramadan Wednesday...                                                                                                                                                                                                                    |
| Gurre-i Ramazan olan yevm-i İsneyn'de...                                                                                                                                                                                                                  | 1158        | Monday               | 1 <sup>st</sup> Ramadan Monday...                                                                                                                                                                                                                       |
| Gurre-i Ramazan-ı şerif olan yevm-i Sebt'de...                                                                                                                                                                                                            | 1159        | Saturday, Friday     | 1 <sup>st</sup> Ramadan Saturday...                                                                                                                                                                                                                     |
| Yirmi beşinci yevm-i Sülâsa'da... Ramazan-ı şerif'in yevm-i Cumadan sübutu müteahakkık olup yirmi beşinci olan yevm-i Sülâsa yirmi altıncısı vaki oldu.                                                                                                   |             |                      | 25 <sup>th</sup> [Ramadan] Tuesday... with the confirmation that the 1 <sup>st</sup> day of Ramadan was Friday, the 25 <sup>th</sup> Tuesday became the 26 <sup>th</sup> day.                                                                           |
| Gurre-i Ramazan-ı şerif olan yevm-i Erbaa'da...                                                                                                                                                                                                           | 1160        | Wednesday, Tuesday   | 1 <sup>st</sup> Ramadan Wednesday...                                                                                                                                                                                                                    |
| Yirmi beşinci yevm-i Sebt'de... ibtida-yı Ramazan-ı şerif yevm-i Sülâsa'dan sübutu ilamı etraftan vürud etmekle yevm-i Sebt yirmi altıncı olup...                                                                                                         |             |                      | 25 <sup>th</sup> [Ramadan] Saturday... with the declaration that the 1 <sup>st</sup> day of Ramadan was reconsidered Tuesday, Saturday became the 26 <sup>th</sup> ...                                                                                  |
| Gurre-i Ramazan-ı şerif olan yevm-i Ahad'da...                                                                                                                                                                                                            | 1161        | Sunday               | 1 <sup>st</sup> Ramadan Sunday...                                                                                                                                                                                                                       |
| Gurre-i Ramazan-ı şerif olan yevm-i Cuma...                                                                                                                                                                                                               | 1162        | Friday, Thursday     | 1 <sup>st</sup> Ramadan Friday...                                                                                                                                                                                                                       |
| On üçüncü yevm-i Erbaa'da... ibtida-yı Ramazan-ı şerif'in yevm-i Hamis'den sübutu ilamı vürud etmekle yevm-i Hamis on beşinci vaki oldu.                                                                                                                  |             |                      | 13 <sup>th</sup> [Ramadan] Wednesday... with the declaration that the 1 <sup>st</sup> day of Ramadan was reconsidered Thursday, Thursday became the 15 <sup>th</sup> .                                                                                  |

<sup>97</sup> Soydemir, *Sultan I. Mahmud Ruznameleri (1730-1754) (İnceleme ve Çeviriyazı Metin)*, 693, 749, 752, 803, 804, 853, 901, 942, 945, 985, 988, 1023, 1059, 1060.

Table 2.15: The comparison of the first days of Ramadans, 1741-1750, including corrections

| Hegira<br>Year | Sources                                 |                                         | Date<br>Discrepancies |
|----------------|-----------------------------------------|-----------------------------------------|-----------------------|
|                | Ömer Ağa's Sultanic Diary<br>(Istanbul) | Ahmed ibn Budayri's Diary<br>(Damascus) |                       |
| 1154           | Thursday                                | <del>Friday</del> , Thursday            | 0                     |
| 1155           | <del>Tuesday</del> , Monday             | Monday                                  | 0                     |
| 1156           | <del>Saturday</del> , Friday            | Saturday                                | ±1                    |
| 1157           | Wednesday                               | -                                       | ?                     |
| 1158           | Monday                                  | -                                       | ?                     |
| 1159           | <del>Saturday</del> , Friday            | Monday                                  | ±3                    |
| 1160           | <del>Wednesday</del> , Tuesday          | Wednesday                               | ±1                    |
| 1161           | Sunday                                  | Sunday                                  | 0                     |
| 1162           | <del>Friday</del> , Thursday            | -                                       | ?                     |

The imperial capital appears more flexible, with visible room for negotiation and recalibration of lunar dates, while Damascus seems to uphold a more stable and consistent reckoning. Yet this impression requires caution. The difference likely stems not only from regional administrative practices but also from the nature and function of the sources themselves. Ömer Ağa's sultanic diary reflects a systematic bureaucratic logic, written from within the palace apparatus, whereas Budayri's diary is episodic and selective, shaped by local concerns and personal observation. A fuller understanding will require broader comparison across diverse texts and regions over longer time spans.

Nonetheless, what is evident is that in both cities, the inhabitants experienced shifts in the reckoning of days, reflecting the real-time application of correction mechanisms embedded in the practical method of moon-sighting. While it may be tempting to attribute such discrepancies solely to communication delays in the pre-telegraph era, the following case suggests that negotiation, rather than mere transmission speed, played the dominant role in harmonizing the lunar calendar across the empire.

An illustrative example of this dynamic can be found in the winter of 1711, shortly after the conclusion of the Pruth Campaign, when the Ottoman army returned to Edirne. While stationed there during Ramadan, the soldiers maintained their fast. On Thursday, December 12, they treated the day as the 29th of Ramadan and continued fasting. Yet, the residents of Edirne had already declared the beginning of Şevval and were celebrating the Eid. The following day, Friday, both soldiers and townspeople gathered in the mosque for communal prayer. Although they were aligned by the day of the week, their calendars

diverged: for the soldiers, it was the first day of Şevval; for the townspeople, the second Şevval, creating a striking juxtaposition in their temporal experience.

The source of the discrepancy lay in a moon-sighting report from the nearby village of Hafsa on the previous evening, Wednesday, December 11. A group of locals claimed to have seen the crescent moon and informed the judge of Edirne the following morning. The judge entered their testimony into the official register and transmitted it to the grand vizier, who was then leading the imperial army. Upon receiving the report, the grand vizier Baltacı Mehmed Paşa summoned Abdullah Efendi, the judge of the imperial army, and consulted him in accordance with Islamic legal procedure. Abdullah Efendi replied that a larger public assembly was required to verify the testimony and advised that the witnesses should be questioned in person. A decree was immediately issued, and the witnesses brought before the grand vizier. However, upon questioning, they failed to respond satisfactorily, and their testimony was rejected. As a result, the day was not declared the Eid.

A firsthand account of the episode appears in the diary of Göynüklü Ahmed Efendi, a treasury scribe (*hazine-i birun katibi*) serving with the imperial army, during the period. In his entry, he records that despite the official rejection of the sighting, the judge of Edirne maintained, “Today is the Eid,” which led residents to break their fasts. Meanwhile, the soldiers, acting in accordance with the decision of the military and central authorities, continued fasting. The event reveals that even when sharing the same geography, communities could operate on different lunar calendars depending on which authorities they followed.

This episode vividly illustrates how even in close geographic proximity, temporal coordination could break down, not due to ignorance or inefficiency, but because of the procedural weight assigned to legal testimony, communal consensus, and religious legitimacy. It underscores that the Ottoman approach to timekeeping was not merely a matter of observation or transmission, but of negotiation and recognition within a legal-social framework.

Table 2.16: Göynüklü Ahmed Efendi's diary, Ramadan 1123

| <u>Text</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <u>Translation</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Mah-ı Ramazan-ı şerifin yigirmi dördüncü Cumairtesi günü otağ-ı hümayunda iki kıst mevacib ihrac olunup kula virildi. Fi 24 Ramazan sene 1123. Pazar günü meks. Pazartesi meks. Salı günü meks. Çarşenbi günü meks. Pençşenbi günü meks.</p> <p>Gün-i mezburda kuşluk vaktinde karye-i Hafsa'da Ay'ı görüp şahadet eylediklerinde, Edirne Monlası faziletli efendi hazretleri sicillata kayd itdirdüp, ber-mucib-i hüccet-i şeriyyeyi sadr-ı azam hazretlerine gönderdiklerinde,</p> <p>faziletli ordu-yı hümayun kadısı Abdullah Efendi be-huzur-ı hazret-i sadr-ı aliye davet olunup, mukteza-yı şer-i şerife müracaat ve istisfar buyurduklarında, kadı efendi şöyle cevap buyurdılar ki Sadr-ı Azam hazretlerine "cemm-i gafire muhtacdır. Bu şahadet iden kimesnelerin şahadetliğini huzur-ı saadetinizde dinleyüp icra-yı şer oluna," didiklerinde,</p> <p>ol saat ferman-ı ali sadır olunup şahid-i mezburları huzur-ı saadete ihzar olunup sual olundukda suale göre cevap vermeyüp, şahadetleri makbul olmayup ol gün iyd olunmadı. Lakin Edirne Monlası efendi "Bu gün iyddür" dimesi Edirneli oruçların bozup sefer-i hümayundan gelenler bozmamışdır. Mah-ı Şevval-i mükerrrem Cuma'dan zabt idüp ol gün iyd-i şerif olundu.<sup>98</sup></p> | <p>On the twenty-fourth day of the noble month of Ramadan, Saturday, two portions of wages were distributed in the imperial camp and delivered to the soldiers. On the 24<sup>th</sup> of Ramadan, in the year 1123. [25<sup>th</sup>] Sunday rested, [26<sup>th</sup>] Monday passed, then [27<sup>th</sup>] Tuesday, then [28<sup>th</sup>] Wednesday, and then [29<sup>th</sup>] Thursday.</p> <p>On the aforementioned day, during midmorning, some individuals from the village of Hafsa claimed to have sighted the moon and gave their testimony. The esteemed judge of Edirne had their statements recorded in the registers and, in accordance with legal certification, sent the report to the grand vizier.</p> <p>Upon receiving the report, the grand vizier summoned Abdullah Efendi, the respected judge of the imperial army, to his presence. When consulted in accordance with the requirements of Islamic jurisprudence, Abdullah Efendi replied: "This case requires the presence of a larger assembly. Let these witnesses be heard in your presence so that the legal process may proceed accordingly."</p> <p>In response, a decree was immediately issued, and the witnesses were brought before the Grand Vizier. When questioned, they failed to answer properly, and their testimony was not accepted. That day was not declared the eid. However, the judge of Edirne declared, "Today is the eid," which led the local population of Edirne to break their fasts, though those returning from the imperial campaign did not. The month of noble Şevval was officially recorded as beginning on Friday, and that day was observed as the eid.</p> |

## 2.2.2 Moment of Death

To demonstrate that discrepancies in timekeeping extended well beyond ritual months and into the very heart of the state's record-keeping apparatus, this section examines their presence in the historical records of two Ottoman sultans: Mustafa II and Ahmed III. Both cases highlight how even the deaths of former monarchs, events of major political and ceremonial significance, were subject to chronological confusion in the sources. The former, who had been deposed at Edirne in August 1703 during the Edirne Incident, died four months later in December of the same year while under house arrest in Istanbul. His brother and successor, Sultan Ahmed III, ruled for nearly three decades before being

<sup>98</sup> Göynüklü Ahmed Efendi, *Tarih-i Göynüklü*, 123.

dethroned during the revolt in September 1730. He then lived in seclusion within the imperial palace for six years, until his death in June 1736.

Despite the official and public nature of their deaths, chroniclers and recordkeepers from both their own time and subsequent generations present conflicting accounts regarding the exact dates. These discrepancies, which center not on the Hegira year or month but on the specific day within the month, reveal the broader challenges of synchronizing time in the Ottoman world. By comparing these inconsistencies, this study underscores not only the variances in observational methods and local reporting but also the enduring tensions between idealized calendar systems and practical timekeeping realities in Ottoman historiography.

In the final days of December 1703, Sultan Mustafa II drew his last breath, closing a chapter in Ottoman history. His death was a politically charged event. He had been deposed just four months earlier in Edirne during the “Edirne Incident,” a major revolt that brought his brother, Ahmed III, to the throne. Mustafa II died under house arrest in Istanbul. His death, while perhaps expected, needed to be handled with care to finalize the legitimacy of the new regime. One might assume that the new administration of Ahmed III would be meticulous in recording the passing of the man he had replaced. Yet, a comparison of contemporary sources reveals a striking divergence on the specific day of the month.

The task of overseeing the funeral arrangements fell to Silahdar Mehmed Ağa, a senior palace official and a historian in his own right. He was, quite literally, the man in charge of the event. In his chronicle, he recorded the sultan’s death as occurring on 21 Şaban 1115. Other key sources from the period, however, provide different dates. Mehmed Raşid Efendi, who would later be appointed as the official court historian, recorded the event as occurring a day earlier, on 20 Şaban 1115. He was not alone; Defterdar Sarı Mehmed Paşa, a high-ranking finance official and chronicler, also marked the 20<sup>th</sup> Şaban. Uşşakizade İbrahim Efendi, another contemporary historian, likewise used the 20<sup>th</sup> Şaban. To complicate matters further, an anonymous chronicle offered yet another alternative: 22 Şaban 1115. Table 2.17 summarizes this clear disagreement among contemporary observers in the imperial capital.

Table 2.17: Hegira dates for the death of Sultan Mustafa II, 1703

| Ottoman Sources                      | Hegira Date   | Day of the Week |
|--------------------------------------|---------------|-----------------|
| Uşşakizade Efendi <sup>99</sup>      | 20 Şaban 1115 | Saturday        |
| Defterdar Mehmed Paşa <sup>100</sup> | 20 Şaban 1115 | -               |
| Raşid Efendi <sup>101</sup>          | 20 Şaban 1115 | -               |
| Silahdar Mehmed Ağa <sup>102</sup>   | 21 Şaban 1115 | Saturday        |
| Anonymous <sup>103</sup>             | 22 Şaban 1115 | -               |

How can this be explained? Are these simply errors? That is highly unlikely. A more plausible explanation emerges when we analyze the roles of the authors and the critical piece of data: the day of the week.

Two sources, Uşşakizade and Silahdar, provide the weekday: Saturday. This is the anchor. It confirms they are all describing the same day. The Gregorian conversion for this event is Saturday, 29 December 1703. The conflict, therefore, is not about when the sultan died, but about what that Saturday was counted as.

The discrepancies in the Hegira date, ranging from the 20<sup>th</sup> to the 22<sup>nd</sup> of Şaban, can be attributed to differing calculations of when the lunar month began. While the weekday served as a stable referent anchoring these accounts, the inconsistencies in the count of lunar days reveal the interpretative nature of Ottoman timekeeping. Uşşakizade, Raşid, and Defterdar appear to have marked the beginning of Şaban 1115 as a Monday, whereas Silahdar counted from Sunday, and the anonymous chronicler from Saturday. These differences reflect not only the calendar's dependence on moon-sighting but also the broader historiographical variability in how Ottoman recordkeepers interpreted time.

A parallel, and arguably even more revealing, episode unfolded thirty-three years later with the death of Sultan Ahmed III. Enthroned after Mustafa II's deposition in 1703, he

<sup>99</sup> Raşit Gündoğdu, *Uşşakizade Tarihi Tahlil ve Metin (1106-1124 / 1694-1712)* (İstanbul University, PhD Dissertation, 2000), 359.

<sup>100</sup> Defterdar Sarı Mehmed Paşa, *Zübde-i Vekayiat, Tahlil ve Metin (1066-1116 / 1656-1704)*, ed. Abdülkadir Özcan (Ankara: Türk Tarih Kurumu, 1995), 835.

<sup>101</sup> Raşid Mehmed Efendi - Çelebizade İsmail Asım Efendi, *Tarih-i Raşid ve Zeyli*, ed. Abdülkadir Özcan et al. (İstanbul: Klasik, 2013), 716.

<sup>102</sup> Mehmet Topal, *Silahdar Fındıklılı Mehmed Ağa, Nusretname Tahlil ve Metin (1106-1133/1695-1721)* (Marmara University, PhD Dissertation, 2001), 657.

<sup>103</sup> Abdülkadir Özcan (ed.), *Anonim Osmanlı Tarihi (1099-1116 / 1688-1704)* (Ankara: Türk Tarih Kurumu, 2000), 275.

was himself removed from power in the 1730 revolt. He spent his final six years confined to the Topkapı Palace during the reign of his nephew, Mahmud I.

Ahmed III died in June 1736. As with his brother, the death of a deposed monarch was a sensitive state event, representing a definitive break with the previous era and securing the legitimacy of Mahmud I's reign. And, as with his brother, the administrative and historical records for this event include chronological contradictions in terms of month-days.

Subhi Efendi, the official court chronicler for this period, is curiously vague. Serving from 1739 to 1745, he was tasked with compiling a narrative for the years 1730-1744 and editing the works of his predecessors. When recording the event, he notes only the month and year (Safer 1149), omitting the specific day. This omission, far from being an oversight, appears to be a conscious historiographical choice.

Other sources, however, were more precise, and they fundamentally disagree. Hıfzi Ağa, the private secretary (*sır katibi*) of Mahmud I, recorded the death in the sultanic diary as occurring on 13 Safer 1149. Göynüklü Ahmed Efendi, the treasurer of the galleons (*kalyonlar defterdarı*) at that time, concurred, also recording 13 Safer 1149. However, Numanpaşazade Ahmed Paşa, the acting grand vizier (*sadaret kaymakamı*), recorded the death as occurring on 14 Safer 1149. An anonymous recordkeeper also reported 14 Safer 1149. Further variations appear. The diary of Mustafa Efendi, scribe to the chief of the bombardiers (*humbaracıbaşılik katibi*), noted the death as 11 Safer 1149. Şemdanizade Efendi, writing retrospectively in the late eighteenth century but drawing on contemporary sources, cited the date as 12 Safer 1149.

Table 2.18: Hegira dates for the death of Sultan Ahmed III, 1736

| Ottoman Sources                         | Hegira Date    | Day of the Week |
|-----------------------------------------|----------------|-----------------|
| Mustafa Efendi <sup>104</sup>           | 11 Safer 1149  | -               |
| Şemdanizade Efendi <sup>105</sup>       | 12 Safer 1149  | -               |
| Göynüklü Ahmed Efendi <sup>106</sup>    | 13 Safer 1149  | Saturday        |
| Hıfzi Ağa <sup>107</sup>                | 13 Safer 1149  | Saturday        |
| Numanpaşazade Ahmed Paşa <sup>108</sup> | 14 Safer 1149  | Saturday        |
| Anonymous <sup>109</sup>                | 14 Safer 1149  | Saturday        |
| Subhi Efendi <sup>110</sup>             | (-) Safer 1149 | -               |

Once again, the weekday anchor resolves the apparent chaos. The four sources (Göynüklü, Hıfzi, Numanpaşazade, and Anonymous) all agree the day was Saturday. This allows the event to be synchronized with Saturday, 23 June 1736.<sup>111</sup> The discrepancies, therefore, are not factual errors about the event, but different counting styles. Mustafa Efendi likely considered the first day of Safer 1149 to have fallen on a Wednesday, Şemdanizade on a Tuesday, Hıfzi Ağa and Göynüklü Ahmed Efendi on Monday, and Numanpaşazade Ahmed Paşa and the anonymous writer on Sunday.

This brings us back to Subhi Efendi, the official court historian. His job was to write the single, authoritative history of the reign for posterity. He was thus faced with a classic historian's dilemma: what does one do when multiple sources directly contradict each other? The Sultan's private secretary records the 13th, while the office of the Grand Vizier records the 14th.

<sup>104</sup> Karan, *Humbaracıbaşılık Katibi Mustafa Efendi'nin Ruzmerre Mecmuası (1143-1180/1730-1767) İnceleme-Çeviriyazı*, 29.

<sup>105</sup> Şemdanizade Fındıklılı Süleyman Efendi, *Mürî't-Tevarih*, ed. M. Münir Aktepe (İstanbul: İstanbul Üniversitesi Edebiyat Fakültesi, 1976), 1/44.

<sup>106</sup> Göynüklü Ahmed Efendi, *Tarih-i Göynüklü*, 425.

<sup>107</sup> Soydemir, *Sultan I. Mahmud Ruznameleri (1730-1754) (İnceleme ve Çeviriyazı Metin)*, 382.

<sup>108</sup> Elif Sabır, *Sadaret Kaymakamı Numanpaşazade Ahmed Paşa'nın Yazışmalarını Havi Bir Mecmua* (Marmara University, MA Thesis, 2022), 143–144.

<sup>109</sup> TSMA.D, (Topkapı Sarayı Müze Arşivi Defterleri), 2066, 1a.

<sup>110</sup> Subhi Mehmed Efendi, *Subhi Tarihi Sami ve Şakir Tarihleri İle Birlikte*, 298.

<sup>111</sup> While this research argues that Sultan Ahmed III died on Saturday, 23 June 1736, the reported date of his death varies significantly across modern studies. Uzunçarşılı cites 13 June 1736, Danişmend gives 1 July 1736, Aktepe and Özcan both list 24 June 1736, Huart records 30 June 1736, while Kayar notes 22 June 1736. İsmail Hakkı Uzunçarşılı, *Osmanlı Tarihi: Karlofça Antlaşmasından XVIII. Yüzyılın Sonlarına Kadar* (Ankara: Türk Tarih Kurumu, 2011), 4/2/211; Danişmend, *İzahlı Osmanlı Tarihi Kronolojisi*, 4/24; M. Münir Aktepe, "Ahmed III," *Türkiye Diyanet Vakfı İslam Ansiklopedisi* (İstanbul: Türkiye Diyanet Vakfı, 1989); Abdülkadir Özcan, *İmparatorluk Çağının Osmanlı Sultanları - III* (İstanbul: Türkiye Diyanet Vakfı İslam Araştırmaları Merkezi, 2022), 176; Clement Huart, "Ahmad III," *The Encyclopaedia of Islam* (Leiden: Brill, 1913); Kayar, "I. Mahmud Dönemi Kronolojisi: 2 Ekim 1730-14 Aralık 1754 (19 Rebiülevvel 1143-28 Safer 1168)," 2/689.

His solution is a masterful display of historiographical craft. By omitting the specific day, he refuses to privilege one high-level state record over another. He simply states the death occurred in “Safer 1149,” a fact that no source could dispute. This “chronological silence” should be read not as evasion, but as a deliberate methodological choice. To choose a date would be to inscribe a contested fact into the official record. Instead, Subhi, as a historian, chose a different kind of accuracy: the precision of acknowledging ambiguity. His strategic silence, which merits its own future study on the dating habits of court historians, reveals a sophisticated method of navigating historical complexities.

Taken together, these two episodes illuminate more than isolated inconsistencies; they reveal the interpretive and negotiated character of Ottoman timekeeping. The divergences do not reflect error or confusion but rather underscore the flexibility inherent in a lunar calendar system. In both 1703 and 1736, we observe a common pattern: although the numerical day of the lunar month varies across sources, convergence around the day of the week offers a stabilizing mechanism. This coexistence of variation and coherence exemplifies the temporal pluralism that characterized the Ottoman experience of time.

### 2.2.3 Payment of Debt

The consequences of a fluid lunar calendar extended far beyond religious observances or the official recording of history. Nowhere were these consequences more tangible than in the realm of economic life, where temporal discrepancies had a direct and material impact on contractual agreements. Many agreements relied solely on the lunar calendar for setting deadlines, omitting the day of the week and thereby introducing a layer of ambiguity when parties disagreed over the progression of the month. This practice created a structural ambiguity that could easily erupt into a legal dispute.

Consider a common credit arrangement: a debtor agrees to repay a loan one lunar month from a given date. In theory, the contract’s term concludes with the sighting of the next crescent moon (*rüyet-i hilal*). In practice, however, the end date was contestable. The creditor, backed by witnesses who saw the new crescent, could declare the contract due. The debtor, however, citing different observers or adverse weather in their locale, could legitimately argue that the previous month had not yet concluded and the demand for

payment was premature. What one party considered a fulfilled month, the other could legally claim was still the 30th day of the old one.

One might assume such disagreements could be settled by appealing to an expert, such as a professional timekeeper (*muvakkıt*). However, the authority of such specialists was limited in this domain. The Ottoman legal and cultural system overwhelmingly prioritized the communal testimony of the direct, visual confirmation of the new moon over the abstract calculations of an astronomer. The legally binding start of a month was established not by prediction, but by the sworn testimony of trustworthy local witnesses.

As a result, these temporal disputes frequently landed in the local court, where the judge (*kadı*) played a decisive role. The courtroom was not a forum for verifying an astronomical fact but a site for adjudicating competing social realities. Creditors and debtors would present their respective witnesses, each group swearing to have either seen the crescent or not. The *kadı*'s task was not to determine a single, objective truth, but to weigh the social legitimacy and legal plausibility of these conflicting temporal claims. In this space, time was not a fixed, external reality to be measured, but a social fact to be adjudicated. The *kadı*'s ruling did not simply settle a debt; it officially sanctioned one version of time over another, rendering it a legally binding, contextually negotiated truth.

On the evening of Wednesday, June 4, 1788, a group of individuals appeared before the Istanbul court, initiating what began as a private legal dispute but soon transformed into a matter of communal timekeeping. The case concerned Mahmud Efendi, who had borrowed money from Molla Musa with an agreement that repayment would occur on the first day of Ramadan 1202.<sup>112</sup> The disagreement centered not on the validity of the contract but on the determination of that very date. Multiple witnesses, aligned with the creditor, testified to having seen the new moon a few hours earlier. One reported observing it from the minaret of the Hoca Hamza Mosque, while another claimed to have seen it from an elevated location in the same neighborhood. These accounts persuaded the judge to declare Thursday as the first day of Ramadan. He ruled in favor of the creditor, ordering Mahmud Efendi to repay the debt and mandating the illumination of mosque lanterns to officially commence the holy month in Istanbul.

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<sup>112</sup> Rıfat Günelan (ed.), *İstanbul Mahkemesi 56 Numaralı Sicil (H. 1201-1203 / M. 1786-1787)* (Istanbul: İstanbul Büyükşehir Belediyesi Kültür A.Ş., 2019), 170.

This case is illustrative not only of how economic obligations were tied to the lunar calendar but also of the broader communal consequences such disputes could trigger. A private conflict over a debt became the legal basis for announcing the beginning of Ramadan in the capital. The incident underscores a critical point: spatial proximity did not necessarily lead to chronological uniformity, as illustrated in Ramadan 1711 in Edirne. Despite inhabiting the same city, individuals could count days differently depending on their interpretation or reception of moon-sighting reports. The case offers a striking example of how flexible and localized timekeeping could affect both public rituals and personal financial responsibilities.

Another entry from an Istanbul court register sheds light on a further example of an economic dispute. In this case, Mustafa Çelebi had borrowed money from Mehmed Bey, with the agreement that repayment would be made on 13 Şaban 1072. However, the two parties disagreed when the thirteenth day actually fell, due to differing interpretations of the month's starting point. Believing the debtor had missed the deadline by one day, Mehmed Bey brought the matter to court. He argued that the crescent moon had been sighted on Monday evening, meaning that the month began on Tuesday, and that the present day, Sunday, was therefore the thirteenth and the due date: "...el-yevm mezbur Şaban'ın on üçüncü günü yevm-i Ahad olup ecel hulul etmekle..."<sup>113</sup>

In contrast, the debtor, Mustafa Çelebi, contended that the new moon had not been sighted until Tuesday evening, and that the month had therefore begun on Wednesday. By his reckoning, the thirteenth of Şaban fell on Monday, making the deadline still one day away: "...hilal-i Şaban Erbaa gecesı [Tuesday evening in Gregorian calendar] görülmekde ecel-i mezbur el-yevm hulul etmemiştir..." The *kadı* summoned witnesses to resolve the dispute. Five individuals, hailing from different parts of the region (Silivrikapı, Çukurhamam, Eyüp, and even as far as Karadeniz Ereğlisi) testified that they had seen the crescent moon on Monday evening, aligning with the creditor's claim. Their consistent testimonies led the *kadı* to rule in favor of Mehmed Bey.

This case stands apart from the preceding examples in several important respects. First, it predates the eighteenth-century focus of the study, taking place instead on Sunday,

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<sup>113</sup> Yılmaz Karaca et al. (eds.), *İstanbul Mahkemesi 10 Numaralı Sicil (H. 1072-1073 / M. 1661-1663)* (İstanbul: İstanbul Büyükşehir Belediyesi Kültür A.Ş., 2019), 228.

April 2, 1663. Second, unlike previous cases where testimony was often localized, the witnesses in this instance came from widely dispersed parts of the region, emphasizing the empire-wide prevalence of lunar observation as a routine and distributed practice. Third, and perhaps most notably, the dispute hinged on observations made thirteen days earlier, underscoring that discrepancies and recalibrations in date reckoning could emerge at any point in the month, not solely at its beginning or end. This aspect reinforces the notion of retrospective correction explored in earlier pages and illustrates how temporal negotiation was an ongoing and cumulative process within the Ottoman legal and social framework.

Table 2.19: The record from Istanbul court register, 1663

| <u>Text</u>                                                                                                                                                                                                                                                                                                  | <u>Translation</u>                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Darü'l-hilafeti'l-aliyye Kostantiniyyeti'l-mahmiyede tüccar taifesinden Mehmed Bey b. Ahmed meclis-i şer'-i şerif-i enver ve mahfil-i din-i münif-i ezherde Mustafa Çelebi b. Osman mahzarında takrir-i dava edip,                                                                                           | In the protected imperial capital of Constantinople, Mehmed Bey b. Ahmed, a member of the merchant class, appeared before the illustrious court of Islamic law and the exalted assembly of the radiant religion, in the presence of Mustafa Çelebi b. Osman, and initiated his legal claim.                                                               |
| tarih-i kitab senesinden beş ay mukaddem semenleri sene-i mezbure Şabanının on üçüncü gününe müeccel olmak üzere her biri beşer riyalı guruş olmak üzere mezbur Mustafa Çelebi silk-i mülkümde olan beş Şam alacasını işтира ve kabz edip,                                                                   | He stated that five months prior to the date of this petition, he had sold five rolls of Damascene cloth, each valued at five riyalı kuruş, to Mustafa Çelebi. The payment was to be deferred ( <i>müeccel</i> ) until the thirteenth day of Şaban of the same year. Mehmed Bey then declared:                                                            |
| “El-yevm mezbur Şabanın on üçüncü günü yevm-i Ahad olup ecel hulul etmekle meblağ-ı mezburu taleb ederin, sual olunsun” dedikde gıbbe's-sual mezbur Mustafa Çelebi cevabında                                                                                                                                 | “Today is the thirteenth day of Şaban, which falls on a Sunday. Since the due date has arrived, I demand the agreed-upon amount.” He requested the court to inquire into the matter. In response to the court's question, Mustafa Çelebi replied:                                                                                                         |
| “Fi'l-vaki tarih-i kitabdan beş ay mukaddem zikrolunan alacaları semenleri yevm-i mezbura müeccel olmak üzere her biri beşer riyalı guruşa mezburdan işтира ve kabz eyledim idi, lakin hilal-i Şaban Erbaa gecesi görülmekde ecel-i mezbur el-yevm hulul etmemişdir” deyü hululünü inkar eyledikde           | “Indeed, five months prior to the date of this petition, I purchased the mentioned goods from him, agreeing to a deferred payment due on the thirteenth day of Şaban. However, the new moon of Şaban was sighted on Wednesday evening [Tuesday night in Gregorian]. Therefore, the agreed term has not yet expired.”                                      |
| müddei-i mezburdan müddesasını mübeyyin beyyine taleb olundukda udul-i rical-i Müsliminden olup                                                                                                                                                                                                              | Upon this disagreement, the court asked the plaintiff to provide evidence to substantiate his claim. In response, several witnesses from among the upright Muslim men were called:                                                                                                                                                                        |
| mahmiye-i mezburede Silivrikapısı kurbünde İbrahim Paşa mahallesinde sakin Ali Bey b. Mehmed ve Çukurhamam kurbünde sakin Muharrem Beşe b. Hüseyin ve medine-i Ebi Eyyub Ensari mahallatından Defterdar Mahmud Efendi mahallesi sükkanından Kenan b. Abdullah ve Kayıkçı Hüseyin Beşe b. Mehmed ve Karadeniz | Ali Bey b. Mehmed, residing in the İbrahim Paşa neighborhood near Silivrikapı, Muharrem Beşe b. Hüseyin, residing near Çukurhamam, Kenan b. Abdullah and Kayıkçı Hüseyin Beşe b. Mehmed, residents of the Defterdar Mahmud Efendi neighborhood in the district of Eyüp, and Ali b. Veli from the area of Karadeniz Ereğlisi appeared in court to testify. |

Ereğlisi'nden Ali b. Veli nam kimesneler li-ecli'-şehade meclis-i şera hazırın olup istişhad olunduklarında,

mezbur Ali Bey evvela "Fi'l-vaki tarih-i kitabdan on üç gün mukaddem Salise gecesi Silivrikapısı haricinde kubeyl-i mağribde havada gaym olduğu halde reyü'l-ayn hilal-i Şabanı gördüm,"

ve mezbur Muharrem Beşe dahi "Fi'l-vaki tarih-i kitabdan on üç gün mukaddem Salise gecesi kubeyl-i mağribde Sultan Mehmed Han Cami-i şerifinin şimâl tarafında havada gaym olduğu halde reyü'l-ayn hilal-i Şabanı gördüm,"

ve mezburan Kenan ve Hüseyin Beşe dahi "Tarih-i kitabdan on üç mukaddem Salise gecesi bade'l-mağrib zikrolunan Defterdar Mahmud Efendi mahallesinde hilal-i Şabanı havada gaym olduğu halde reyü'l-ayn gördük,"

ve mezbur Ali dahi "Fi'l-vaki tarih-i kitabdan on üç gün mukaddem Salise gecesi kubeyl-i mağribde Karadeniz Ereğlisi burnunda havada gaym olduğu halde reyü'l-ayn hilal-i Şabanı gördüm," deyü

her biri eda-i şehadet-i şeriye eylediklerinde gibbe riayet-i şeraiti'l-kabul şehadetleri makbule olmağın hilal-i Şaban Salise'den olup ecel-i mezbur hulul eylediğine bade'l-hüküm ma-vakaa bi't-taleb ketb olundu.

Fi'l-yevmi's-Salis aşer min Şabanı'l-muazzam sene isna ve sebin ve elf.<sup>114</sup>

Ali Bey first testified: "Indeed, on Tuesday evening (Monday evening in Gregorian), thirteen days before the date of this petition, just before sunset and despite cloudy skies, I personally saw the new moon of Şaban with my own eyes outside the Silivrikapı gate."

Muharrem Beşe likewise stated: "On that same Tuesday evening, just before sunset and although the sky was cloudy, I saw the new moon of Şaban from the northern side of the Sultan Mehmed Han Mosque."

Kenan and Hüseyin Beşe both testified: "On Tuesday evening, after sunset, thirteen days before the petition date, we saw the new moon of Şaban with our own eyes in the aforementioned Defterdar Mahmud Efendi neighborhood, despite the cloudy weather."

Ali from Ereğli also testified: "On that same Tuesday evening, just before sunset, I personally saw the new moon of Şaban from a cape near Karadeniz Ereğli, even though the sky was cloudy."

After each witness gave valid and proper legal testimony (*şehadet-i şer'iy*), and as their testimonies met the conditions of admissibility under Islamic law (*riayet-i şeraiti'l-kabul*), the court accepted their statements. It was thus established that the month of Şaban had begun on Tuesday evening (Salise gecesi), making the current day the thirteenth of the month and confirming that the payment term had indeed arrived.

Following the judgment, this record was written upon request.

On the thirteenth day of the noble month of Şaban, year 1072.

## 2.3 Lunar Months Lasting 28 Days

To summarize the cases discussed so far on a chronological level, imagine a simple scenario with three actors: Person A and Person B residing in the same city, and Person C living in a nearby village. They all initially agree that Muharram, the first month of the Hegira calendar, spans 30 days. However, variations emerge with the second month, Safer. Suppose Persons A and B consider Safer as 29 days, while Person C counts it as 30 days. This discrepancy misaligns their calendars, such that on what is the 60<sup>th</sup> day of

<sup>114</sup> Karaca et al., *İstanbul Mahkemesi 10 Numaralı Sicil (H. 1072-1073 / M. 1661-1663)*, 228.

the year for Persons A and B, marking the start of the third month (30+29+1), Person C still considers it the final day of the second month (30+30).

As we extend this scenario to the third month, further complications arise if Person A decides this month should have 30 days, diverging from Persons B and C, who consider as 29 days. This results in different patterns of timekeeping. For Person B, the first three months total 88 days (30+29+29), while for Persons A and C, it is 89 days (30+29+30 for Person A and 30+30+29 for Person C). As a result, on the 90<sup>th</sup> day, Persons A and C are just beginning the fourth month, but for Person B, it's already the second day.

Table 2.20: The first hypothetical scenario of the recordkeepers' counting styles,

| # of days       | Person A                           | Person B                           | Person C                           |
|-----------------|------------------------------------|------------------------------------|------------------------------------|
| 1               | 1 <sup>st</sup> Month<br>(30 days) | 1 <sup>st</sup> Month<br>(30 days) | 1 <sup>st</sup> Month<br>(30 days) |
| 2               |                                    |                                    |                                    |
| ...             |                                    |                                    |                                    |
| 28              |                                    |                                    |                                    |
| 29              |                                    |                                    |                                    |
| 30              |                                    |                                    |                                    |
| 31              | 2 <sup>nd</sup> Month<br>(29 days) | 2 <sup>nd</sup> Month<br>(29 days) | 2 <sup>nd</sup> Month<br>(30 days) |
| ...             |                                    |                                    |                                    |
| ...             |                                    |                                    |                                    |
| 58              |                                    |                                    |                                    |
| 59              |                                    |                                    |                                    |
| 60              |                                    |                                    |                                    |
| 61              | 3 <sup>rd</sup> Month<br>(30 days) | 3 <sup>rd</sup> Month<br>(29 days) | 3 <sup>rd</sup> Month<br>(29 days) |
| ...             |                                    |                                    |                                    |
| ...             |                                    |                                    |                                    |
| 88              |                                    |                                    |                                    |
| 89              |                                    |                                    |                                    |
| 90              | 4 <sup>th</sup> Month              | 4 <sup>th</sup> Month              | 4 <sup>th</sup> Month              |
| Counting Styles | 30+29+30+1                         | 30+29+29+2                         | 30+30+29+1                         |

In the Ottoman context, it was indeed possible, and quite common, for individuals residing in the same city and even in the same district to count the days of the month differently. The sources reveal a complex system of timekeeping where variations in day-counting could occur even within the same locality. These inconsistencies in day counting not only disrupt personal scheduling but also significantly impact administrative functions, economic transactions, and religious observances.

How, then, did the empire avoid descending into chronological chaos? Fundamental to this system was the lunar calendar's inherent self-correcting mechanisms. Given that lunar months alternate naturally between 29 and 30 days, persistent differences in month-length preferences among various communities were bound to arise. However, the very practice of local crescent sightings ensured these discrepancies were short-lived. If one community consistently observed shorter months, eventually they would encounter delayed crescent visibility, prompting a subsequent shift toward longer months. Conversely, communities frequently opting for longer months would eventually realign themselves upon earlier sightings. This cyclical oscillation allowed divergent local calendars to converge gradually, maintaining general alignment across the empire while still permitting short-term divergence.

Complementing the flexibility of lunar observation, communication played a critical role in synchronizing the lunar calendar across the empire. Crescent-sighting reports moved along established channels: testimonies were given before the *kadi*'s court; court scribes circulated notices to mosque officials, and information traveled by official couriers (*ulak* or *tatar*) through the imperial postal network connecting major towns to the capital. This widespread reporting created feedback loops, allowing communities to calibrate their lunar dates based on broader observational consensus. Collectively, these natural oscillations, and deliberate communicative practices allowed the empire to maintain temporal order amidst inherent short-term variations.

Besides these correction mechanisms, the unchanging structure of the seven-day week played the primary role. It provided a stable and universally accepted temporal anchor. Unlike the fluctuating lengths of lunar months, the weekly cycle remained constant and undisputed throughout the Ottoman Empire, as it had for over fifteen centuries across the broader Mediterranean world.<sup>115</sup> While local debates might arise over whether a given date marked the 10<sup>th</sup> or 11<sup>th</sup> day of the month, no such disputes emerged concerning the day of the week.

Key Islamic holidays such as Eid al-Fitr and Eid al-Adha, observed on the first day of the tenth month (01/10) and the tenth day of the twelfth month (10/12) respectively, were

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<sup>115</sup> Eviatar Zerubavel, *The Seven Day Circle: The History and Meaning of the Week* (Chicago: The University of Chicago, 1989).

always celebrated on different days, one or two days earlier or later, throughout the empire. This lack of synchronization extended to other important dates tied to the lunar calendar, including Ashura (10/01), Mevlid (12/03), Miraj (27/07), and Barath (15/08). This consistency ensured that Muslims across Ottoman lands performed the obligatory Friday prayer, a central ritual and communal gathering, on the same day, regardless of regional differences in lunar month demarcation.

This hierarchy, a fixed, reliable weekly cycle and a flexible, negotiable monthly date, is the central mechanism that allowed Ottoman temporal culture to function. It provided a “calibration anchor,” allowing users to cross-check and realign floating lunar dates without compromising the larger chronological framework.

The distinction between the fixed weekly cycle and the observed lunar cycle underlines a crucial aspect of timekeeping in the Ottoman world. While weekdays provide a reliable constant, the fluctuating length of lunar months can result in differing day counts, creating alternative matchings between the days of the week and month. Consequently, questions such as “Which day is today?” often carried additional context, inquiring not just about the day of the week but also about its position within the potentially shifting lunar month: “Which day (of the week) is the first day (of the month)?”

Pairing the previous scenario with weekdays, let us assume that the first day of the Muharram is Monday. Persons A, B, and C initially agree on the start days of the first two months, with variations emerging by the third month, Rebiyülevvel. Person A and B see it beginning on a Thursday, while for Person C, it starts on a Friday. Despite these differences, they all observe Friday prayers on the 61<sup>st</sup> day, though marked differently within each one’s monthly count, Rebiyülevvel 2 for Persons A and B, and Rebiyülevvel 1 for C. After four weeks, this discrepancy places the prayer on 89<sup>th</sup> day, on the last day of the month for A and C, but on the first day of the fourth month for B.

Table 2.21: The second hypothetical scenario of the recordkeepers' counting styles

| # of days               | Person A                                                | Person B                                              | Person C                                              | Weekdays  |
|-------------------------|---------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------|-----------|
| 1                       | 1 <sup>st</sup> Month<br>(30 days)                      | 1 <sup>st</sup> Month<br>(30 days)                    | 1 <sup>st</sup> Month<br>(30 days)                    | Monday    |
| 2                       |                                                         |                                                       |                                                       | Tuesday   |
| ...                     |                                                         |                                                       |                                                       | ...       |
| 28                      |                                                         |                                                       |                                                       | Sunday    |
| 29                      |                                                         |                                                       |                                                       | Monday    |
| 30                      | 2 <sup>nd</sup> Month<br>(29 days)                      | 2 <sup>nd</sup> Month<br>(29 days)                    | 2 <sup>nd</sup> Month<br>(30 days)                    | Tuesday   |
| 31                      |                                                         |                                                       |                                                       | Wednesday |
| ...                     |                                                         |                                                       |                                                       | ...       |
| ...                     |                                                         |                                                       |                                                       | ...       |
| 58                      |                                                         |                                                       |                                                       | Tuesday   |
| 59                      | 3 <sup>rd</sup> Month<br>(30 days)                      | 3 <sup>rd</sup> Month<br>(29 days)                    | 3 <sup>rd</sup> Month<br>(29 days)                    | Wednesday |
| 60                      |                                                         |                                                       |                                                       | Thursday  |
| 61                      |                                                         |                                                       |                                                       | Friday    |
| ...                     |                                                         |                                                       |                                                       | ...       |
| ...                     |                                                         |                                                       |                                                       | ...       |
| 88                      | 4 <sup>th</sup> Month                                   | 4 <sup>th</sup> Month                                 | 4 <sup>th</sup> Month                                 | Thursday  |
| 89                      |                                                         |                                                       |                                                       | Friday    |
| 90                      |                                                         |                                                       |                                                       | Saturday  |
| First Days<br>of Months | 1: Monday<br>2: Wednesday<br>3: Thursday<br>4: Saturday | 1: Monday<br>2: Wednesday<br>3: Thursday<br>4: Friday | 1: Monday<br>2: Wednesday<br>3: Friday<br>4: Saturday |           |

This divergence prompts communication efforts within the community to synchronize their lunar calendars. Now, let us imagine that all three actors successfully communicated on the 90<sup>th</sup> day. Since Persons A and B are residing in the same city, the latter persuades the former that he has seen the New Moon on Friday. Person A then adjusts his count of Rebiyülevvel from 30 to 29 days to align with B's observation and reconsiders the current day as the first day of the fourth month (30+29+29+2 instead of 30+29+30+1). Similarly, if a courier delivers this moon sighting news to the nearby village where Person C lives, C adjusts his calendar accordingly. Thus, through either social interaction and public declarations within the city or messengers bridging locations, synchronization is temporarily achieved. However, without ongoing communication, their calendars most likely desynchronize again in the following months.

Table 2.22: The third hypothetical scenario of the recordkeepers' counting styles

| # of days               | Person A                                                                       | Person B                                              | Person C                                                                     | Weekdays  |
|-------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------------------|-----------|
| 1                       | 1 <sup>st</sup> Month<br>(30 days)                                             | 1 <sup>st</sup> Month<br>(30 days)                    | 1 <sup>st</sup> Month<br>(30 days)                                           | Monday    |
| 2                       |                                                                                |                                                       |                                                                              | Tuesday   |
| ...                     |                                                                                |                                                       |                                                                              | ...       |
| 28                      |                                                                                |                                                       |                                                                              | Sunday    |
| 29                      |                                                                                |                                                       |                                                                              | Monday    |
| 30                      | 2 <sup>nd</sup> Month<br>(29 days)                                             | 2 <sup>nd</sup> Month<br>(29 days)                    | 2 <sup>nd</sup> Month<br>(30 days)                                           | Tuesday   |
| 31                      |                                                                                |                                                       |                                                                              | Wednesday |
| ...                     |                                                                                |                                                       |                                                                              | ...       |
| ...                     |                                                                                |                                                       |                                                                              | ...       |
| 58                      |                                                                                |                                                       |                                                                              | Tuesday   |
| 59                      | 3 <sup>rd</sup> Month<br>( <del>30</del> , 29 days)                            | 3 <sup>rd</sup> Month<br>(29 days)                    | 3 <sup>rd</sup> Month<br>(29, 28 days)                                       | Wednesday |
| 60                      |                                                                                |                                                       |                                                                              | Thursday  |
| 61                      |                                                                                |                                                       |                                                                              | Friday    |
| ...                     |                                                                                |                                                       |                                                                              | ...       |
| ...                     |                                                                                |                                                       |                                                                              | ...       |
| 88                      | 4 <sup>th</sup> Month<br>-date alteration-                                     | 4 <sup>th</sup> Month                                 | 4 <sup>th</sup> Month<br>-date alteration-                                   | Thursday  |
| 89                      |                                                                                |                                                       |                                                                              | Friday    |
| 90                      |                                                                                |                                                       |                                                                              | Saturday  |
| First Days<br>of Months | 1: Monday<br>2: Wednesday<br>3: Thursday<br>4: <del>Saturday</del> ,<br>Friday | 1: Monday<br>2: Wednesday<br>3: Thursday<br>4: Friday | 1: Monday<br>2: Wednesday<br>3: Friday<br>4: <del>Saturday</del> ,<br>Friday |           |

This dynamic, far from hypothetical, was a recurring challenge across the Ottoman Empire, emphasizing the crucial role of communication in maintaining calendar synchronization. It reflects what happened in Ramadan 1739, a courier's report led to a recalibration of the month's duration in the capital, 29 days instead of 30.

Besides communication, there are alternative but less feasible solutions. One is for each individual to consistently and accurately observe the New Moon. However, the Moon, in this phase, is observable for a few minutes at the horizon just after sunset, which makes constant synchronization impractical due to factors like weather obscuring visibility, suitable location, healthy eyes and expertise for observation. Another solution is adherence to a predetermined calendrical timetable prepared by experts like the imperial astronomers. However, without enforcement from central or local authorities, such pre-determined schedules often go unadopted, leaving real-time communication as the most viable solution for maintaining synchronization among the communities in the imperial lands. Therefore, improvements in communication increase predictability and help maintain synchronization.

In this hypothetical scenario, we encounter a compelling example of Ottoman timekeeping that diverges from astronomical theory: a lunar month lasting only 28 days. Given that the average lunar cycle spans approximately 29.5 days, the accepted norm in both astronomical texts and practical bureaucratic usage is that lunar months consist of either 29 or 30 days. Person C initially calculated the first 90 days of the Hegira year as composed of three full lunar months and an additional day (30+30+29+1). However, upon being informed that the fourth month had already begun on what Person C had considered the 89<sup>th</sup> day, the count was retrospectively revised to (30+30+28+2), effectively shortening one month to 28 days. This adjustment raises a fundamental question: could such a practice have occurred in real-world Ottoman timekeeping, despite its astronomical inaccuracy?

The answer is yes, and the explanation lies not in scientific accuracy, but in the social, administrative, and interpretive realities of timekeeping in the Ottoman world. Ottoman recordkeeping, while broadly informed by astronomical principles, was not strictly bound by them in daily application. In practice, the calculation of lunar months was influenced by a range of human and institutional factors: delays in moon-sighting reports, conflicting local observations, reliance on oral testimony, and retrospective corrections to previously assumed dates. In such an environment, discrepancies of one or two days between sources are common. More strikingly, however, there are indeed cases where months of 28 or 31 days appear in the archival record. They offer concrete evidence of the flexible and contingent nature of Ottoman time reckoning.

One particularly illustrative case comes from the court registers of Ruse, a city in present-day Bulgaria, covering the years 1738 to 1740. Ottoman court registers, in general, offer more than legal documentation. They provide glimpses into the temporal frameworks that structured administrative life in the provinces. Court records from across the empire were kept by judges, their deputies, or scribes, and though they followed a general template, styles and emphases varied widely depending on location, the scribe's training, and the nature of the local bureaucracy.

In most registers, issues directly related to timekeeping, such as the first day of a lunar month, appear infrequently. When they do occur, they tend to cluster around religious observances like Ramadan, the two Eids, and major religious nights, usually falling in the

second half of the lunar year. The Ruse register partly stands out in this regard. It includes four consecutive records noting the first days of the final four months of Hegira 1152, each accompanied by invocations for blessings upon the Muslim community.

Table 2.23: Selected records from Ruse court register, 1739-1740

|                                                                                           |                                                                                             |
|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
|                                                                                           |                                                                                             |
| <p>Entry 1: The first day of Ramadan 1152 is Tuesday [1 December 1739]<sup>116</sup></p>  | <p>Entry 3: The first day of Zilkade 1152 is Saturday [30 January 1740]<sup>117</sup></p>   |
|                                                                                           |                                                                                             |
| <p>Entry 2: The first day of Şevval 1152 is Thursday [31 December 1739]<sup>118</sup></p> | <p>Entry 4: The first day of Zilhicce 1152 is Saturday [27 February 1740]<sup>119</sup></p> |

These four entries share stylistic features, such as calligraphy, vocabulary, and syntax, indicating that they were written by the same individual and likely with a specific purpose. Similar notes are absent from the rest of the register, and few parallels can be found in registers from other cities or even from Ruse itself in other periods. Their rarity underscores their significance: the judge or scribe was doing something deliberately unusual, likely aiming to align legal or communal activities with his interpretation of the lunar calendar.

<sup>116</sup> St. Cyril and Methodius National Library, Sijills, R 7, 28b.

<sup>117</sup> St. Cyril and Methodius National Library, Sijills, R 7, 32b.

<sup>118</sup> St. Cyril and Methodius National Library, Sijills, R 7, 29a.

<sup>119</sup> St. Cyril and Methodius National Library, Sijills, R 7, 35a.

The sequence provided by these entries is revealing: Ramadan, the ninth month begins on a Tuesday; the tenth month on a Thursday; the eleventh on a Saturday; and the twelfth also on a Saturday. This means Ramadan lasted 30 days, Şevval lasted 30 days, and Zilkade only 28. The fact that Zilhicce began on the same weekday as Zilkade leaves no room for ambiguity: Zilkade lasted precisely 28 days.

While such a configuration contradicts the astronomical reality of lunar motion, it appears in the register with no sign of hesitation or qualification. The entries are written in consistent calligraphy, using similar vocabulary and syntactic patterns, suggesting they were recorded by the same scribe. Their isolated nature, there are no similar entries for other months, implies a specific intention or necessity behind this brief temporal mapping. The recordkeeper may have been reacting to shifting declarations, clerical delays, or conflicting sightings, but he clearly deemed it acceptable to document a 28-day lunar month as fact. This illustrates a crucial point: Ottoman scribes and legal authorities sometimes prioritized local administrative or observational coherence over strict astronomical accuracy.

Another compelling case comes from the sultanic diary of Ömer Ağa, the private secretary to Sultan Mahmud I. Within this text, the beginning of the months of Şaban, Ramadan, and Şevval in 1159 (1746) are given as Friday, Saturday, and Sunday respectively, implying each month lasted 29 days. However, on Ramadan 25, 1159 or 11 October 1746, Ömer Ağa inserts a noted lunar date alteration, explicitly stating that the first day of Ramadan was revised retroactively from Saturday to Friday. “With the confirmation that the first of Ramadan was Friday,” he writes, “the 25th [of Ramadan], Tuesday, became the 26th day.”

This recalibration extended the duration of Ramadan from 29 to 30 days, but it did not prompt a revision of the previous months. As a result, Şaban 1159 was shortened from 29 to 28 days, another instance of a lunar month being treated as 28 days, this time explicitly documented within a palace record. This example is especially revealing because it not only shows the flexibility of temporal interpretation but also documents the process by which one alteration (extending Ramadan) necessitates another (shortening Şaban). The awareness of these changes and the care taken to note them underscore the seriousness with which time was handled, even as its boundaries remained negotiable.

A third example, equally telling, comes from another sultanic diary, this one kept during the reign of Sultan Mustafa III by his private secretary, Abdullah Efendi. In the diary's entries for the Hegira year 1175 (1761–1762), the first days of both Şaban and Ramadan are listed as falling on a Friday.<sup>120</sup> There is no silent or noted lunar date alteration in the sequence of days and dates that follow, which implies that Şaban in this case lasted only 28 days. This example is particularly striking because it shows that such a short month could be accepted and recorded without any special note or explanation, even within the most formal and time-sensitive layers of the Ottoman court.

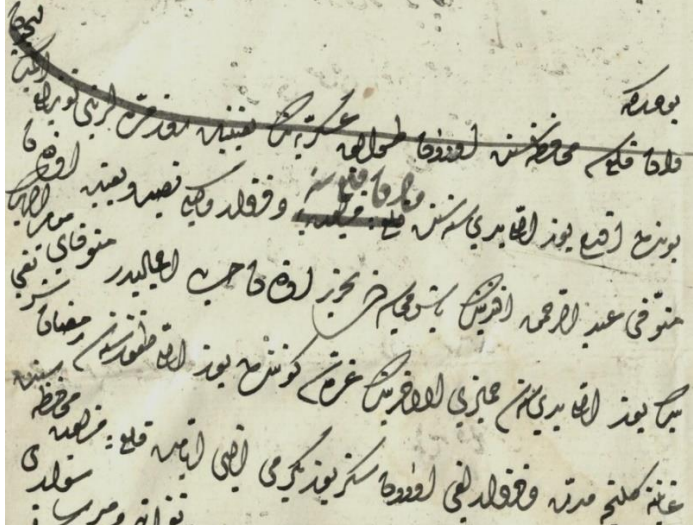
When considering that both Abdullah Efendi and Ömer Ağa worked in close proximity to imperial astronomers and within the highly regulated environment of the Topkapı Palace, these cases offer strong evidence that deviations from the astronomical model were not only acknowledged but practiced at the highest levels of state recordkeeping. This suggests a social legitimacy to such temporal shifts, one that transcended any rigid calendrical orthodoxy.

Nevertheless, it would be misleading to suggest that such deviations were the norm. Months lasting 28 or 31 days are rare and exceptional. In contrast, financial and bureaucratic documents from the same periods reveal a consistent understanding of lunar time as measured in averages, particularly 29.5 days per month. A clear example comes from a financial record related to the death of Abdurrahman Efendi, deputy *defterdar* at the Van castle. The document calculates salary payments over a span of 826 days, covering the period from the beginning of the sixth month of 1157 to the end of the ninth month of 1159, exactly twenty-eight lunar months. Dividing 826 by 28 yields an average of 29.5 days per month, demonstrating that the financial administration adhered to standard lunar calculations even when minor day-count anomalies might have existed in narrative sources.

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<sup>120</sup> Irmak, *III. Mustafa Ruznamesi* (H. 1171-177/ M. 1757-1763), 90.

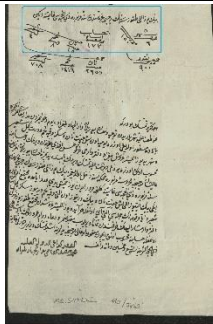
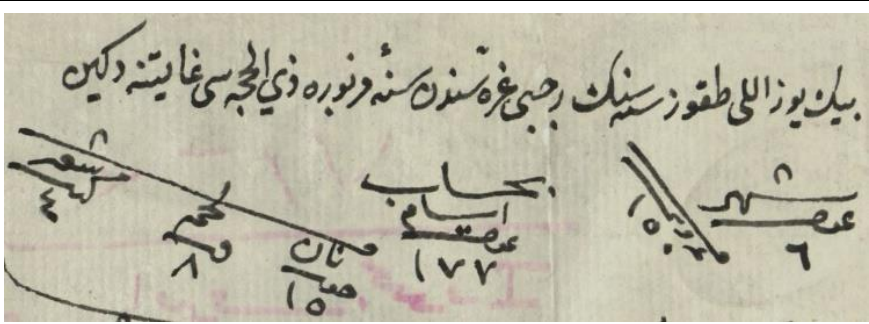
Table 2.24: The salary calculation for Abdurrahman Efendi, 1746, Van

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Translation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <p>Budur ki<br/>Van kalesi muhafazasının üzere tavaif i askeriyyenin<br/>tayin i ruzmerrelerini tevzi eylemek için</p> <p>Bundan akdem yüz elli yedi senesinde kala-i<br/>mezbureye Van kalesine defterdar vekili nasb ve<br/>tayin olunan müteveffa Abdurrahman Efendinin<br/>başmuhasabede tahrir olunan hasib icmalidir.<br/>Müteveffa-i muma ileyh bin yüz elli yedi senesi<br/>Cemaziyelahirinde guresi gününden yüz elli dokuz<br/>Ramazan-ı şerifin gayetine gelince müddet-i vafir<br/>olduğu üzere sekiz yüz yirmi altı eyyamin kala-i<br/>mezbure muhafazasında...<sup>121</sup></p> | <p>This is to state that,<br/>to distribute the assigned daily allowances for the<br/>military units responsible for the protection of Van<br/>Castle</p> <p>The summary of the account registered in the main<br/>bookkeeping for the deceased Abdurrahman<br/>Efendi, who was appointed as the deputy defterdar<br/>to the aforementioned Van Castle in the year 1157.<br/>The deceased, as mentioned, served from the first<br/>day of Cemaziyelahir in the year 1157 until the end<br/>of the blessed month of Ramadan in the year 1159,<br/>amounting to a total period of 826 days dedicated<br/>to the protection of the aforementioned castle...</p> |

Another document from the same year, issued in Belgrade by the provincial *defterdar*, records the salary of Mehmed Efendi, the local judge, over six months (Receb to Zilhicce 1159), totaling 177 days. Once again, this aligns with a 29.5-day average. These calculations, precise and methodical, suggest that while narratives could absorb and normalize calendrical irregularities, administrative systems maintained a strict arithmetical standard rooted in lunar averages.

<sup>121</sup> BOA., C.A.S., (Cevdet Askeriye), Gömlek:448, Dosya: 18646.

Table 2.25: The salary calculation for Mehmed Efendi, 1746, Belgrade

|                                                                                        |                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Text                                                                                                                                                                    | Translation                                                                                                                                                                     |
| <p>Bin yüz elli dokuz senesinin Recebi guresinden<br/>sene-i mezbur Zilhiccesi gayetine değin<br/>Be hesab-i eyyam aded: 177<br/>Şehr aded: 6<sup>122</sup><br/>...</p> | <p>From the first day of the month of Receb in the year<br/>1159 until the end of the same year's month of Zilhicce<br/>Number of days: 177<br/>Number of months: 6<br/>...</p> |

In conclusion, Ottoman timekeeping was a flexible system shaped by human perception, communal practice, and institutional pragmatism. While theoretical models anchored months at 29 or 30 days, lived realities sometimes diverged, allowing for 28- or 31-day months under certain conditions. The examples from court registers, sultanic diaries, and financial documents illustrate that such deviations were neither random nor erroneous, but part of a broader temporal culture that navigated between the ideal and the actual. In this culture, time was both seen and interpreted, counted and corrected, fixed and fluid.

## 2.4 Four Stages of Date Alteration

This section analyzes the process of date alteration through four interconnected stages that make the process legible: Sighting, Communication, Negotiation, and Declaration. This framework reveals how potential discrepancies were identified, debated, and ultimately resolved. Each stage left its own trace in the historical record, from court registers and chronicles to administrative correspondence. Read together, these sources reveal a flexible corrective machinery designed to align the empire's religious obligations, economic contracts, and public order.

<sup>122</sup> BOA., AE.SMHD.I (Ali Emiri Mahmud I), Gömlek:110, Dosya: 7863.

Viewed collectively, these cases map a repeatable corrective sequence: observation triggers a report; reports travel along roads and water; officials weigh testimony against risk and precedent; a binding public act (lanterns, town criers, or cannon fires) makes a date stick. This four-stage model, however, is not strictly linear. Stages could overlap, informal reports might circulate before an official declaration, and a late-arriving dispatch could retroactively expose a misalignment already in practice. A recordkeeper might only note a complex social process with a few brief words. Nonetheless, the model provides a valuable framework for understanding how a human-sighted calendar was synchronized, revealing the similar patterns of adjustment used across a vast empire.

Table 2.26: The template for lunar date alteration

|                       |               | This part usually includes...                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Before                |               | ...information at hand, based the pre-calculated astronomical calendar prepared by experts. It establishes the expected start of the new month.                                                                                                                                                                                                                                                          |
| Lunar Date Alteration | Sighting      | The crucial act of sighting the new crescent moon ( <i>hilal</i> ) with the naked eye. This observation provides the empirical evidence needed to challenge or confirm the prediction. When: Weekday and date of the sighting. Who: Number, names, and social status of the observers/witnesses. Where: Location of the observation.                                                                     |
|                       | Communication | The formal process of conveying the sighting report from the observers to a local or central authority, typically the judge ( <i>kadı</i> ). How: The method used to transmit the report (e.g., verbal testimony, written document, namely <i>hüccet</i> ). When: The time elapsed between the sighting and the report's delivery.                                                                       |
|                       | Negotiation   | The authorities' evaluation of the report's credibility. Did the authorities accept the report or demand more evidence? Was the physical presence of the witnesses required? Who was the first official informed and responsible for the final decision?                                                                                                                                                 |
|                       | Declaration   | The official announcement of the lunar date alteration to the public and the subsequent social and administrative reactions. Announcement: How was the news spread (e.g., town criers, cannon fire, lighting minarets)? Reaction: How did the public and recordkeepers respond to the change? Accountability: If the declaration was delayed or negotiation failed, whose fault was it considered to be? |

#### 2.4.1 A Delayed Declaration, Istanbul 1704

The mechanism is best seen not in abstract rules but in moments of friction, when parallel communities abiding by the same norm, “sighting the crescent,” fell out of step. A telling example comes from the dawn of the eighteenth century. Prince Ahmed ascended to the throne in 1703, preparing to observe his first Ramadan as Sultan during the winter. Nearly a week after Sultan Mustafa II's death on December 29, historian Uşşakizade Efendi recorded a notable instance of date alteration in Istanbul. He explains that, according to the official calendar, Ramadan 1704 was scheduled to begin on a Tuesday. However, due

to the absence of a moon sighting, the month was completed as 30 days, and the start of Ramadan was postponed to Wednesday. Later, reports from nearby villages led authorities to revert the date back to Tuesday. Uşşakizade subtly suggests that the public did not fast on the first day, and the previous month was shortened by a day to realign the calendar:

Table 2.27: Uşşakizade Efendi's chronicle, Ramadan 1115

| <u>Text</u>                                                                                                                                                                                                                                                                                                                                                                          | <u>Translation</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bi-hasebi't-takvim gurre-i Şaban, yevm-i İsneynden itibar olunup, amma yirmi dokuz istihrac olunduğuna binaen gurre-i Ramazan-ı şerif, yevm-i Sülâsa tasrih olunmuş idi. Lakin Sülâsa gicesi kabile'l-gurub, havada ziyade safvet olup rüyet olmamağın Şaban-ı muazzam tekmi-i selasin ile muallem kılınıp gurre-i Ramazan bi-hasebi'ş-şer yevm-i Erbaa'dan itibar olundukdan sonra, | According to the regular [takvim] counting, the first day of Şaban was a Monday [December 10, 1703], and since the month was counted as 29 days, the first day of Ramadan was determined to be a Tuesday [January 8, 1704]. However, on the Tuesday evening before sunset [January 7, Monday evening], <sup>124</sup> the sky was clear, and the Moon was not visible. As a result, Şaban was completed with 30 days, and according to the observational [şer'i] counting, the first day of Ramadan was then considered to be a Wednesday [January 9]. |
| etrafdaki vaki karyelerde Sülâsa gicesi rüyet vaki olup İstanbul Efendisini ağah eylediklerinde, baide'z-zuhur dellal nida itdirüp, gurre-i Ramazan Sülâsa gününden idüğün ilam itdirdi.                                                                                                                                                                                             | However, in nearby villages, the Moon was sighted on Monday evening, and upon being informed of this situation, the judge of Istanbul announced the change through town criers [on Tuesday] afternoon, and the first day of Ramadan was again designated as Tuesday.                                                                                                                                                                                                                                                                                   |
| Gerçi tedariki mümkün olmadığı cihetden, dellala dahi hacet yoğ idi, ancak tetavvuan saim olanları tasvib bulunmuş oldu. Hasılı Erbaa gicesi kanadil ikad olundu. <sup>123</sup>                                                                                                                                                                                                     | Since there was no way to make up for the missed fasting day, the town criers were unnecessary, and only those who observed optional fasting were acknowledged in this situation. In summary, lanterns were lit on Wednesday evening [January 8, Tuesday evening].                                                                                                                                                                                                                                                                                     |

Upon reviewing Uşşakizade's chronicle and other eighteenth-century sources, similar instances of timekeeping discrepancies frequently emerge, especially during the seventh, eighth, and most notably, the ninth month of the Hegira calendar, Ramadan. These discrepancies are most pronounced on the crucial first and last days of Ramadan, when precise timekeeping is vital. As temporal rhythms of daily life shifts in response to fasting, the question of "when" takes on heightened importance,<sup>125</sup> leading to more detailed and scrutinized records during this period.

<sup>123</sup> Gündoğdu, *Uşşakizade Tarihi Tahlil ve Metin (1106-1124 / 1694-1712)*, 363.

<sup>124</sup> The conversion of weekdays from the Hegira to the modern Gregorian system may result in certain discrepancies. A full explanation of this complex process is provided in the section 3.3.1, "Three Levels of Calendar Conversion."

<sup>125</sup> For a detailed examination of the discussion around fasting the day before Ramadan, *yevm-i şekk*, in Islam, see to the article titled "The Sawm of Yawm Al-Shakk (Day of Doubt) in Ḥadīths." Yılmaz, "Hadislerde Yevm-i Şek (Şek Günü) Orucu."

Applying this model to Uşşakizade's account reveals how these stages functioned in practice, as illustrated in the table below. While Uşşakizade clearly describes the situation before the alteration and the public announcement, his text provides only sparse details for the intermediate stages. For example, he notes that the sighting occurred in villages near the capital on the evening of Monday, January 7, 1704, but does not identify the observers. Similarly, specifics regarding the stages of communication and negotiation are absent. The chronicler simply states that "they informed the judge of Istanbul" (İstanbul Efendisini agah eylediklerinde), leaving the arrival timing of the report and the details of its evaluation ambiguous.

Table 2.28: The lunar date alteration model for Ramadan 1115, Istanbul

|                       |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Before                |               | According to the regular counting, the first day of Şaban was a Monday [December 10, 1703], and since the month was counted as 29 days, the first day of Ramadan was determined to be a Tuesday [January 8, 1704]. However, on the Tuesday evening before sunset [January 7, Monday evening], the sky was clear, and the Moon was not visible. As a result, Şaban was completed with 30 days, and according to the observational [şer'i] counting, the first day of Ramadan was then considered to be a Wednesday [January 9]. |
| Lunar Date Alteration | Sighting      | However, in nearby villages, the Moon was sighted on Monday evening,                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                       | Communication | and upon being informed of this situation,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                       | Negotiation   | the judge of Istanbul                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                       | Declaration   | announced the change through town criers [on Tuesday] afternoon, and the first day of Ramadan was again designated as Tuesday. Since there was no way to make up for the missed fasting day, the town criers were unnecessary, and only those who observed optional fasting were acknowledged in this situation. In summary, lanterns were lit on Wednesday evening [January 8, Tuesday evening].                                                                                                                              |

The ambiguity in Uşşakizade's account forces us to speculate on where the procedural failure occurred. He notes a delay in the announcement but does not assign blame. The spatial proximity of the "nearby villages" to the capital should have, in theory, facilitated a swift process. Given that the sighting occurred on a winter evening just after sunset, there was a long period of darkness until sunrise, providing ample time for the news to be conveyed, deliberated upon, and announced. The failure could have occurred at any point: slow communication from the villagers, a protracted negotiation by the authorities, or a simple delay in executing the public declaration. Without corroborating sources, we can only speculate where the system failed.

## 2.4.2 A Failed Negotiation, Edirne 1711

In stark contrast to Uşşakizade's account, other sources from the eighteenth century can be remarkably explicit about the causes of such failures. The episode concerning the end of Ramadan in Edirne in 1711, meticulously recorded in Göynüklü's diary, serves as a perfect case study to understand the high-stakes drama of the negotiation stage. The process began conventionally: residents of a village near the city observed the new crescent moon (observation) and promptly traveled to Edirne to report their sighting (communication).

Table 2.29: The lunar date alteration model for Ramadan 1123, Edirne

|                       |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Before                |               | On the twenty-fourth day of the noble month of Ramadan, Saturday, two portions of wages were distributed in the imperial camp and delivered to the soldiers. On the 24 <sup>th</sup> of Ramadan, in the year 1123. [25 <sup>th</sup> ] Sunday rested, [26 <sup>th</sup> ] Monday passed, then [27 <sup>th</sup> ] Tuesday, then [28 <sup>th</sup> ] Wednesday, and then [29 <sup>th</sup> ] Thursday.                                                                                                                                                                                        |
| Lunar Date Alteration | Sighting      | ...some individuals from the village of Hafsa claimed to have sighted the Moon...                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                       | Communication | On the aforementioned day [29 <sup>th</sup> Thursday], during midmorning, ... gave their testimony. The esteemed judge of Edirne had their statements recorded in the registers and, in accordance with legal certification, sent the report to the grand vizier.                                                                                                                                                                                                                                                                                                                            |
|                       | Negotiation   | Upon receiving the report, the grand vizier summoned Abdullah Efendi, the respected judge of the imperial army, to his presence. When consulted in accordance with the requirements of Islamic jurisprudence, Abdullah Efendi replied: "This case requires the presence of a larger assembly. Let these witnesses be heard in your presence so that the legal process may proceed accordingly." In response, a decree was immediately issued, and the witnesses were brought before the Grand Vizier. When questioned, they failed to answer properly, and their testimony was not accepted. |
|                       | Declaration   | That day was not declared the eid. However, the judge of Edirne declared, "Today is the eid," which led the local population of Edirne to break their fasts, though those returning from the imperial campaign did not. The month of noble Şevval was officially recorded as beginning on Friday, and that day was observed as the eid. <sup>126</sup>                                                                                                                                                                                                                                       |

However, the system fractured dramatically during the negotiation. The local judge (*kadı*), who was responsible for verifying such claims, and the grand vizier, the highest administrative authority, failed to reach a consensus on the sighting's validity. This administrative impasse led directly to two conflicting declarations. The judge, convinced by the witnesses, authorized the announcement of the holiday, while the vizier's camp rejected it. The result was a plural temporality within the city; different communities began the festival on different days, creating significant social confusion. This public split

<sup>126</sup> Göynüklü Ahmed Efendi, *Tarih-i Göynüklü*, 123.

reveals in vivid detail what happened when the corrective machinery failed to produce a single, unified timeline, demonstrating that the negotiation of time was a fragile and contested process. The table above divides Göynüklü's detailed diary entry into the distinct stages of this process.

### 2.4.3 Communication, Sofia and Bursa 1739

In the eighteenth century, the Ottoman state sought to synchronize its lunar calendar by centralizing new moon sighting reports in Istanbul. This administrative imperative to establish a uniform date led to the formation of distinct, yet fluid, "date zones" across the empire. Unlike modern, geometrically imposed time zones, these Ottoman zones were organic, shifting regions of temporal consensus. Their boundaries were not defined by merely geography but by the speed at which credible information could travel in a pre-telegraphic world. The existence of these zones was a direct consequence of eighteenth-century communication limitations. This concept offers a new framework for understanding the social and administrative experience of time in the empire, which will be explored in the subsequent chapter.

In an era, preceding steam or electricity, the empire's information network was powered by the elemental forces of biology and nature: the endurance of the horse and the caprice of the wind. The primary arteries of land-based communication were the state-managed courier (*ulak* or *tatar*) system, a sophisticated network of relay stations (*menzilhane*) stocked with fresh horses and provisions. This system was designed for speed, enabling official messengers to cover vast distances at a remarkable pace. Maritime communication, while essential for connecting coastal regions and islands, was subject to its own set of variables, including seasonal weather patterns, prevailing winds, and the constant threat of piracy, making it a less predictable channel for time-sensitive information.

This communication infrastructure inevitably led to localized practices in timekeeping. A new moon sighted in Cairo or Baghdad could not be known in Istanbul for many days, by which time the capital would already be operating on a different date based on its own local observations. The resulting discrepancies are invaluable data points that map the

practical limits of central authority and reveal the complex negotiation between imperial standards and regional realities.

The invention and adoption of the electric telegraph represented a fundamental rupture in this system. Embraced by the Ottomans during the Crimean War (1853–1856), this technology gradually annihilated the distance that had for centuries. The chronological scope of this study, however, is firmly planted in the preceding era, offering a detailed glimpse into a world where the speed of information, and thus the synchronization of time itself, was contingent upon the stamina of an animal and the temperament of the elements.

Analyzing the average speed of an Ottoman courier provides a compelling, if approximate, measure of how quickly information could traverse the empire. While this does not yield a precise map of lunar date zones, it vividly illustrates the system's potential capacity. The speed of a report, however, was not constant; it was a direct reflection of the message's perceived importance within a clear administrative hierarchy of urgency.

Consider the remarkable speeds achieved for matters of high state importance. In 1745, for instance, a courier carrying the urgent news of the Ottoman army's defeat near Yerevan covered the roughly 1,900-kilometer distance to Istanbul in a mere seventeen days.<sup>127</sup> This journey, averaging over 110 kilometers per day across challenging terrain, demonstrates the system operating at peak efficiency. That same year, another courier completed an even more astonishing feat, traveling approximately 2,700 kilometers from the capital to Baghdad in only seventeen days. Tatar Mehmed, reporting on behalf of Baghdad's governor, confirmed his timeline: "It has been seventeen days since I left Baghdad..."<sup>128</sup> Two years prior, in 1743, another messenger on the same difficult route managed the journey in an incredible fifteen days, averaging 180 kilometers daily.<sup>129</sup>

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<sup>127</sup> The army was defeated on Saturday, Receb 21, 1158 or August 21, 1745. BOA., A.{DVNSMHM.d, (Bâb-ı Âsafî Divan-ı Hümâyûn Sicillatı Mühimme Defterleri), 152, 6. İzzî Süleyman Efendi, *İzzî Tarihi*, 117. The news arrived in the capital on Sunday, Şaban 8, 1158 or 5 September 1745. Soydemir, *Sultan I. Mahmud Ruznameleri (1730-1754) (İnceleme ve Çeviri Metin)*, 848.

<sup>128</sup> "Bağdad valisi vezir-i mükerrem Ahmed Paşa hazretlerinin tatarı Mehmed kullarının takriridir. Kulunuz Bağdaddan çıkalı on yedi gün oldu..." BOA., HAT., (Hatt-ı Hümâyûn), Gömlek: 4, Dosya: 122.

<sup>129</sup> Jean Otter, *Voyage En Turquie et En Perse: Avec Une Relation Des Expéditions de Tahmas Kouli-Khan* (Paris: Guerin, 1748), 2/228.

These figures underscore the state's ability to transmit critical military and political intelligence with extraordinary speed. Yet, this high-speed capacity creates a compelling paradox when compared to the transmission of lunar sighting reports. News of a new moon, despite its profound religious and social significance, often traveled much more slowly. A clear example is the case of Ramadan in 1739, when sighting reports from Sofia arrived in Istanbul significantly delayed, despite the relatively short distance of around 500 kilometers.

This disparity cannot be attributed to a failure of the postal system itself. Rather, it reveals a prioritization of information. News of a military defeat was an existential threat requiring immediate mobilization of state resources. A discrepancy in the calendar, while disruptive, was an internal administrative and religious matter that was often managed at a local level before being escalated. The “slowness” of a sighting report, therefore, was not necessarily a sign of inefficiency but a reflection of its place in the official or social order of priorities. This hierarchy explains why a report from nearby Sofia might be delayed, while a dispatch from the distant Iranian frontier would arrive with breathtaking speed. The urgency was dictated not by proximity, but by content. Understanding this dynamic is key to interpreting the temporal discrepancies that characterized the Ottoman world and appreciating the complex socio-political calculus that determined whose time mattered most.

The chaotic 1739 Ramadan crisis in Istanbul, as documented by the diarist Göynüklü Ahmed Efendi, offers a powerful micro-historical lens into the fragility of the Ottoman temporal system.<sup>130</sup> When deconstructed using the four-stage model, his account vividly details a severe breakdown in the negotiation and declaration phases, highlighting the profound social consequences of administrative failure. The following table reconstructs the event based on his narrative.

The diary focuses on the social chaos that ensued. The city was thrown into temporal disarray. Citizens who had been fasting were abruptly forced to break it. Some people rushed to the mosques to perform the Eid prayer, while others missed it entirely.

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<sup>130</sup> Göynüklü Ahmed Efendi, *Tarih-i Göynüklü*, 453.

Göynüklü's account is a social critique, portraying the judge of Istanbul as incompetent and the cause of public confusion.

Table 2.30: The lunar date alteration model for Ramadan 1152, Istanbul

| Before                |               |                                                                                                                                                                                                                                                                                                                                           |
|-----------------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lunar Date Alteration | Sighting      | The report of sighting the New Moon for Ramadan was recorded by the kadi in the town of Lovec.                                                                                                                                                                                                                                            |
|                       | Communication | It was then sent to the court of Sofia, where it was signed by the deputy judge before being forwarded to Plovdiv, Pazardzhik, and Edirne. The report arrived in Istanbul on Thursday...                                                                                                                                                  |
|                       | Negotiation   | ...due to the kadi's procrastination...                                                                                                                                                                                                                                                                                                   |
|                       | Declaration   | but was not announced until before noon... The firing of the cannonballs caught people off guard as they were resting or taking a nap, and they broke their fast. Some rushed to the mosques for the Eid prayer while others missed. The sultan performed the Eid prayer at the Sultan Ahmed Mosque, followed by the customary ceremonies |

While Göynüklü's diary offers a compelling narrative that isolates the failure to a single official, archival evidence reveals a far more complex and contradictory situation facing the central authorities. A record from the register of important affairs (*mühimme defteri*) shows that the Istanbul court was simultaneously handling another, conflicting report from a different region.

This imperial decree, dated from the same month, reveals that the authorities had been informed that Ramadan had begun on Tuesday in Bursa and its surrounding areas (including Armudlu). This directly contradicted the capital's own reckoning, which had started the fast on Wednesday, December 2, 1739. The central government's response to this news from Bursa, a city far closer to the capital than Sofia, was not an immediate alteration, but a formal demand for verification, as shown in the table below.

Table 2.31: Imperial decree for the investigation of a sighting report, Ramadan 1152, Bursa

| Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Translation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Burusa kadısına hüküm ki,</p> <p>İşbu amimetu'l-meymene şehr-i Ramazanü'l-mübarekenin gurre-i medine-i Burusa ve Emrudlu ve ol havalide yevm-i selâseden zabt olduğu haber verildiği cihetden sıhhat ve hakikate tahsil-i itla için arz u ilam olunması muktezi olmağla tayin olunan Çavuş (...) zide kadruhu mübaşeretıyla şehr-i mezburun gurre-i kangı gününden ityan ve zabt olundığı vuku-ı üzere arz olunmak için ferman-ı ali-şanım sadır olmuştur buyurdum ki.</p> <p>Fi evahir-i N [Ramazan] sene [1]152<sup>131</sup></p> | <p>To the judge of Bursa, an order:</p> <p>Since it has been reported that the beginning of this auspicious and blessed month of Ramadan was recorded as Tuesday in the city of Bursa, Emrudlu, and surrounding areas, it is necessary to verify the accuracy and truth of this information. Thus, a decree has been issued for it to be presented as soon as the appointed messenger (...), may his life be prolonged, determines and records the exact day of the aforementioned month's beginning. I command this to be executed accordingly.</p> <p>In the last ten days of the month of N [abbreviation for Ramadan], year [1]152.</p> |

This single document fundamentally reshapes our understanding of the 1739 episode. It reveals that the imperial court was not merely handling one late report, but was instead attempting to manage a full-blown administrative gridlock. The imperial authorities were juggling at least three timelines on Thursday morning, December 31, 1739: their own official reckoning (starting Ramadan on Wednesday), an unverified report from nearby Bursa (claiming a Tuesday start), and the legally-attested, but delayed, report from the Sofia-Lovec chain (which also confirmed a Tuesday start).

The date of the decree, issued during the last ten days (*evahir*) of Ramadan, is particularly revealing. While it does not permit a precise day-by-day reconstruction of the crisis, its imprecision is itself significant. It demonstrates that authorities were still formally investigating the Bursa claim even as the month was drawing to a close. This confirms

<sup>131</sup> Betül Nalci, *147 Numaralı Mühimme Defteri'nin Transkripsiyonu ve Değerlendirilmesi* (s. 1-156) (Bingöl University, MA Thesis, 2022), 129.

that signs of temporal asynchronization were already apparent to the central government before the couriers from the Sofia-Edirne route ever arrived in the capital.

This context strongly suggests that the Istanbul *kadı*'s perceived "procrastination" was less about personal negligence and more about systemic paralysis. He was caught between conflicting reports from different regions. The very processes designed to ensure the system's legal integrity were likely the cause of the bottleneck. The requirement for thorough court validation and the physical presence of witnesses, procedures essential for producing a legally binding proof (*hüccet*), were inherently and procedurally slow. While this hypothesis requires more detailed examination in future studies, it appears the legal-bureaucratic process was fundamentally at odds with the need for temporal speed.

Ultimately, the 1739 crisis, defined by its competing regional reports and chaotic public outcome, served as a profound shock to the administrative system. The sheer public embarrassment of this mid-day Eid declaration, an internal administrative failure standing in stark contrast to the recent military triumph of Belgrade's reconquest, appears to have been a powerful catalyst for change. The absence of such last-minute, public-facing date alterations in the capital's records after this event strongly suggests a significant policy shift. The 1739 failure forced a permanent reprioritization, elevating the swift communication and verification of lunar sighting reports from a routine administrative task to a matter of urgent state importance.

#### 2.4.4 Sighting of the New Moon, Istanbul 1766

Observing the New Moon in the Ottoman Empire, a critical act for establishing the lunar calendar, was a significant socio-religious event meticulously documented in official records. Eighteenth-century sources, particularly the court registers (*kadı sicilleri*), provide precise details of this protocol, especially for determining the start of Ramadan.

A compelling example is found in a document dated Monday, February 10, 1766. This date corresponded to the 29th day of Shaban 1179, the crucial evening of "doubt" when the sighting would determine whether the fast began the next day. On this evening, a group of residents ascended the right-side minaret of the Fatih Mosque precisely at sunset.

According to their subsequent sworn testimony before the kadi, they witnessed the crescent just as the sun vanished from the horizon.

Table 2.32: The record from Istanbul court register, 1766

| <u>Text</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <u>Translation</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Maruz,</p> <p>Zikri ati husus hukukullah-ı sırfeden olup bila-dava istima-ı şhadet emr-i meşru olduğuna binaen işbu bin yüz yetmiş dokuz senesi Şabani'l-muazzamı'nın yirmi dokuzuncu yevm-i İsneyn leyle-i Selasede bade'l-gurub bi'l-müşahede havada gaym olduğu halde mahmiye-i İslambol'da merhum Fatih Sultân Mehmed Han Cami-i şerifi'nin sağ minaresinde Müezzîn Hüseyin Efendi b. İsmail ve Molla Mehmed b. Ali ve daihaneden es-Seyyid Mustafa b. Ahmed ve Abdi b. Hafız Ömer ve sair mazbutü'l-esami kimesneler li-ecli'ş-şehade mahmiye-i mezburede meclis-i şer-i münirde hazirun olup,</p> <p>“Biz bin yüz yetmiş dokuz senesi Şaban-ı şerifi'nin yirmi dokuzuncu Pazartesi günü ki Salı gecesi bade'l-gurub cami-i mezkurun sağ minaresinde iltimas-ı hilal-i Ramazan-ı şerif eylediğimizde ukf-ı semada hilal-i Ramazan-ı mübareki iki uçları kible canibine müteveccihen reyü'l-ayn müşahede eyledik,”</p> <p>deyü eda-yı şhadet-i hasbiye-i şeriyye etmeleriyle yarınki Salı günü ibtida-yı Ramazan-ı şerif olmağla ikad-ı kanadil-i minare için Selatin-i izam kayyumlarına tenbih ve ifham olunacağı malum-ı devletleri buyruldukda emr ü ferman hazret-i men-lehü'l-emrindir.</p> <p>Fi 29 Ş sene 1179.<sup>132</sup></p> | <p>Submitted,</p> <p>Since the matter mentioned below pertains purely to the rights of God (ḥuqūq Allāh) and, therefore, the hearing of testimony without a lawsuit is lawful, on the twenty-ninth day of Şaban of the year 1179, on Monday, on the night leading into Tuesday, after sunset, despite the sky being cloudy, at the right minaret of the Mosque of the late Sultan Mehmed the Conqueror in the protected city of Istanbul, the müezzîn Hüseyin Efendi b. İsmail, Molla Mehmed b. Ali, and from the daihane (almshouse), al-Sayyid Mustafa b. Ahmed and Abdi b. Hafız Ömer, together with the other persons whose names are recorded, were present in the noble shar'ī court for the purpose of testimony and declared:</p> <p>“When we sought the crescent of the noble Ramadan at the right minaret of the aforesaid mosque on Monday, the twenty-ninth of Şaban 1179, that is, the night of Tuesday, after sunset, we visually observed with our own eyes the blessed crescent of Ramadan on the horizon of the sky, its two tips inclined toward the qibla.”</p> <p>Having thus given their voluntary, lawful testimony, it is thereby established that tomorrow, Tuesday, is the beginning of the noble month of Ramadan. Let it be ordered and made known to the custodians of the imperial mosques that the minaret lamps are to be lit. When this became known to Your Excellency by imperial command, (we state that) command and decree belong to the one vested with authority.</p> <p>29 Şaban, year 1179.</p> |

Their formal testimony states: “...hilal-i Ramazan-ı mübareki iki uçları kible canibine müteveccihen reyü'l-ayn müşahede eyledik... (We visually observed with our own eyes the blessed crescent of Ramadan on the horizon of the sky, its two tips inclined toward the qibla).” This visual confirmation, legally delivered, was the critical step. Accepting their testimony as valid proof, the kadi issued a decree formally declaring the next day,

<sup>132</sup> Salih Kahrıman - Mümin Yıldıztaş (eds.), *İstanbul Mahkemesi 25 Numaralı Sicil (H. 1179-1180 / M. 1765-1767)* (İstanbul: İstanbul Büyükşehir Belediyesi Kültür A.Ş., 2019), 475.

Tuesday, as the official commencement of Ramadan. This legal declaration triggered the public celebration, beginning with his order to illuminate the lanterns in the mosques, signaling to the city that the fast was to begin.

Uncovering details of new moon observations from Ottoman sources is possible but truly comprehending their social and technical mechanics presents a significant challenge for the modern researcher. We live in an age saturated with artificial light, where information about the new moon is instantly delivered by centralized, authoritative institutions via electronic devices. This passive, standardized experience is worlds apart from the pre-modern world.

In the eighteenth century, the sighting of the crescent (*rüyet-i hilal*) was an active, empirical, and communal event. Its success depended entirely on the visual acuity of human observers, the clarity of the local horizon, and specific atmospheric conditions. This fundamental experiential gap makes it difficult to grasp the nuances, uncertainties, and human factors inherent in their practice.

A valuable bridge to understanding this practice comes from the early Turkish Republic. An article written in 1924 by Fatin Gökmen, the head of national observatory, provides a remarkably comprehensive explanation. Gökmen's primary purpose was to advocate for the scientific supremacy of astronomical calculations over traditional naked-eye sighting in demarcating the Hegira months. In doing so, he articulated the physical principles of observation with a clarity for a modern readership that few historical texts provide.

Although Gökmen was writing in 1924, the fundamental optical and atmospheric principles he discusses are timeless. His analysis of the physical constraints of human vision is directly applicable to the observers of the eighteenth century, offering a powerful educated guess for the historian.

Most importantly, Gökmen's analysis is crucial because it meticulously details why naked-eye observation is so fraught with error and human subjectivity. He explains the physical thresholds of visibility, thereby underlining how different vantage points, atmospheric conditions, or even observer bias could easily lead to conflicting reports. This technical insight helps explain a common feature in the historical record: the

emergence of alternative lunar dating, not only between different cities in the same region but even among different districts within a single metropolis like Istanbul.

To illustrate his argument, Gökmen evaluates a contemporary case: whether it was possible to observe the Ramadan crescent by naked eye on the evening of Monday, April 16, 1924. He concludes it was a clear impossibility. While his text includes technical concepts, it masterfully describes the necessary conditions for any naked-eye sighting:

Let us now return to the question of whether the moon could be seen on the evening of Monday, April 16. From the astronomical magnitudes (*makadir-i hey'yye*) calculated for the Kilyos horizon concerning the sighting of the crescent, we infer that the crescent could by no means be seen that evening. This impossibility is so certain that there is not the slightest room for doubt or hesitation. I will try to explain the matter for readers who possess a bit of cosmography and physics by clarifying it at one or two simple points, as follows:

On Monday, April 16, at Kilyos, exactly at the time of the call to evening prayer, the crescent (the Moon) would be at an apparent altitude of 1 degree 24 minutes, and it would set 10.7, i.e., 11, minutes later. Its angular distance from the Sun would be 4 degrees 22 minutes. From another angle: what we call the thickness of the crescent (*dahamet-i hilal*), the thickness at its midpoint, would be 0.002 of the diameter of the lunar disk; accordingly, the thickest middle of the crescent would subtend only four arcseconds.

Based on this data, the following discussion can be made:

First: To see something under an angle of four arcseconds is equivalent to making out a 1-millimeter thickness from 50 meters away or distinguishing a hair thinner than one-hundredth of a millimeter from a distance of 40 centimeters, which is well beyond (roughly one-fifteenth of) the resolving power of a normal eye. If the Moon's light were, say, as strong as that of Venus (Zühre), we would have to think differently; but the Moon's light, as is well known, is weak. Its albedo is 17, that is, approximately the same as the light reflected by plaster facing the Sun.

Now, if we imagine that at a point 50 meters away from where we stand, on a sunlit surface facing us, we have drawn a line with chalk that is 1 millimeter thick, we may consider this an analog of our phenomenon. Even if the surface were black, that line would not be visible; and the closer the surface's color is to that of the chalk, the more impossible it becomes to see the line.

From this discussion, I am convinced, and I believe readers will conclude together with me, that a crescent this thin could not be sighted even if the sky on which it is "projected" were dark, that is, even if the crescent were above the horizon at midnight, let alone under ordinary twilight conditions.<sup>133</sup>

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<sup>133</sup> "Şimdi 16 Nisan Pazartesi günü akşamı ayın görünüp görünemeyeceği meselesine rücu edelim. Hilalin rü'yetine müteallik Kilyos ufkuna göre hesap edilmiş olan makadir-i hey'yyeden istidlal ediyoruz ki o

Gökmen's detailed, physics-based breakdown of observability moves the historical inquiry beyond simply chronicling what was reported. It equips the historian to ask more critical questions about the process of sighting itself. His explanation of optical thresholds and the "impossibility" of sighting a crescent below a certain angular size forces a re-evaluation of the historical sources.

This raises several critical avenues for future research, which fall beyond the immediate confines of this study: Do eighteenth-century sources, such as the court registers, contain accepted testimonies of crescent sightings on evenings when modern astronomical models (like Gökmen's) would deem it a physical impossibility? If such reports exist, how did local kadis handle them? Was a sworn, pious testimony considered sufficient to override potential skepticism, or do we find evidence of testimonies being rejected on technical grounds? And finally, what is the historian's role when faced with a sighting report that is scientifically non-viable? Should such cases be interpreted as genuine, if mistaken, observations (e.g., mistaking Venus for the crescent)? Or could they reflect social pressure, pious desire, or even procedural errors in the court?

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akşam rü'yet-i hilal külliyyen gayr-i mümkindi. Bu adem-i imkân o kadar muhakkaktır ki bunda zerre kadar şübhe ve tereddüt de mahal yoktur. Aynı kanaati biraz kozmografya ve fizik malumatını haiz bulunan karilerde de tevliid için meseleyi basit bir iki yerinden izaha çalışacağım. Şöyle ki:

Hilal yani kamer 16 Nisan Pazartesi günü akşamı Kilyos'ta tam ezan vakti bir derece yirmi dört dakika irtifa-ı mer'ide bulunacak ve 10,7 yani 11 dakika sonra da gurub edecekti. Kamerin güneşten olan bu'd-i zaviyevisi dahi 4 derece 22 dakika kadardır. Diğer cihetten dahamet-i hilal namını verdiğimiz hilalin ortasının kalınlığı kurs-ı kamer kutrunun 0,002'si kadar ki buna göre hilalin en kalın olan ortasının maktamı ancak dört saniyelik bir zaviye dahilinde görebileceğiz.

Verdiğimiz şu malumat üzerine ber-vech-i ati münakaşat icra edilebilir:

Evvela – Bir şeyi dört saniyelik zaviye tahtında görmek demek bir milimetrelik kalınlığı elli metre uzaklıktan veyahud inceliği bir milimetrenin yüzde birinden daha aşağı olan bir kılı 40 santimetre mesafeden seçmek demektir ki nazımı (normal) bir gözün kudret-i tefrikiyyesinin on beş misli madunundadır. Eğer kamerin ziyası mesela Zühre gibi oldukça kuvvetli olsa idi başka türlü düşünmemiz icab ederdi; halbuki ziya-yı kamer malum olduğu vechile zaiftir; "Albedo"sı 17 yani takriben ziya-yı şems muvacehesinde bulunan alçının neşreylediği ziyanın aynıdır.

Şimdi bulunduğumuz bir noktadan elli metre uzaklıkta bize müteveccih ve güneşle ziyadar bir sathın üzerine bir milimetre kalınlığında tebeşirle bir çizgi çizmiş olduğumuzu farz eyler isek hadisemizin bir mümasilini elde etmiş olduğumuzu düşünebiliriz. Sathı siyah olsa bile bu çizginin görülmesi kabil değildir. Sathın rengi tebeşir rengine yaklaştıkça tabiidir ki çizginin görülmesi evleviyetle gayr-i kabil olur. Şu münakaşattan karilerin her halde benimle beraber istintac edeceklerine kaniim ki bu kadar ince olan hilal, mürtesem düştüğü sema muzlim olsa yani hilal mesela gece yarısı fevka'l-ufuk bulunsa bile yine rü'yet mümkün değildir." Ahmet Yılmaz et al. (eds.), *Meşrutiyet'ten Cumhuriyet'e Yakın Tarihimizin Belgesi 1908-1925 Sebilürreşad Mecmuası* (İstanbul: Bağcılar Belediyesi, 2021), 22/88–89.

These questions are not merely theoretical. Modern studies have already begun to investigate this precise discrepancy in other contexts. For example, Adnan Abdülmünim el-Kadi's research investigating the divergence between astronomical calculations and naked-eye observations in Saudi Arabia between 1961 and 2004 provides a clear methodological precedent, as will be discussed below.

Yet, when the textual legacy produced in the Islamicate world before the Ottomans are scanned within such questions related to timekeeping realm, the researcher can easily comprehend the sighting issue as not new, but centuries old. An anecdote from the mesnevi of Jalaladdin Mevlana Rumi serves as a perfect example in this regard.

Table 2.33: Jalaladdin Mevlana Rumi's anecdote

| <u>Text</u>                                                  | <u>Translation</u>                                                                                                        |
|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| هلال پنداشتن آن شخص خیال را در عهد<br>عمر رضی الله عنه       | That person mistaking imagination for the new moon in the<br>time of Umar (May God be pleased with him)                   |
| ماه روزه گشت در عهد عمر<br>بر سر کوهی دوپند آن نفر           | The month of fasting arrived in the time of Umar,<br>A group of people ran to the top of a mountain,                      |
| تا هلال روزه را گیرند فال<br>آن یکی گفت ای عمر اینک هلال     | To take the crescent of the fast as a good omen.<br>One of them said, "O Umar, behold the new moon!"                      |
| چون عمر بر آسمان مه را ندید<br>گفت کین مه از خیال تو دمید    | Since Umar did not see the moon in the sky,<br>He said, "This moon has sprung from your imagination.                      |
| ورنه من بیناترم افلاک را<br>چون نمی بینم هلال پاک را         | Otherwise, I am a better seer of the heavens;<br>How is it that I do not see the pure crescent?"                          |
| گفت تر کن دست و بر ابرو بمال<br>آنکهان تو در نگر سوی هلال    | He said, "Wet your hand and rub it on your eyebrow,<br>Then look again towards the new moon."                             |
| چونکه او تر کرد ابرو، مه ندید<br>گفت ای شه نیست مه شد ناپدید | When he wet his eyebrow, he did not see the moon. He said,<br>"O Shah (King), the moon is not there, it has disappeared." |
| گفت آری موی ابرو شد کمان<br>سوی تو افکند تیری از گمان        | Umar said, "Yes, a hair of your eyebrow became a bow<br>And shot an arrow of assumption at you.                           |
| چون یکی مو کژ شد، او را راه زد<br>تا به دعوی لاف دید ماه زد  | When one hair became crooked, it led him astray,<br>So he made the false claim of seeing the moon.                        |
| موی کژ چون پرده گردون بود<br>چون همه اجزات کژ شد، چون بود    | If a crooked hair can be a veil to the heavens,<br>When all your parts are crooked, how will it be?                       |
| راست کن اجزات را از راستان<br>سر مکش ای راسترو ز آن آستان    | Straighten your parts by (following) the righteous;<br>Do not turn your head, O straight-goer, from that threshold.       |
| هم ترازو را ترازو راست کرد<br>هم ترازو را ترازو کاست کرد     | A scale is set right by a (true) scale;<br>A scale is also made deficient by a (false) scale.                             |

While Jalaladdin Mevlana Rumi masterfully employs this anecdote to highlight mystical, ethical, and epistemological paths to righteousness, his example is potent precisely because it reflects a tangible and recurring problem in the world he lived in. The power of the allegory stems from its grounding in a familiar social reality. The story perfectly encapsulates the core elements of the sighting dilemma: the communal expectation (running to a mountaintop), the pious desire (to be the first to see the crescent), the fallibility of human perception (the false claim), and the role of a skeptical authority (the caliph) who must verify the “fact.”

Caliph Umar, representing wisdom and clear vision, does not merely dismiss the man as a liar. Instead, he diagnoses the source of the error: a physical illusion, an “arrow of assumption” fired by a crooked eyebrow hair. The crooked hair acts as a physical veil that distorts reality, causing the man to project his imagination onto the heavens and mistake it for the crescent.

The anecdote has been analyzed by others, such as On Barak, who takes the text and considers it as “...an appropriate springboard for a discussion of the politics of fact setting and the relations between timekeeping and authority.”<sup>134</sup> In this reading, the story is not about perception but about power. Caliph Umar, as the sovereign, possesses the ultimate authority to declare fact. His perception (or lack thereof) overrides the testimony of the common man, demonstrating that timekeeping is an act of state authority.

This study, however, highlights a different, more literal dimension of the text: the simple continuity of the technical issue throughout the centuries. Jalaladdin Mevlana Rumi’s story works as an allegory precisely because its literal premise was immediately recognizable to his thirteenth-century audience. The phenomenon of a false sighting, the social excitement of the event, the problem of a “phantom” crescent, and the intervention of a higher authority to resolve the dispute were all known, real-world issues.

This anecdote thus demonstrates that the tension between subjective human observation and the desire for objective temporal certainty is not a modern, post-Enlightenment concern. The Ottoman world, as the preliminary outcomes of this research imply, should

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<sup>134</sup> Barak, *On Time: Technology and Temporality in Modern Egypt*, 115.

not be seen as an exception. An eighteenth-century Ottoman judge, weighing the sworn testimony of witnesses against his own judgment or procedural standards, was participating in the very same social and epistemological drama that Rumi captured five hundred years prior. This hypothetical scenario finds a dramatic and tragic real-world precedent in the life of one of the era's most brilliant minds: Gelenbevi İsmail Efendi (1730-1791).

Gelenbevi was a distinguished Ottoman scholar, born in Manisa, who became renowned not as a jurist, but for his exceptional works in logic and mathematics. After his initial studies, he moved to the capital, becoming a professor (*müderris*) in 1763. He was a quintessential figure of the eighteenth-century Ottoman modernization, teaching mathematics at newly founded institutions like the Imperial Naval Engineering School (*Mühendishane-i Bahri-i Hümayun*). His work explaining logarithm tables in Turkish (*Logaritma Şerhi*) gained him significant acclaim and rewards from Sultan Selim III.

This background is precisely what makes his final post so significant. In 1790, this preeminent mathematician was appointed kadi of Larissa (Yenişehir). He was now, in effect, a man of science placed in a position of traditional legal authority, responsible for ruling on the very moon sighting that his own skills could calculate and verify. His death in 1791 is directly linked to the collision between these two worldviews.

Fatin Gökmen, in the same 1924 article previously mentioned, recounts the story of Gelenbevi's death, noting the account was passed down to him by his own father. The anecdote pinpoints this exact conflict as the cause:

It is known that the late Gelenbevi died of a stroke while he was a kadi in Yenişehir, Thessaly, upon receiving a severely-worded letter from the Şeyhülislam. My late father used to narrate that this letter contained harsh reproaches and criticisms, written after Gelenbevi had rejected the testimony of witnesses attempting to prove the new moon of Şevval. He based his rejection on his own calculations that a sighting was impossible. [My father said] he died from the distress this caused. It was understood only later, after the Müsellim of Yenişehir pressured the witnesses, that they confessed to having, in fact, committed perjury.<sup>135</sup>

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<sup>135</sup> "Gelenbevi merhum Tesalya Yenişehiri'nde kadı iken şeyhülislam'dan aldığı şedidü'l-meâl bir tezkire üzerine menzulen vefat eylemiş olduğu malumdur. Pederim merhum bu tezkire Gelenbevi'nin Şevval Gurrecini isaat ile şahidlerin şehadetini, rü'yetin mümkün olamayacağı hakkındaki kendi hesabatına

Further research is necessary to fully identify historical individuals who prioritized astronomical calculation, rejecting premature naked-eye sighting reports that fell outside the new moon's scientifically determined period of visibility. Nonetheless, historical precedents for this skepticism are evident. As referenced in the first chapter, the subtle 1802 critique by the sultan's private secretary, Ahmed Faiz Efendi, and Sultan Abdülhamid I's decree in 1786 regarding inaccurate observations, both highlight persistent concerns within the Ottoman administration over the unreliable demarcation of lunar months.

This historical tension is strikingly quantified by modern research. Adnan el-Kadi's study, which investigated the divergence between astronomical data and traditional observations for the start of Ramadan in Saudi Arabia (1961–2004), revealed significant discrepancies. Applying the criteria adopted at the Istanbul meeting, el-Kadi found that the traditional crescent sighting method conflicted with astronomical data in 40 out of 46 years.

The data revealed that in 29 of those 40 mismatched years, the crescent was mathematically calculated to be below the horizon after sunset, making a valid sighting impossible. El-Kadi concluded that, based on these findings, adhering to proper visibility conditions would have required delaying the start of Ramadan by two days in many of those instances.<sup>136</sup>

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istinaden reddeylemesi üzerine yazılmış şedid tevbihat ve tenkidatı muhteve olduğunu ve bundan müteessiren vefat eylediğini ve bilahare Yenişehir Müsellimi tarafından şahidler tazyik edilerek fil-hakika yalan yere şehadet etmiş olduklarının itirafları neticesi anlaşıldığını nakleylemişti.” Yılmaz et al., *Meşrutiyet'ten Cumhuriyet'e Yakın Tarihimizin Belgesi 1908-1925 Sebilürreşad Mecmuası*, 22/91.

<sup>136</sup> “İstanbuldaki toplantıda benimsenen kriterler esas alındığında araştırmanın sonuncunda Ramazan ayının başlangıcını ilan eden geleneksel hilal gözleme metodu ile astronomi ilminin verileri; 46 yıldan 6 yıl uygun düşerken; 46 yıldan 40 yıl uygun düşmemiştir. 46 yıldan 29 yıl güneş battıktan sonra hilal ufku altında hesap edilmiş, son olarak 29 yıldan 10 yıl ise hilalin ufku altında olup uzakta olduğu tespit edilmiştir. Buna göre şartlarına uygun bir şekilde görerek ramazana başlamak için iki gün geçmesi gerekirdi.” Adnan Abdülmünim El-Kadi, “Astronomik Araştırma: H.1380-1425 Yılları Arasında Suudi Arabistan'da Ramazan Ayının Başlangıç Gününün Resmi ve Astronomik Olarak Karşılaştırılması,” *Ru'yet-i Hilal, Makaleler*, ed. Mustafa Bülent Dadaş (Ankara: Diyanet İşleri Başkanlığı, 2016), 291–292.

## 2.5 Conclusion

This chapter has argued that Ottoman timekeeping in the eighteenth century was not a static, top-down system governed by rigid theory, but a dynamic and flexible social practice. By moving beyond a simple search for correct dates, we have reframed chronological discrepancies not as errors, but as the documented traces of a system in action. The central concept of “lunar date alteration” has served as an analytical framework to understand how time was actively counted, challenged, and reshaped by individuals and institutions.

The chapter’s methodology, built on a dual internal and external analysis of sources, allowed us to identify both “silent” and “noted” date alterations. This approach revealed the conscious, cognitive labor of recordkeepers. We have seen this practice at play in the most critical domains of daily life. In the religious sphere, where the 1711 Edirne episode demonstrated a “failed negotiation” over Ramadan, leading to a split temporality within a single city. In the political recordkeeping realm, where the conflicting death dates for Sultans Mustafa II (1703) and Ahmed III (1736) proved that not even the imperial center was immune to this fluidity. Finally, in the economic world, where court cases from 1663 and 1788 showed how legal and financial obligations were contingent on a socially-adjudicated timeline.

Furthermore, this analysis confronted the apparent paradox of “astronomical impossibilities.” The appearance of 28- and 31-day months in sources like the Ruse register and the sultanic diaries of Ömer Ağa and Abdullah Efendi was not evidence of ignorance. On the contrary, parallel financial documents demonstrated a clear working knowledge of the 29.5-day lunar average. These anomalies represent a deliberate prioritization of practical, administrative, and legal coherence over a purely theoretical model.

Finally, the chapter deconstructed the corrective machinery that prevented chronological chaos, proposing a four-stage model of Sighting, Communication, Negotiation, and Declaration. The 1739 crisis in Istanbul, with its competing reports from Sofia and Bursa, vividly illustrated this system under duress, where communication lags and

administrative hierarchies created a temporal gridlock. This breakdown, along with the deep dive into the 1766 sighting protocol, led to the chapter's core tension: the conflict between subjective, naked-eye observation (the legal standard) and objective, scientific calculation. As the 1924 analysis by Fatin Gökmen and the thirteenth-century parable from Rumi illustrate, this is an ancient dilemma. The tragic end of the mathematician-kadi Gelenbevi İsmail Efendi, who reportedly died after rejecting a false sighting based on his calculations, serves as the ultimate allegory. It confirms that in the eighteenth-century Ottoman world, time was not merely an astronomical fact to be measured; it was a human-centered, legally grounded, and socially negotiated reality.

### 3. Charting Timekeeping Practices

A fundamental challenge in Ottoman historiography is the persistent chronological incoherence found in primary sources. This chapter argues that these discrepancies are not simply errors but are a systemic feature of the empire's observational Hegira calendar. Because the start of each month depended on a visual moon sighting, time was not dictated by a single, calculated standard but was negotiated locally. This process created dynamic, overlapping "lunar date zones," regional spheres of shared time defined by the flow of information.

This chapter first maps this fluid temporal landscape using two complementary approaches: a spatial (synchronic) study of the Hegira year 1159 (1746) to chart variations across the empire, and a temporal (diachronic) study of eighteenth-century Istanbul to examine its role as a temporal "clearinghouse." It then pivots to address the profound methodological errors these discrepancies have caused in modern scholarship.

Through critical case studies, including the widely misdated death of Hacı Beşir Ağa and a 25-day error in an ambassador's arrival, this analysis exposes how historians have propagated incorrect Gregorian dates by privileging flawed chronicles or ignoring the crucial data provided by the weekday.

Finally, the chapter provides a constructive solution. It proposes a new, systematic "Three Levels of Calendar Conversion," namely the simple, weekday, and sunset styles. This framework serves as a practical guide for historians, demonstrating how to use the weekday as a trans-calendrical anchor to correctly adjudicate between conflicting sources and accurately navigate the ambiguities of administrative lag, geographical distance, and the sunset-to-sunset definition of the lunar day.

#### 3.1 Mapping Lunar Date Zones

A foundational challenge of the Hegira lunar calendar, a system grounded in the visual sighting of the new crescent moon rather than adherence to pre-calculated astronomical tables, was its inherent temporal ambiguity. The reliance on human observation meant

that the start of any given month was contingent upon a visual event susceptible to weather, geography, and human interpretation. The primary corrective mechanism for this ambiguity was a social and administrative process: the formal and informal transmission of sighting reports. This reliance on observation and communication gave rise to an interurban network of temporal coordination, creating what this study terms “lunar date zones,” regional spheres of shared time centered on major metropolitan hubs. These hubs, particularly the imperial capital, functioned as reference points for standardizing the start and end of lunar months, processing information to create a localized temporal consensus.

These zones were not static geographic footprints. They were dynamic, socially constructed, and spatially distributed networks defined by the flow of information. Their boundaries were fluid, capable of expanding or contracting based on the speed of communication, atmospheric conditions obscuring a sighting, or the political urgency of a specific date. The term “lunar date zone,” therefore, refers to this network of shared lunar date usage, shaped by the circulation of moon-sighting reports and their subsequent negotiation among a diverse cast of actors, from local observers and judges (*kadis*) to high-level officials at the Sublime Porte.

This study explores the formation and function of these zones in the eighteenth-century Ottoman world. While it privileges Istanbul as the focal point, this is a methodological choice warranted by the richness of its documentation, not a reflection of absolute temporal authority. The capital actively functioned as a clearinghouse, requesting, receiving, and critically evaluating sighting reports from a constellation of provincial cities, including Edirne, Sofia, Plovdiv, Bursa, Ankara, Sivas, Trabzon, İzmir, and Aleppo.

However, the lunar date zone centered on the capital should be understood as *primus inter pares*, first among equals. Its aspirational role as the empire’s ultimate temporal reference was often constrained by the practical limitations of the pre-modern postal system. Its attempts at synchronization were, by necessity, limited in their geographic reach and speed. This argument, therefore, treats the capital’s date zone as an ordinary one in its fundamental mechanics. It serves as an ideal case study, offering a high-definition snapshot of the processes at play, precisely because other metropolitan centers were often

equally authoritative in their own spheres and were not necessarily bound by imperial orders, which they might adopt, ignore, or embrace as merely one alternative view.

The capital's function in this network can be likened to a temporal clearinghouse. Istanbul collected informational assets, reports of a successful sighting or, just as importantly, a lack of one, from various parts of the empire. At a certain point, it would declare its own temporal standard by announcing the specific pairing of a month-day and a weekday (e.g., "Tuesday is the first of Ramadan"). This declaration was the mechanism that stabilized its own local date zone.

Preliminary findings show these declarations were not uniformly distributed throughout the year. They appear concentrated in the second half of the Hegira calendar, particularly in the three consecutive holy months (Recep, Şaban, Ramadan) and the month of the Hajj (Zilhicce). This clustering is logical, as these declarations were essential for coordinating the empire's high stakes religious life: the timing of holy nights, the beginning and end of the fast (Eid al-Fitr), and the Eid of the sacrifice (Eid al-Adha). However, alterations and declarations could, and did, occur in other months.

Crucially, the capital's intervention was not constant. For many months, and surprisingly, sometimes even for the critical first day of Ramadan, there was no formal declaration via town-criers, edicts, canon fire, or the illumination of mosque minarets. This "non-demarcated period" between lunar months is a key finding. Preliminary findings clearly suggest that it would be a mistake to assume officials always declared the first day of every month.

This selective intervention explains why the lunar date zones were never fully and entirely synchronized. A useful metaphor is not a homogeneous block of Cheddar cheese, but rather a slice of Emmental cheese: a single entity punctuated with holes. These holes represent the gaps, overlaps, and co-existing alternative reckonings that populated the temporal landscape. Within a single lunar date zone, recordkeepers, scribes, and administrators might be fully aware of diverging date counts yet consciously adhere to their own established conventions, whether due to institutional inertia, professional habit, or simple practical considerations.

This model allows us to understand Ottoman timekeeping less as a rigid, top-down system of regulation and more as a fluid, bottom-up process of temporal negotiation. This argument explains the persistent paradoxes found in the archives: why people sharing the same city, district, social group, or even working in the same office, did not always date their documents in full uniformity. It explains why, even within the sultan's court itself, individual scribes exercised a significant degree of authority in determining the start and length of lunar months for their own records.

The sources will be examined using two complementary approaches. The first is spatial: it freezes time to map regional differences in dating practices at a single moment. The second is temporal: it freezes the location, allowing for an analysis of how dating differences within a specific area evolved over a given period.

### 3.1.1 A Year Across the Empire

The first approach freezes time and maps spatial differences within the Hegira year 1159, approximately falls in 1746 Gregorian. By confining the analysis to a single lunar year, from Muharrem to Zilhicce, this method enables a close comparison of days of lunar months and weekday alignment across a range of sources: sultanic diaries, financial daybooks, court registers, and provincial documents.

This comparison is organized into three primary clusters to chart the degree of temporal synchronization, or lack thereof, among recordkeepers situated in different social and geographic contexts: records produced in the immediate circle of the sultan, records kept by officials and individuals in the capital, Istanbul, and records originating from other parts of the empire. This analysis immediately challenges the assumption that temporal synchronization was guaranteed, even within the imperial core. Discrepancies did occur, even in these closely monitored environments. They suggest that even within the sultan's court, scribes exercised a significant degree of individual authority and judgment in applying the principles of lunar reckoning.

A compelling example emerges from the comparison of two sources that recorded the daily life of Sultan Mahmud I during the Hegira year 1159 (1746). The first is the sultanic

diary, kept by Ömer Ağa, the sultan's private secretary (*sır katibi*) from 1740 to 1750. For Hegira 1159, this diary offers an unbroken sequence of 355 daily entries, documenting everything from court ceremonies to the sultan's routine engagements.

The second is a financial daybook (*masraf defteri*), compiled by an anonymous scribe, which covers the first six months of the same year with 178 entries. It meticulously logs the sultan's monetary transactions, including gratuities paid to palace personnel and the public during his frequent appearances.

These two sources, produced in the same elite social and spatial environment, provide a rare opportunity to compare how time was recorded in parallel narrative and financial registers. According to Ömer Ağa's diary, the first days of the months from Muharrem to Cemaziyelahir 1159 were Sunday, Tuesday, Thursday, Friday, Sunday, and Monday, respectively. The anonymous scribe of the financial daybook, however, recorded the third month, Rebiyülevvel, as beginning on a Wednesday instead of Thursday.

This discrepancy was not arbitrary. It arose from a minor but meaningful divergence in how they concluded the previous month: Ömer Ağa counted the second month, Safer, as 30 days, while the financial scribe considered it only 29 days. Consequently, their calendars fell out of sync by one full day.

Crucially, this misalignment was not a permanent break; it lasted for only one month, and both records subsequently show the next month, Rebiyülahir, beginning on a Friday. This brief divergence and its rapid, almost invisible, self-correction perfectly illustrate the dynamic and adaptive nature of Ottoman lunar timekeeping. Even in the most centralized and bureaucratically structured environments, time was not treated as a rigid, abstract metric. It was a negotiated framework, constantly shaped by local observation, institutional habit, and scribal judgment.

Table 3.1: The duration of lunar months in Hegira 1159, Topkapı Palace

| Sources <sup>137</sup> | Hegira Months of 1159 |    |    |    |    |    | Total Duration (days) |
|------------------------|-----------------------|----|----|----|----|----|-----------------------|
|                        | 1                     | 2  | 3  | 4  | 5  | 6  |                       |
| Sultanic Diary         | 30                    | 30 | 29 | 30 | 29 | 30 | 178                   |
| Financial Daybook      | 30                    | 29 | 30 | 30 | 29 | 30 | 178                   |

Table 3.2: The first days of lunar months in Hegira 1159, Topkapı Palace

| Sources           | Hegira Months of 1159 |     |     |     |     |     | Total Duration (weekdays) |
|-------------------|-----------------------|-----|-----|-----|-----|-----|---------------------------|
|                   | 1                     | 2   | 3   | 4   | 5   | 6   |                           |
| Sultanic Diary    | Sun                   | Tue | Thu | Fri | Sun | Mon | Sun-Mon                   |
| Financial Daybook | Sun                   | Tue | Wed | Fri | Sun | Mon | Sun-Mon                   |
| Discrepancy       | 0                     | 0   | ±1  | 0   | 0   | 0   |                           |

This case directly challenges a dominant historiographical assumption: that discrepancies in timekeeping were primarily a concern for the high-stakes ritual months, such as Ramadan and Zilhicce. In such months, synchronization was critical for public order and religious observance. As this comparison demonstrates, however, variations could and did arise in seemingly unremarkable months like Rebiyülevvel 1159. These were not isolated anomalies, nor were they mere byproducts of exceptional circumstances. This evidence strongly suggests that such variations were systemic features embedded in the very structure of lunar reckoning itself.

Ultimately, this case demonstrates that time in the Ottoman world was not a fixed, abstract backdrop against which events simply unfolded. It was a lived, practical dimension of imperial governance, recorded, interpreted, and adjusted by the very hands that kept the records. The table below, outlining the durations and first days of these six lunar months as recorded by both scribes, offers a rare glimpse into the simultaneous yet occasionally asynchronous workings of imperial timekeeping.

The sample group under consideration can be meaningfully expanded by incorporating additional sources from the same period, all of which were produced in the imperial capital. One such source is the diary of Göynüklü Ahmed Efendi, which spans the years 1711 to 1759. While the earlier periods of his diary offer a detailed day-by-day record of

<sup>137</sup> Ömer Ağa, *Sultan Ruznamesi*, İstanbul Millet Kütüphanesi, Ali Emiri, Tarih 423. BOA. D.BŞM.d. 2874.

events, entries become increasingly sparse in later years, with entire months occasionally left unrecorded. For the Hegira year 1159, only about ten entries survive, focusing selectively on what the author considered notable events. Despite its fragmentary nature, the diary still allows for the reconstruction of weekday alignments for at least five months: Muharrem, Safer, Rebiyülevvel, Cemaziyelahir, and Şevval.

Another key text from the same period is the chronicle of İzzi Süleyman Efendi, the official court historian whose narrative spans the years 1744 to 1752. Although not a daily register, İzzi's chronicle offers an indirect record of timekeeping practices through dated descriptions of significant occurrences. For the year 1159, the chronicle mentions the beginnings of nine lunar months, either explicitly or implicitly. The months missing from his account, Safer, Rebiyülahir, and Zilhicce, limit a full reconstruction, yet his chronicle still allows for significant comparative insight.

Beyond these narrative and historiographical sources, a number of financial records further enrich the sample group. Many of these daybooks record daily income and expenditures associated with the imperial budget, although most list only the day of the lunar month without noting the corresponding day of the week, a limitation for sample selection in this research. As mentioned above, one is a daybook that meticulously logs the sultan's personal monetary transactions, including distributions of gratuities during public appearances. This register, kept anonymously like many fiscal documents of the time, offers a day-by-day record for the first half of the year 1159 and is located in the Ottoman Archives under the catalogue number BOA., D.BŞM.d., 2874. For ease of reference, it will be referred to as "Daybook-1."

To this core financial record, three additional daybooks can be added: two labeled as *sergi defteri*, and one *ruzmançe defteri*. These sources also remain anonymous pending further attribution but are nonetheless valuable for their chronological detail. The first *sergi defteri* (Daybook-2) is archived as BOA. D.BRZ.SRG.d 21235, the second *sergi defteri* (Daybook-3) as BOA. D.BRZ.SRG.d 21236, and the *ruzmançe defteri* (Daybook-4) as BOA. MAD.d. 22358.

Together, these sources, comprising one sultanic diary, one personal diary, one court chronicle, and four financial daybooks, provide a rich and diverse body of materials for

examining temporal recording practices at the Ottoman capital during the year 1159 (1746). While they vary in genre, authorship, and detail, they all contribute valuable data points for mapping out the ways time was noted, interpreted, and synchronized in both narrative and fiscal registers. Except for İzzî Efendi's chronicle, which was composed retrospectively, all these sources were maintained on a daily basis, reflecting firsthand engagement with the temporal rhythms of the Ottoman imperial center.

The results of this comparative analysis are striking: as the number of recordkeepers in the sample increases, the extent of discrepancy across the lunar year becomes more pronounced. In the context of Istanbul in 1746, full alignment among sources is observed in only five months (Safer, Rebiyülahir, Cemaziyelahir, Şevval, and Zilhicce). For the remaining months, the records diverge, typically by a margin of one day. While the temporal rhythms reflected in these sources follow a broadly similar pattern, they do not exhibit uniformity in timekeeping practices. Instead, what emerges is a picture of overlapping yet non-identical systems of reckoning.

Table 3.3: The duration of lunar months in Hegira 1159, Istanbul

| Location | Source                        | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | Total |
|----------|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|-------|
| Istanbul | Sultanic Diary <sup>138</sup> | 30 | 30 | 29 | 30 | 29 | 30 | 30 | 28 | 30 | 29 | 30 | 30 | 355   |
|          | Daybook-2 <sup>139</sup>      | 29 | 29 | 30 | 29 | 30 | 29 | 30 | 30 | 29 | 29 | 30 | 29 | 353   |
|          | Daybook-3 <sup>140</sup>      |    | 29 | 30 | 29 | 30 | 29 | 31 | 29 | 29 | 29 | 30 | 30 |       |
|          | Daybook-1 <sup>141</sup>      | 30 | 29 | 30 | 30 | 29 | 30 |    |    |    |    |    |    |       |
|          | Daybook-4 <sup>142</sup>      |    | 29 | 30 | 29 |    |    |    |    |    |    |    |    |       |
|          | Chronicle <sup>143</sup>      | 59 |    | 58 | 30 | 29 | 31 | 29 | 29 | 30 |    | 59 |    | 354   |
|          | Diary-1 <sup>144</sup>        | 29 | 30 | 59 |    |    |    |    |    |    |    |    |    |       |

Table 3.4: The first days of lunar months in Hegira 1159, Istanbul

| Sources                       | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  |
|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Sultanic Diary                | Sun | Tue | Thu | Fri | Sun | Mon | Wed | Fri | Fri | Sun | Mon | Wed |
| Sergi-1                       | Mon | Tue | Wed | Fri | Sat | Mon | Tue | Thu | Sat | Sun | Mon | Wed |
| Sergi-2                       |     | Tue | Wed | Fri | Sat | Mon | Tue | Fri | Sat | Sun | Mon | Wed |
| Masraf-1                      | Sun | Tue | Wed | Fri | Sun | Mon |     |     |     |     |     |     |
| Ruznamçe                      |     | Tue | Wed | Fri | Sat |     |     |     |     |     |     |     |
| Chronicle                     | Mon |     | Thu |     | Sat | Mon | Tue | Fri | Sat | Sun | Tue |     |
| Diary-1                       | Mon | Tue | Thu |     |     | Mon |     |     |     | Sun |     |     |
| <b>Difference in Istanbul</b> | ±1  | 0   | ±1  | 0   | ±1  | 0   | ±1  | ±1  | ±1  | 0   | ±1  | 0   |

These variations are not limited to the initial demarcation of each month; they also manifest in the total length attributed to the lunar year. Only three sources in the sample specify the duration of the year, and their figures diverge: the sultanic diary reports 355 days, the court chronicle records 354, and Daybook-2 calculates only 353. These discrepancies highlight the absence of a centralized or universally enforced calendar, even within the capital.

The fact that these variations occur among recordkeepers residing in the same city, serving in the same bureaucratic offices, such as the *defterdarlık* (financial administration), or even sharing the same social setting in the sultan's immediate entourage, underscores a critical point: temporal reckoning was not strictly institutional

<sup>138</sup> Ömer Ağa. İstanbul Millet Kütüphanesi, Ali Emiri, Tarih 423.

<sup>139</sup> BOA., D.BŞM.d., (Bâb-ı Defterî, Başmuhasebe Kalemi Defterleri), 21235.

<sup>140</sup> BOA., D.BRZ.SRG.d., (Bâb-ı Defterî Büyük Ruznamçe Sergi Defterleri), 21236.

<sup>141</sup> BOA., D.BŞM.d., (Bâb-ı Defterî, Başmuhasebe Kalemi Defterleri), 2874.

<sup>142</sup> BOA., MAD.d., (Maliyeden Müdevver Defterler), 22358.

<sup>143</sup> İzzî Süleyman Efendi, *İzzî Tarihi*.

<sup>144</sup> Göynüklü Ahmed Efendi, *Tarih-i Göynüklü*.

or local but carried a degree of personal authority. Each scribe, though embedded in an imperial framework, exercised interpretive discretion in marking the passage of time.

In the third stage of enlarging the sample group, sources from different parts of the empire are examined such as a financial daybook from Birecik on the Euphrates (For ease of reference, it will be referred to as “Daybook-5”), the ambassadorial report from Iran (*sefaretname*), and the personal diary of Ahmad al-Budayri in Damascus (Diary-2). These outcomes show that the temporal discrepancies observed within Istanbul were only a fraction of the variation found across the wider empire.

Table 3.5: The duration of lunar months in Hegira 1159, across the empire

| Location | Source                          | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | Total |
|----------|---------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|-------|
| Istanbul | Sultanik Diary                  | 30 | 30 | 29 | 30 | 29 | 30 | 30 | 28 | 30 | 29 | 30 | 30 | 355   |
|          | Daybook-2                       | 29 | 29 | 30 | 29 | 30 | 29 | 30 | 30 | 29 | 29 | 30 | 29 | 353   |
|          | Daybook-3                       |    | 29 | 30 | 29 | 30 | 29 | 31 | 29 | 29 | 29 | 30 | 30 |       |
|          | Daybook-1                       | 30 | 29 | 30 | 30 | 29 | 30 |    |    |    |    |    |    |       |
|          | Daybook-4                       |    | 29 | 30 | 29 |    |    |    |    |    |    |    |    |       |
|          | Chronicle                       |    | 59 |    | 58 | 30 | 29 | 31 | 29 | 29 | 30 |    | 59 | 354   |
|          | Diary-1                         | 29 | 30 |    | 59 |    |    |    |    |    |    |    |    |       |
| Birecik  | Masraf Defteri-2 <sup>145</sup> | 30 | 30 | 30 |    |    |    |    |    |    |    |    |    |       |
| Damascus | Diary-2 <sup>146</sup>          | 29 |    |    |    |    | 30 | 31 | 31 | 30 |    |    |    |       |
| Iran     | Sefaretname <sup>147</sup>      |    |    |    |    |    | 30 | 30 |    |    |    |    |    |       |

Table 3.6: The first days of lunar months in Hegira 1159, across the empire

| Sources                       | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  |
|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Sultanik Diary                | Sun | Tue | Thu | Fri | Sun | Mon | Wed | Fri | Fri | Sun | Mon | Wed |
| Sergi-1                       | Mon | Tue | Wed | Fri | Sat | Mon | Tue | Thu | Sat | Sun | Mon | Wed |
| Sergi-2                       |     | Tue | Wed | Fri | Sat | Mon | Tue | Fri | Sat | Sun | Mon | Wed |
| Masraf-1                      | Sun | Tue | Wed | Fri | Sun | Mon |     |     |     |     |     |     |
| Ruznamçe                      |     | Tue | Wed | Fri | Sat |     |     |     |     |     |     |     |
| Chronicle                     | Mon |     | Thu |     | Sat | Mon | Tue | Fri | Sat | Sun | Tue |     |
| Diary-1                       | Mon | Tue | Thu |     |     | Mon |     |     |     | Sun |     |     |
| <b>Difference in Istanbul</b> | ±1  | 0   | ±1  | 0   | ±1  | 0   | ±1  | ±1  | ±1  | 0   | ±1  | 0   |
|                               |     |     |     |     |     |     |     |     |     |     |     |     |
| Masraf -2                     | Mon | Wed | Fri | Sun |     |     |     |     |     |     |     |     |
| Diary-2 Budayri               | Sun | Mon |     |     |     | Sun | Tue | Fri | Mon | Wed |     |     |
| Sefaretname                   |     |     |     |     |     | Mon | Wed | Fri |     |     |     |     |
| <b>Difference in Empire</b>   | ±1  | ±2  | ±2  | ±1  | ±1  | ±1  | ±1  | ±1  | ±3  | ±3  | ±1  | 0   |

<sup>145</sup> BOA., D.BŞM.d., (Bâb-ı Defteri, Başmuhasebe Kalemi Defterleri), 2855-A.

<sup>146</sup> Ahmed Shihabaddin al-Budayri, *Hawadit Dimashq Ash-Sham al-Yawmiyya*.

<sup>147</sup> Nazif Mustafa Efendi. İran Sefaretnamesi.

The data from Hegira 1159 clearly reveals the existence of distinct “lunar date zones,” where temporal reckoning was governed by local information flow rather than a centralized imperial standard. For example, in the month of Safer, the Istanbul sources, al-Budayri in Damascus, and the Birecik register each recorded a different weekday for the first of the month (Tuesday, Monday, and Wednesday, respectively), creating a three-day variance across these three nodes of the empire.

This divergence became even more pronounced in the later months. In Şaban 1159, the gap between the sultanic diary (starting Friday) and al-Budayri’s diary (starting Monday) stretched to three days. This was not a minor scribal preference; it was a systemic, infrastructural lag. It demonstrates that the temporal coherence of the capital, even with its own internal variations, was a localized phenomenon.

Provincial timekeeping operated on different schedules, governed either by local moon sightings or by the significant delay in communication relays, the time it took for a courier to carry the official sighting report from Istanbul. What emerges is not a single, unified Ottoman time, but a patchwork of overlapping temporal zones, confirming that time was a profoundly local and negotiated reality, mediated by geography, infrastructure, and the slow pace of premodern information networks.

### 3.1.2 A Century in the Capital

The second approach inverts the perspective. Instead of freezing time and examining spatial variance, it freezes space by focusing exclusively on Istanbul and examining how temporal synchronization evolved over time, from the early eighteenth to the early nineteenth century. This method foregrounds the city’s role as the temporal heart of zone and traces how it received, evaluated, and sometimes coordinated moon-sighting reports from across its imperial hinterlands.

Drawing on archival records, administrative decrees, and sultanic diaries, this analysis uncovers the mechanics of temporal governance centered in the capital. Istanbul functioned not only as the seat of imperial authority but also as a central node in a vast network of lunar communication. Moon-sighting reports were regularly dispatched from

cities across the empire, and Istanbul's decision to accept, reject, or request confirmation of those reports shaped the temporal life of the provinces.

This system can be visualized in two concentric zones. The inner circle comprised cities such as Edirne to the west and Bursa to the east, both relatively close to the capital and linked by well-established routes. These cities were Istanbul's most reliable correspondents. Reports from them appear frequently in the sources, and they were even asked to verify negative sighting claims (i.e., when the new moon was reportedly not seen), underscoring the capital's efforts to enforce some level of temporal consistency within its immediate orbit.

The outer circle, by contrast, included a much wider range of locales. These ranged from Balkan cities like Gelibolu, Stara Zagora, Plovdiv, Pazardzhik, and Gümülcine, to Anatolian centers like İzmir, Kütahya, and Ankara, and even extended to Konya, Sivas, Trabzon, and Aleppo. In some exceptional cases, lunar reports reached Istanbul from as far afield as Larissa, and Sofia. The inclusion of such distant voices reveals both the scope and ambition of the empire's temporal apparatus, as well as the limits of its efficacy. The further one moved from the capital, the more likely one was to encounter variation in lunar dating, a pattern that reflects both logistical challenges and local agency in defining time.

Yet, even within Istanbul itself, temporal uniformity was more aspirational than actual. Variations in date recognition were observed across neighborhoods, professions, and social classes. While the imperial bureaucracy might have issued one official date for the beginning of a month, local communities, guided by their own religious authorities or traditions, might follow another. Guilds, madrasa circles, and merchant networks all had temporal cultures of their own, embedded in their routines and reinforced by practical needs.

This dual approach, spatial variance within a fixed year and temporal variance within a fixed space, offers a more comprehensive understanding of how time was negotiated in the Ottoman Empire. It demonstrates that discrepancies in lunar dating were not aberrations to be corrected but essential features of a pluralistic temporal order. Understanding lunar date zones as dynamic, semi-permeable networks provides a

powerful lens for rethinking the Ottoman experience of time, one shaped as much by local agency and interpretive flexibility as by imperial control.

The next table codifies a compelling, long-range view of a consistent and systemic process of temporal negotiation that defined life in the eighteenth-century Istanbul. It catalogues 22 distinct instances, spanning from 1731 to 1805. This network of “lunar date zones” is clearly mapped, with reports flowing from major Rumelian hubs (Edirne, Sofia, Plovdiv, Gümülcine, Larissa), key Anatolian centers (Bursa, Kütahya, Konya, Sivas), and even distant port cities (İzmir, Gelibolu, Trabzon) and provincial capitals (Aleppo).

The table’s most striking feature is the overwhelming concentration of these events in the month of Ramazan, which accounts for 19 of the 22 documented instances. This powerfully underscores that these were not minor administrative corrections or clerical errors. Rather, they were high-stakes interventions driven by the immense social and religious pressure to achieve a synchronized date for the empire’s most critical ritual month, which governed the communal fast and the timing of Eid al-Fitr. The inclusion of Receb and Şaban, the other sacred months, reinforces this conclusion.

The diversity of sources, ranging from personal diaries (Göynüklü, Sıdkı, Humbaracı) and sultanic diaries (Mustafa Ağa, Ahmed Faiz) to, most significantly, official state records like the *mühimme defteri* and multiple imperial decrees, proves this was a state-level concern. This evidence reframes the entire system. This was not a record of a failed or chaotic system, but rather the documented operation of a flexible, adaptive, and proactive mechanism designed to process and reconcile geographic discrepancies.

The sheer frequency of these reports, especially from recurring regional centers like Edirne (appearing 8 times) and Bursa (appearing 6 times), suggests this was not a passive or accidental flow of information. It indicates that the central administration in Istanbul was actively demanding these legal notices from its periphery. The ultimate goal was to establish a “lunar synchronization zone” centered on the capital, creating a more unified temporal framework by systematically, incorporating the periphery’s observations into the core’s temporal reckoning.

Table 3.7: The locations of sighting reports for the date zone of Istanbul, 1731-1805

| No | Year | Hegira Month | Locations of Reports                      | Source                                      |
|----|------|--------------|-------------------------------------------|---------------------------------------------|
| 1  | 1731 | Ramazan      | Çorlu, Bursa, İzmir                       | Mustafa Ağa's Sultanic Diary <sup>148</sup> |
| 2  | 1739 | Ramazan      | Bursa                                     | Mühimme Defteri <sup>149</sup>              |
| 3  | 1739 | Ramazan      | Lovec, Sofia, Plovdiv, Pazardzhik, Edirne | Göynüklü Ahmed's Diary <sup>150</sup>       |
| 4  | 1753 | Ramazan      | Sofia, Plovdiv, Pazardzhik, Edirne        |                                             |
| 5  | 1750 | Ramazan      | Edirne                                    | Sıdkı Efendi's Diary <sup>151</sup>         |
| 6  | 1753 | Ramazan      | Gümülcine                                 |                                             |
| 7  | 1754 | Ramazan      | Aleppo                                    |                                             |
| 8  | 1754 | Ramazan      | İzmir                                     | Imperial Decree <sup>152</sup>              |
| 9  | 1764 | Ramazan      | Edirne                                    | Mustaf Efendi's Diary <sup>153</sup>        |
| 10 | 1785 | Ramazan      | Edirne, Bursa, Sivas                      | Taylesanizade's Diary <sup>154</sup>        |
| 11 | 1786 | Receb        | Trabzon                                   |                                             |
| 12 | 1787 | Ramazan      | Edirne                                    |                                             |
| 13 | 1787 | Ramazan      | Konya                                     | Imperial Decree <sup>155</sup>              |
| 14 | 1790 | Ramazan      | Kütahya, Larissa                          | Imperial Decree <sup>156</sup>              |
| 15 | 1793 | Receb        | Gelibolu                                  | Imperial Decree <sup>157</sup>              |
| 16 | 1795 | Şaban        | Edirne                                    | Imperial Decree <sup>158</sup>              |
| 17 | 1799 | Ramazan      | Bursa                                     | Ahmed Faiz's Sultanic Diary <sup>159</sup>  |
| 18 | 1800 | Ramazan      | Edirne                                    |                                             |
| 19 | 1801 | Ramazan      | Edirne                                    |                                             |
| 20 | 1802 | Ramazan      | Edirne                                    |                                             |
| 21 | 1803 | Ramazan      | Bursa                                     |                                             |
| 22 | 1805 | Ramazan      | Bursa                                     |                                             |

Although this table presents compelling findings, its clear yearly gaps indicate the data is still preliminary. The projection, however, is clear: a more exhaustive future examination would likely reveal that these temporal alterations were not just common, but a near-annual feature of imperial life, with certain years almost certainly witnessing multiple corrections.

<sup>148</sup> Soydemir, *Sultan I. Mahmud Ruznameleri (1730-1754) (İnceleme ve Çeviriyazı Metin)*, 183.

<sup>149</sup> Nalci, *147 Numaralı Mühimme Defteri'nin Transkripsiyonu ve Değerlendirilmesi (s. 1-156)*, 129.

<sup>150</sup> Göynüklü Ahmed Efendi, *Tarih-i Göynüklü*, 453, 526.

<sup>151</sup> Ali Aslan, "18. Yüzyıl Osmanlı İlim Hayatından Bir Kesit: Sıdkı Mustafa Efendi'nin Günlüğü ve Mülazemet Yılları" (MA Thesis, İstanbul University, 2015), 76, 98, 105.

<sup>152</sup> BOA., C.ADL., (Cevdet Adliye), Dosya: 83, Gömlek: 5301.

<sup>153</sup> Karan, *Humbaracıbaşı Katibi Mustafa Efendi'nin Ruzmerre Mecmuası (1143-1180/1730-1767) İnceleme-Çeviriyazı*, 55.

<sup>154</sup> Taylesanizade Hafız Abdullah Efendi, *İstanbul'un Uzun Dört Yılı (1785-1789)*, ed. Feridun M. Emecen (İstanbul: Tarih ve Tabiat Vakfı, 2003), 82, 151, 206.

<sup>155</sup> BOA., AE.SABH.I, (Ali Emiri Abdülhamid I), Dosya: 243, Gömlek: 16217.

<sup>156</sup> BOA., HAT., (Hatt-ı Hümayûn), Dosya: 183, Gömlek: 8432.

<sup>157</sup> BOA., C.ADL., (Cevdet Adliye), Dosya: 15, Gömlek: 964.

<sup>158</sup> BOA., C.ADL., (Cevdet Adliye), Dosya: 18, Gömlek: 1102.

<sup>159</sup> Ahmed Faiz Efendi, *III. Selim'in Sırkatibi Ahmed Efendi Tarafından Tutulan Ruzname*, ed. Sema Arıkan (Ankara: Türk Tarih Kurumu, 1993), 272, 300, 323, 345, 368; Beyhan, *Saray Günlüğü*, 185.

## 3.2 Tracing Lunar Reference Chains

This section explores the significant methodological pitfalls in modern Ottoman historiography by “tracing lunar reference chains” through two striking the eighteenth-century case studies. Both sections challenge the uncritical acceptance of official dates, demonstrating how easily chronological errors are created, canonized, and propagated.

The first part analyzes the 1746 death of the powerful “vizier-maker” Hacı Beşir Ağa. It reveals how a minor, one-day discrepancy, born from modern scholars privileging a lunar date (the 13th) over the unanimously recorded weekday (Thursday), led to the widespread adoption of an incorrect Gregorian date (June 3 vs. the correct June 2, 1746).

The second, more severe case presents a massive 25-day discrepancy in the 1736 arrival of the Iranian ambassador. It shows how the official chronicler’s account, based on a single flawed memoir, was uncritically accepted over the triple-verified evidence of the ambassador’s own letter, the sultan’s private diary, and foreign reports. Together, these cases expose deep methodological flaws in date conversion and source evaluation, demonstrating the urgent need to triangulate sources before accepting any date as fact.

### 3.2.1 The Death of the Vizier-Maker

Hacı Beşir Ağa stands as one of the most formidable and influential political figures in eighteenth-century Ottoman history, wielding unparalleled power during his tenure as the chief black eunuch (*darüssaade ağası*). His career was not only remarkable for its duration, the longest in the office’s history, spanning nearly three decades, but also for the sheer depth of his control over the empire’s political, economic, and cultural life. As the eminent historian İsmail Hakkı Uzunçarşılı noted, the anecdotes surrounding his career suggest Beşir Ağa held considerable, often decisive, sway over the sultan, particularly in the appointment and dismissal of grand viziers.<sup>160</sup> This reality led Jane Hathaway to aptly describe him as a “vizier maker,”<sup>161</sup> while Norman Itzkowitz offered

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<sup>160</sup> İsmail Hakkı Uzunçarşılı, “Osmanlı Tarihinde Gizli Kalmış Veya Şüphe İle Örtülü Bazı Olaylar ve Bu Hususa Dair Vesikalar,” *Belleten* 163 (1977), 519–523.

<sup>161</sup> Jane Hathaway, *Beshir Agha: Chief Eunuch of the Ottoman Imperial Harem* (Oxford: Oneworld, 2005), 63.

an even starker assessment: “the entire history of the Empire produced no more powerful Kizlar Aghasi than Al-Hajj Beshir Agha.”<sup>162</sup>

This section explores the life of this extraordinary figure, focusing not only on the mechanisms of his power but also on a curious and revealing historiographical problem: the precise date of his death. While his life was defined by the “invisible hand” he exerted over the empire, his death has become a case study in chronological discrepancy, revealing fault lines in modern historical methods. By tracing the multiple chronological references found in eighteenth-century sources and examining their distorted reflections in modern scholarship, a complex web of information emerges. Its analysis not only aims to correct a persistent error in contemporary literature but also provides insight into the methodological pitfalls of Ottoman chronology, demonstrating how simple-seeming date conversions can obscure historical reality.

The origins of many palace figures are shrouded in ambiguity, and Beşir Ağa’s are no exception. The sparse details of his early life, however, trace a path from profound vulnerability to supreme authority. Born in Abyssinia (the region of modern-day Ethiopia and Eritrea), he was enslaved and taken to Cairo, a central hub of the slave trade. There, he entered the household of İsmail Bey before his fortunes decisively changed in 1694. That year, he was brought to the Ottoman capital by Yapraksız Ali Ağa, a former chief eunuch, marking his entry into the imperial palace.<sup>163</sup>

Beşir Ağa’s rise was not immediate but was propelled by strategic and powerful alliances. Within the palace, he cultivated a crucial relationship with Gülnuş Emetullah Sultan, the favored consort of Mehmed IV and mother of Sultans Mustafa II and Ahmed III. This patronage was instrumental in his appointment as royal treasurer (*hazine kethüdası*) in July 1707.<sup>164</sup> However, the currents of court politics were treacherous; in 1713, he was removed from office and exiled to Cyprus, a common fate for those who fell from favor.

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<sup>162</sup> Norman Itzkowitz, *Mehmed Raghib Pasha: The Making of an Ottoman Grand Vizier* (Princeton University, PhD Dissertation, 1959), 143.

<sup>163</sup> Hathaway, *Beshir Agha: Chief Eunuch of the Ottoman Imperial Harem*, 29.

<sup>164</sup> Rebiyülahir 1119. Raşid Mehmed Efendi and Çelebizade İsmail Asım Efendi, *Tarih-i Raşid ve Zeyli*, vol. 2, 781.

His exile was transformative. After Cyprus, Beşir Ağa was sent to Egypt<sup>165</sup> and later given the prestigious position of şeyhü'l-harem in the Hedjaz. This role, as chief of the tomb eunuchs in Medina and supervisor of the endowments for Mecca, was far from a demotion. It placed him at the head of the Haremeyn, the vast and immensely wealthy imperial pious foundations (waqfs) that supported the Holy Cities. In this capacity, he controlled enormous revenues, vast networks of patronage, and the distribution of funds and grain across the Arab provinces. This position afforded him a degree of financial and political autonomy that would become the bedrock of his future power. He was recalled to Istanbul in late 1716 and, leveraging his new status and wealth, re-entered the court in April 1717 as Kızlar Ağası.<sup>166</sup> This appointment, eclipsed with the governance of Grand Vizier Damad İbrahim Paşa, was the true beginning of his decades-long dominance.

Once installed as chief eunuch, Beşir Ağa solidified his position with remarkable skill, navigating the turbulent political waters of the early eighteenth century. His power was structural. As Kızlar Ağası, he was not only the chief administrator of the Imperial Harem but also the permanent, unassailable manager of the Haremeyn waqfs. While grand viziers and sultans came and went, Beşir Ağa remained, building a personal financial empire and a sprawling network of clients who depended on his patronage.

His ability to survive, and indeed thrive, during the 1730 Patrona Halil rebellion is a testament to his political mastery. This uprising saw the violent overthrow of Sultan Ahmed III and the dismantling of his administration. Yet, Beşir Ağa, the ultimate palace insider of the old regime, retained his post. He was a key figure in managing the transition, securing the accession of Mahmud I and ensuring the stability of the palace bureaucracy. He was not merely a survivor of the new regime; he was one of its principal architects.

His sobriquet “vizier maker” was well-earned. He was instrumental in the careers of numerous high-ranking officials, including Grand Viziers like Topal Osman Pasha and

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<sup>165</sup> We can assume that he was sent to Egypt after Süleyman Ağa was executed in Magosa, Cyprus in Rebiyülahir 1127/April-May 1715. Topal, *Silahdar Fındıklılı Mehmed Ağa, Nusretname Tahlil ve Metin* (1106-1133/1695-1721), 832.

<sup>166</sup> “The pilgrimage that year [1716] occurred in November, and the sultan order appointing Beshir chief harem eunuch reached him in Mecca at the end of that month. He returned to Cairo at the beginning of 1717 and waited to embark for Istanbul until April, a decision that made perfect sense as the prime sailing seasons were autumn and spring.” Hathaway, *Beshir Agha: Chief Eunuch of the Ottoman Imperial Harem*, 59–60.

Hekimoğlu Ali Pasha. Foreign ambassadors quickly learned that the true center of gravity in Istanbul was not always at the Sublime Porte (the Grand Vizier's office), but in the Topkapı Palace, specifically with Beşir Ağa.

His influence was not purely political. He was one of the most significant architectural patrons of the age, commissioning the mosque complexes, libraries, fountains, and other public works, shaping the very cityscape of Istanbul and beyond. Furthermore, he was a key cultural figure, famously commissioning the earliest known complete manuscript of Evliya Çelebi's monumental *Seyahatname* (Book of Travels), effectively rescuing it from obscurity and transmitting it to the palace library.

Beşir Ağa operated behind the scenes, a master of the subtle and indirect exertion of power. As such, contemporary chronicles rarely credited him for the empire's successes or blamed him for its failures. His name remains largely absent from the grand narratives of war and diplomacy, yet his shadow falls across them all.

The vizier maker passed away on June 2, 1746. Unlike the ambiguity surrounding his birth, his death is exceptionally well-documented. However, this documentation presents a complex chronological puzzle that has systematically misled modern historians for over seventy years. The core of the problem lies not in a lack of sources, but in the subtle, yet critical, inconsistencies between them and the subsequent failure of modern scholars to properly adjudicate the evidence.

The primary sources are nearly unanimous on one crucial, decisive detail: they agree he died on a Thursday afternoon. Where they differ, as is common in Hegira system, is on the specific day of the month. Ömer Ağa's sultanic diary records the date as Cemaziyelahir 13, 1159, a Thursday.<sup>167</sup> İzzî Efendi, the official chronicler, also records Cemaziyelahir 13, 1159, a Thursday. Conversely, Göynüklü's diary presents it as Cemaziyelahir 12, 1159, also a Thursday.<sup>168</sup>

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<sup>167</sup> "...mah-ı Cumadelula'nın on üçüncü Pencşenbih günü bi-emrillahi Teala tarik-i kar [u] bar-ı fena ve azim-i dar-ı beka olup..." İzzî Süleyman Efendi, *İzzî Tarihi*, 207.

<sup>168</sup> "...bin yüz elli dokuz senesinin mah-ı Cemaziyelula'nın on ikinci Pencşenbih günü dar-ı fenadan dar-ı bekaya rihlet idüp, göç Karaağaç Sarayı'nda ol mağla meyyitin Eyyüb Sultan türbesi kurbında defn olundu, rahmetullahi aleyh, fi 12 CA, sene 1159." Göynüklü Ahmed Efendi, *Tarih-i Göynüklü*, 492–493.

The central contradiction is that the diarists agree on the weekday but disagree on the month-day. An external, non-Ottoman source, *The London Gazette*, provides a crucial anchor, reporting the death on May 22, 1746, in Julian, which corresponds to June 2 in Gregorian.<sup>169</sup> This suggests a classic historiographical problem. The chroniclers, writing on or near the day of the event, recorded the weekday they were experiencing, a Thursday. However, due to a common one-day lag in lunar counting, some (like İzzî and Ömer Ağa) recorded the date as the 13th, while another (Göynüklü) recorded it as the 12th.

The error in modern scholarship was born from a failure to recognize this discrepancy. Modern historians, faced with the “authoritative” chronicles of İzzî, and maybe the sultanic diary kept by Ömer Ağa, privileged the lunar month-day (the 13th) while completely ignoring the weekday (the Thursday). They performed a simple conversion of “Cemaziyelahir 13, 1159,” which yielded “June 3, 1746,” and in doing so, created a date that is directly contradicted by the weekday in the very sources they were citing. Tracing this error reveals how historical facts are made and unmade.

In the late nineteenth century, the record was still ambiguous. Şemseddin Sami’s 1889 encyclopedia, *Kamusü’l-Âlam*, only gave the year 1159.<sup>170</sup> Mehmed Süreyya’s 1893 *Sicill-i Osmani* correctly listed the date as Cemaziyelahir 13, 1159, Thursday.<sup>171</sup> However, when this work was republished in a Latinized version in 1996, the editors listed the date as Cemaziyelahir 13, 1159, and 3 June 1746, further confusing the issue by suggesting a different weekday. This pattern reappears in 2018 when İzzî Efendi’s chronicle was republished. Instead of cross-verifying the day of the week, the editor simply converted the date to 3 June 1746, Friday, an incorrect result that highlights the challenges posed by careless date conversions.<sup>172</sup>

The discrepancy regarding the weekday was truly introduced and cemented in the mid-twentieth century. The renowned historian İsmail Hakkı Uzunçarşılı, in his seminal *Osmanlı Tarihi* (1959), provides both the Hegira and Gregorian dates: Cemaziyelahir 13,

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<sup>169</sup> “Constantinople, June 24. On the 22nd past [2 June 1746 in Gregorian calendar] the Kislar Aqau, or Chief Black Eunuch, died in a very advanced age...” *The London Gazette*, July 26-29, 1746, 1.

<sup>170</sup> Şemseddin Sami, “Beşir Ağa, Hacı,” *Kamusu’l-Âlam* (İstanbul: Mihran, 1889 1306).

<sup>171</sup> Mehmed Süreyya, “Beşir Ağa, Hacı,” *Sicill-i Osmani* (İstanbul: Matbaa-i Amire, 1893 1311).

<sup>172</sup> İzzî Süleyman Efendi, *İzzî Tarihi*, 207. Also see, İzzî Süleyman Efendi, *Tarih-i İzzî* (İstanbul: Raşid ve Vasıf Efendiler Matbaası, 1199), 59b.

1159, and 3 June 1746. Critically, he omits the day of the week, thereby hiding the contradiction. In a 1977 article, he repeated these same dates.<sup>173</sup> As one of the giants of Ottoman studies, Uzunçarşılı's authority effectively canonized this incorrect conversion. Other scholars, like Mustafa Cezzar (1971), followed suit, mentioning only the Gregorian date of 3 June 1746.<sup>174</sup>

The 1992 entry for "Beşir Ağa, Hacı" in the highly authoritative *Diyanet İslam Ansiklopedisi* (DİA), written by Abdülkadir Özcan, adopts the 3 June 1746 date.<sup>175</sup> Once enshrined in the DİA, the date became the standard scholarly citation. Necdet Sakaoğlu's Encyclopedia of Istanbul (1993) and Mehmet Nermi Haskan's work on Eyüp (1993) both refer to Cemaziyelahir 13, 1159, and 3 June 1746.<sup>176</sup>

Academic theses, such as Munise Günal's MA thesis (2003) on Beşir Ağa's mosque complex, repeated these dates, demonstrating their firm entanglement in academic discourse.<sup>177</sup> The trend continued into the 2000s. Jane Hathaway, in her pioneer 2005 monograph on Hacı Beşir Ağa, adopted the Gregorian date of 3 June 1746.<sup>178</sup> Works by Çağdaş Adıyeke (2006), Havva Koç (2008), Uğur Demir (2012), and Lokman Tay (2017) all continued to rely on the 3 June 1746 reference, reinforcing its dominance.<sup>179</sup>

Only very recently have scholars noticed the problem. Ayhan Ürkündağ's 2017 dissertation critically footnoted the inconsistencies, though ultimately included both June

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<sup>173</sup> Uzunçarşılı, *Osmanlı Tarihi: Karlofça Antlaşmasından XVIII. Yüzyılın Sonlarına Kadar*, 4/2/332. Uzunçarşılı, "Osmanlı Tarihinde Gizli Kalmış Veya Şüphe İle Örtülü Bazı Olaylar ve Bu Hususa Dair Vesikalar," 522.

<sup>174</sup> Mustafa Cezar, *Mufasssal Osmanlı Tarihi* (İstanbul: Güven, 1971), 5/2530.

<sup>175</sup> Abdülkadir Özcan, "Beşir Ağa, Hacı," *Türkiye Diyanet Vakfı İslam Ansiklopedisi* (İstanbul: Türkiye Diyanet Vakfı, 1992).

<sup>176</sup> Necdet Sakaoğlu, "Beşir Ağa," *Dünden Bugüne İstanbul Ansiklopedisi* (İstanbul: Tarih Vakfı, Kültür Bakanlığı, 1994). Mehmet Nermi Haskan, "Beşir Ağa Türbesi," *Eyüp Tarihi* (İstanbul: Türk Turing Turizm İşletmeciliği Vakfı, 1993).

<sup>177</sup> Munise Günal, *İstanbul'da Bir XVIII. Yüzyıl Osmanlı Mimarlık Eseri: Beşir Ağa Külliyesi* (Marmara University, MA Thesis, 2003), 6.

<sup>178</sup> Hathaway, *Beshir Agha: Chief Eunuch of the Ottoman Imperial Harem*, 103. Also see, Jane Hathaway, *Osmanlı Sarayının En Ünlü Haremağası, Hacı Beşir Ağa*, trans. Hazal Yalın (İstanbul: Kitap, 2014), 99.

<sup>179</sup> Çağdaş Adıyeke, *Süleymaniye Kütüphanesi Hacı Beşir Ağa 486 Numaralı Firdevsi Şehnamesi Minyatürleri* (Mimar Sinan Güzel Sanatlar University, MA Thesis, 2006), 22. Havva Koç, "Beşir Ağa, Hacı," *Yaşamları ve Yapıtlarıyla Osmanlılar Ansiklopedisi* (İstanbul: Yapı Kredi, 2008). Uğur Demir, "Evliya Çelebi Seyahatnamesi'nin Topkapı Sarayı Kütüphanesi'ne İntikali Meselesi," *Osmanlı Araştırmaları* 39 (2012), 208. Lokman Tay, "Hacı Beşir Ağa'nın İnşa Ettirdiği Çeşmeler," *Akdeniz Sanat Dergisi* 16 (2015), 13.

2 and 3.<sup>180</sup> Tellingly, Jane Hathaway, in a separate 2018 study, referred to Cemaziyelahir 13, 1159, and 2 June 1746, citing both Ottoman and Russian sources.<sup>181</sup> This quiet correction from a leading scholar in the field strongly suggests a re-evaluation of the evidence, aligning with the correct weekday, Thursday. During my own MA research in the mid-2010s, I also noted this chronological complexity, referencing 2 June 1746 and its Hegira variations.

Ultimately, the inconsistencies surrounding the recording of Hacı Beşir Ağa's death highlight profound methodological challenges in Ottoman historiography. Contrary to the widely accepted 3 June 1746 date, the "vizier maker" could not have died on this day, as it was a Friday, and all reliable primary sources agree he died on a Thursday.

The web of references reveals that errors in converting Hegira dates to the Gregorian calendar, especially conversions that disregard the crucial anchor of the weekday, have been significantly overlooked. This oversight raises critical concerns about the accuracy of chronological records, particularly in works produced after the 1950s. The simple conversion, driven by a reliance on tables or software without a holistic reading of the source, has created a generation of scholarship built on a small but significant error. The reliability of these modern chronologies has been overestimated, underscoring the urgent need for a more cautious, critical, and methodical approach to date conversions in all historical research.

### 3.2.2 The Iranian Ambassador in Istanbul, 1736

The chronological inconsistencies in Ottoman historiography are not limited to the minor, single-day discrepancies that can arise from lunar sightings, as seen in the case of Hacı Beşir Ağa. A second, starker example from the same period demonstrates a far more severe chronological failure, one that cannot be explained by moon-sighting variations or the alternative counting styles of recordkeepers. This case concerns the 1736 arrival of

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<sup>180</sup> Ayhan Ürkündağ, *Dariüssaade Ağası Hacı Beşir Ağa ve Hayratı* (Afyon Kocatepe University, PhD Dissertation, 2017), 30, 68.

<sup>181</sup> Jane Hathaway, *The Chief Eunuch of the Ottoman Harem, From African Slave to Power-Broker* (Cambridge: Cambridge University, 2018), 149.

the Iranian ambassador, Abdalbaki Khan, where the divergence in sources is not measured in days, but in weeks.

What is crucial about this episode is the uncritical adherence of most modern historians to a single, incorrect date, which was first recorded by an Ottoman negotiator, copied by the official court chronicler, and then cemented in history. This chain of transmission highlights a persistent methodological hazard: the reliability often ascribed to official court chronicles, which can overshadow more accurate, primary sources. This incident proves, yet again, the pressing need for a holistic and critical approach, demanding that historians triangulate multiple sources before accepting any single date for an event in Ottoman history.

The year 1736 was a moment of profound tension and diplomatic significance for the Ottoman Empire. The long and exhausting wars with Iran were, for the moment, paused, and the region was being reshaped by the rise of Nader Shah. The arrival of an Iranian ambassador in Istanbul was not a routine affair; it was a high-stakes negotiation to formally end the ongoing conflict and redraw the geopolitical map of the Middle East. The precise timing of this embassy's arrival was a matter of intense state interest, coordination, and, as the records show, a subject of significant historical confusion. A formidable body of primary evidence, drawn from Iranian, Ottoman, and British sources, points to one unambiguous date.

The first source is the ambassador's own testimony. The most direct and compelling evidence comes from the ambassador himself. Abdalbaki Khan penned a detailed letter to the Iranian Shah, providing a full report of his journey and reception. This letter, which was translated into Turkish and subsequently archived, is preserved today in the Topkapı Palace Museum Archive. In this dispatch, the ambassador provides a clear and personal timeline, stating: "...following the welcoming ceremonies at Fenerbahçesi, we proceeded and reached Üsküdar on the 28th of Rebiyülevvel..."<sup>182</sup>

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<sup>182</sup> "Elçi Abdülbaki han ve maiyyetiyle memur sadr-ı memalik ve Molla Ali Ekber'in Asitane-i saadete vusulleri ilanı ve taraf-ı devlet-i Aliyye'den kendülere olan nevaziş ve muamelenin ahbarıyla şahları tarafına iştiraken yazdıkları kağıdın tercümesidir...Asitane-i saadet'e bir saat karib hedaik-ı hazret-i şehinşahiden Fenerbahçesinde matbah-ı hümayun-ı şehriyariden yemeklik tertib ve icra-ı merasim-i mihmandariye kıyam için dergah-ı mualla kapucu-başlarından diğer Halil Ağa tayin olunmuş idi. Bade itmamı'r-rüşum mahall-i mezkurdan dahi hareket ve mah-ı merkumun yirmi sekizinci günü [1149/03/28]

The second is the sultanic diary. The ambassadorial report is perfectly corroborated by the Ottoman court's own internal, private records. Hıfzı Ağa, the private secretary for Sultan Mahmud I, recorded the daily happenings of the palace. His diary contains an entry that aligns precisely with the ambassador's letter. He writes: "On Monday, the 28<sup>th</sup> of the month [Rebiyülevvel], the Iranian ambassador Abdalbaki Khan arrived..."<sup>183</sup>

Finally, this convergence of Iranian and Ottoman sources is independently confirmed by a third, neutral party. European diplomats in Istanbul, who were keenly observing the negotiations, reported the same timeline. Laurence Lockhart, in his foundational 1938 study on Nadir Shah, draws on the dispatches of the British ambassador. In his work, Lockhart cites this report, which confirms: "Abdulbaqi Khan... reached Constantinople on the 6th August..."<sup>184</sup>

The evidence is overwhelming. The ambassador's personal letter, the sultan's private diary, and the British ambassador's report all converge on a single, verified date: Monday, 28 Rebiyülevvel 1149, which corresponds to August 6, 1736 in the Gregorian calendar.

Despite this clear and triply-verified body of evidence, a powerful counter-narrative emerged from a different, and ultimately more influential, Ottoman source. The Ottoman delegation included Ragıb Efendi (later the Grand Vizier Ragıb Mehmed Pasha), a key participant in the diplomatic discussions. In his own account of the proceedings, a treatise titled *Tahkik ve Tevfik*, he provides a starkly different chronology. In the text, Ragıb states: "...Ambassador Abdalbaki Han and his mission... arrived in Üsküdar on the 3rd of Rebiyülevvel..."<sup>185</sup>

This alternative date, the 3rd of Rebiyülevvel, corresponds to July 12, 1736. This is not a minor discrepancy. It is a massive chronological gap of 25 days, or nearly four weeks. As

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belde-i Üsküdar vürud ve vusul ve tahsis olunan saraya nüzul olunub..." TSMA., E., (Topkapı Sarayı Müze Arşivi, Evrak), 1572-3.

<sup>183</sup> "Yirmi sekizinci İsneyn günü Acem elçisi Abdülbaki Han Asitane-i saadete vürud etme[ğ]in taraf-ı Devlet-i aliyyelerinden Fenerbağçesinde tertib olunan ziyafet-i asafaneye..." Soydemir, *Sultan I. Mahmud Ruznameleri (1730-1754) (İnceleme ve Çeviriyazı Metin)*, 394.

<sup>184</sup> Laurence Lockhart, *Nadir Shah: A Critical Study Based Mainly upon Contemporary Sources* (London: Luzac, 1938), 105.

<sup>185</sup> "...dergah-ı mualla kapıcıbaşılarından mihmandar tayin buyurulan Reis Kethüdası Mustafa Ağa refakatiyle tayy-i merahil ve kat'-ı menazil birle şehir-i Rebiulevvel'in üçüncü günü [1149/03/03] belde-i Üsküdar'a vasil olup..." Ragıb Mehmed Paşa, *Tahkik ve Tevfik, Osmanlı-İran Diplomatik Münasebetlerinde Mezhep Tartışmaları*, ed. Ahmet Zeki İzgöer (İstanbul: Kitabevi, 2003), 35.

this study's premise noted, such a vast difference cannot stem from a simple observational error in sighting the new moon. It is a fundamental error in the record.

The reason for Ragıb's initial error is a matter of speculation, it was likely written after the events, allowing memory or disorganized notes to corrupt the timeline. This stands in sharp contrast to the daily entries of Hıfzı Ağa or the immediate report of Abdalbaki Khan. But the reason is ultimately less important than the consequence: the official but incorrect chronicle was now set, and its influence was just beginning.

Crucially, Ragıb Efendi's account, written by a participant, was viewed as an authoritative summary of the negotiations. Its status as a key diplomatic text led Subhi Efendi, the official court chronicler, to adopt it wholesale. When Subhi compiled his history, he directly copied Ragıb's account, and with it, his incorrect date.<sup>186</sup> By integrating this text, Subhi laundered a personal (and flawed) memoir into the official and reliable state record.

Once this date was canonized in the official chronicle, its place in historiography was sealed. Subsequent generations of Ottoman, Iranian, and European historians, turned to Subhi's chronicle as the most accessible and authoritative source for the period, uncritically reproducing the error. The pedigree of this mistake is a lesson in historiographical transmission.

The error was first introduced to European scholarship by the monumental nineteenth-century historian Joseph von Hammer-Purgstall. In his *Geschichte des Osmanischen Reiches* (1831), he cites the "3rd of Rebiyülevvel" (July 12) date, introducing it as the standard.<sup>187</sup> A century later, the preeminent Turkish historian İsmail Hakkı Uzunçarşılı uncritically adopted this date in his foundational *Osmanlı Tarihi*.<sup>188</sup> This act effectively guaranteed the error's transmission to all future Turkish scholarship.

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<sup>186</sup> Subhi Mehmed Efendi, *Subhi Tarihi Sami ve Şakir Tarihleri İle Birlikte*, 304.

<sup>187</sup> Joseph von Hammer-Purgstall, *Geschichte Des Osmanischen Reiches, Grossentheils Aus Bisher Unbenützten Handschriften Und Archiven: Siebeuter Band, Vom Carlowiczzer Bis Zum Belgrader Frieden, 1699-1739* (Pesth: C. A. Hartleben, 1831), 7/463.

<sup>188</sup> Ragıb Mehmed Paşa, *Tahkik ve Tevfik, Osmanlı-İran Diplomatik Münasebetlerinde Mezhep Tartışmaları*, 232.

The authority of Hammer and Uzunçarşılı, combined with the official status of Subhi's chronicle, ensured this phantom date was passed down, becoming an accepted and unquestioned fact. It appears in Ali Djafar-Pour's 1977 PhD dissertation on Nadir Shah and Muhammad Amin Riahi's 1989 work on Iranian travelogues, *Safaratnamaha-i Iran*.<sup>189</sup>

The error continued into the twenty-first century, repeated in specialized articles like İzzet Sak's 2006 study on the embassy's expenses, as well as in MA theses by Adnan Er (2008) and Nurten Sevinç (2012).<sup>190</sup> Even broad, modern surveys of the period, such as Abdurrahman Ateş's *Osmanlı-İran Siyasi İlişkileri* (2012) and Uğur Kurtaran's *Bir Zamanlar Osmanlı* (2014), continue to propagate the flawed date derived from Ragıb and Subhi.<sup>191</sup> This chain of citations demonstrates how a single error, originating from one participant's memoir and legitimized by an official chronicler, can infect an entire field of study for centuries.

The case of Abdalbaki Khan's arrival is a powerful demonstration of the overestimated reliability of official court chronicles in matters of precise chronology. The official chronicler, Subhi, performing an act of compilation rather than primary investigation, privileged the written account of a fellow bureaucrat (Ragıb) over other, more direct sources that were almost certainly available to him, such as financial daybooks related to the expenses of the Iranian mission.

This case serves as a powerful cautionary tale. It proves that it is the absolute necessity for historians to practice a more holistic and skeptical methodology. The archival record, in this case, the ambassador's own letter and the sultan's private diary, is demonstrably more accurate than the published official history. This incident serves as a stark reminder that even the most foundational texts of Ottoman history must be cross-referenced, and that no date, no matter how many times it has been cited, should be considered fact until

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<sup>189</sup> Ali Djafar-Pour, *Nadir Şah Devrinde Osmanlı İran Münasebetleri* (İstanbul University, PhD Dissertation, 1977), 118. Riahi Muhammad Amin, *Safaratnamaha-i Iran: Gozarasha-i Musafırat Wa Mamuriyat-i Safiran-i Osmani Dar Iran* (Tehran: Intisharat-i Tus, 1368), 153.

<sup>190</sup> İzzet Sak, "1736-1741 Yılları Arasında İstanbul'a Gelen İran Elçilerinin Bazı Masrafları," *Selçuk Üniversitesi Fen-Edebiyat Fakültesi Edebiyat Dergisi* 16 (2006), 121. Adnan Er, *Safevi Devletinin Yıkılış Sebepleri* (Mimar Sinan Güzel Sanatlar University, MA Thesis, 2008), 57. Nurten Sevinç, *Osmanlı Devleti'ndeki İran Elçilerinin Gelir-Giderleri, 1696-1741* (Marmara University, MA Thesis, 2012), 22.

<sup>191</sup> Abdurrahman Ateş, *Osmanlı-İran Siyasi İlişkileri (1720-1747)* (İstanbul: Altın Post, 2012), 190. Uğur Kurtaran, *Bir Zamanlar Osmanlı, Sultan I. Mahmud ve Dönemi* (Ankara: Atıf, 2014), 160.

it has been triangulated against the rich and often contradictory evidence from which it emerged.

### 3.3 Explaining Incoherent Chronologies

A fundamental error in analyzing Ottoman historical sources is the assumption of a centralized, fixed calendar equivalent to the modern Gregorian system. This anachronistic projection obscures the fluid and complex reality of Ottoman timekeeping practices. In solar calendars, such as the Gregorian, or in calculated lunar calendars, the relationship between a specific month-day (e.g., “March 10”) and its corresponding weekday (e.g., “Tuesday”) is immutable and predictable.

The Ottoman system, however, was an observational, sighting-based lunar calendar. This introduced an inherent flexibility that is core to understanding its records. Because the start of a new month depended on the physical sighting of the new moon’s crescent, users could and did adjust their estimation of a lunar month’s length (whether 29 or 30 days). These adjustments, which could differ from city to city or from one official body to another, directly shaped how dates were recorded in practice.

This flexibility meant that the same event, for instance, the death of a sultan, might be legitimately recorded as occurring on the 1st, 2nd, or 3rd day of the month. The date chosen depended on the observer’s location and their accepted start-date for that month. In a fixed, pre-calculated system (whether solar or lunar), only one of these dates could be correct. In the Ottoman sighting-based lunar system, however, all three could be considered accurate within their specific local context. This fluidity, where multiple correct dates for a single event can coexist, is a defining characteristic of practical Ottoman chronology.

This section investigates the reasons for the existence of multiple correct dates, categorizing them into three key factors: variations in New Moon sighting reports, geographical distance between locations where records were kept, and human errors in the evaluation and transmission of chronological information. These factors operate at different scales of discrepancy.

- Variations in New Moon Sighting Reports: The most common source of short-term (1-2 day) variance, where different regions or observers began the month on different days.
- Geographical Distance: When comparing records from distant locations (e.g., Istanbul and Cairo), the time lag in communicating information could compound sighting variations, leading to larger discrepancies.
- Human Error: Simple mistakes in the evaluation, recording, or later transmission and copying of chronological information, which could lead to discrepancies of any length.

In general, when discrepancies in sources are limited to around three or four days, they are typically attributable to the first category. However, when inconsistencies span a longer period, several days or even weeks, geographical factors or significant transmission errors are the more probable cause.

To reconcile these varying dates, this study proposes a two-part approach. For short-term discrepancies, a conversion must be based on the specific, localized details of moon sightings. For larger gaps, as in the case of the arrival of an Iranian ambassador in 1736, a more thorough historiographical analysis of multiple, competing sources is necessary whether the error stems from misinterpretation or communication lag. This comprehensive approach is essential to accurately align and interpret diverse chronological records.

### 3.3.1 Three Levels of Calendar Conversion

The practical act of converting dates between the Hegira and Gregorian calendars presents one of the most persistent and consequential methodological challenges in the field of Ottoman, and indeed all Islamic, history. The two systems are fundamentally irreconcilable in their pure forms. The Gregorian calendar is a solar and calculated system, a closed mathematical loop where the relationship between a date and a weekday is fixed and predictable for millennia. The Hegira calendar, as used in most Ottoman sources, is a lunar and observational system, where the commencement of each month is an empirical event: new-moon sighting, which introduces inherent flexibility and

localized variance. Both systems differ not only in their counting of days, months, and years but also in their fundamental cosmological and civil starting points.

Modern conversion tools, whether in the form of printed tables (like those from the Turkish Historical Association, or TTK) or digital programs, have made this complex process seem deceptively simple. However, these tools are often crude instruments for the historian's purpose. They are built on a mathematical, calculated model of the Hegira calendar, which projects an idealized, uniform alternation of 30- and 29-day months backward in time. This calculated Hegira calendar is not the same as the naked-eyed Hegira calendar used by the Ottoman chronicler or scribe.

Consequently, these tools often include guidelines for handling irregular cases, but these explanations are frequently brief, lack sufficient case-based examples, and are consequently overlooked by researchers. This methodological gap leads to a false sense of precision, where a mathematically "converted" date is accepted as historical fact without the critical scrutiny it requires.

To address this methodological void, this study proposes a new framework for historical date conversion. Instead of treating conversion as a simple, one-step mathematical problem, it introduces a three-tiered hierarchy of conversion methods. The precision of the conversion increases with each level, and the appropriate method to use depends entirely on the level of chronological detail available in the source text:

- The Simple Style (Lacking weekday information)
- The Weekday Style (Including weekday information)
- The Sunset Style (Including weekday and time-of-day information)

The precision of the conversion increases dramatically with each level. The appropriate method to use, therefore, depends entirely on the richness of the data available in the source text.

### 3.3.1.1 The Simple Style: Conversion as Approximation

The simple style of conversion is the method of last resort. It is applied when the source provides only the year, month, and day of the month (e.g., “14 Safer 1149”) but crucially lacks any information about the day of the week. In this scenario, the researcher has no anchor to verify the date against the stable, seven-day weekly cycle.

This method is not an act of translation but of approximation. The researcher’s only option is to input the Hegira date into a standard conversion tool. The tool, in turn, provides a single Gregorian equivalent based on its pre-programmed, calculated lunar model.

This approximation arises from the unavoidable conflict between two distinct systems of counting. The simple style conversion tool must assume that the document’s author was following a strict, calculated alternation of 30-29-30-29 days for the duration of months. But in historical practice, the observational system meant this order could easily vary by  $\pm 1$  or even  $\pm 2$  days, depending on when the new moon was sighted (or officially declared). While this variation does not significantly affect the macro-conversion of years or months, it can lead to substantial errors when pinpointing a specific day.

This problem can be illustrated by returning to the details of an episode analyzed in the second chapter of this dissertation: the death of Sultan Ahmed in 1736. A recordkeeper, the prominent historian of the late eighteenth century, Şemdanizade Fındıklılı Süleyman Efendi, records this event as occurring on “12 Safer 1149,” without providing a day of the week.

When this date is entered into a standard conversion tool, such as the one provided by the Turkish Historical Association (TTK), it yields a single corresponding date: “22 June 1739.” The problem is that we have no way of knowing if Şemdanizade’s “12 Safer” was based on the same monthly start-date as the TTK’s calculated model. Local variations in moon sighting in the accounts he was examining to compile his chronicle could mean that Şemdanizade’s “12 Safer” was, in Gregorian terms, one or two days earlier or later.

This gray area of uncertainty can be quantified. The converted date of June 22nd is merely one possibility within a range of potential dates, including June 20, 21, 23, or 24. If we

assume a  $\pm 1$  day variation, the true date could be June 21, 22, or 23. The simple conversion's accuracy is approximately "33%." If we assume a  $\pm 2$  day variation, the true date could be anywhere from Dec 20 to Dec 24. The simple conversion's accuracy drops to "20%." The following table illustrates the simple style of Hegira conversion, 1115 Şaban.

Table 3.8: The simple style of Hegira conversion, Safer 1149

| <b>Gregorian System</b>             | <b>Hegira System</b>      |
|-------------------------------------|---------------------------|
| 11/06/1736 (11 June 1736) - Monday  | 1149/02/01 (1 Safer 1149) |
| 12/06/1736 (12 June 1736) - Tuesday | 1149/02/02 (2 Safer 1149) |
| 13/06/1736 - Wednesday              | 1149/02/03                |
| 14/06/1736 - Thursday               | 1149/02/04                |
| 15/06/1736 - Friday                 | 1149/02/05                |
| 16/06/1736 - Saturday               | 1149/02/06                |
| 17/06/1736 - Sunday                 | 1149/02/07                |
| 18/06/1736 - Monday                 | 1149/02/08                |
| 19/06/1736 - Tuesday                | 1149/02/09                |
| 20/06/1736 - Wednesday              | 1149/02/10                |
| 21/06/1736 - Thursday               | 1149/02/11                |
| <b>22/06/1736 - Friday</b>          | <b>1149/02/12</b>         |
| 23/06/1736 - Saturday               | 1149/02/13                |
| 24/06/1736 - Sunday                 | 1149/02/14                |

While this level of fuzzy accuracy may suffice for macro-historical studies focusing on years and months, it becomes highly problematic for diplomatic, military, or political histories requiring precise daily timelines. For such studies, this simple conversion method can create conflicts with other sources dated according to either the lunar or solar calendars.

### 3.3.1.2 The Weekday Style: The Trans-Calendrical Anchor

The second method, the "Weekday Style," represents a quantum leap in chronological precision. It is applied to the fortunate (and frequent) cases where the source includes the day of the week alongside the date (e.g., "Saturday, 14 Safer 1149").

The seven-day weekly cycle is an abstract concept, independent of both lunar and solar calendar calculations. Its cycle is purely mathematical and was not interrupted by astronomical events. Since the order of the days of the week (Friday, Saturday, Sunday, Monday...) remained constant and unbroken across the Mediterranean and Europe during the second millennium, this shared cycle provides a stable and immutable anchor for

conversions. It acts as a “Rosetta Stone” to bridge the two otherwise incompatible calendar systems and, crucially, to adjudicate between different local variations within the Hegira system.

The method is simple: the weekday is the primary, non-negotiable piece of information. If a standard (simple style) conversion of a Hegira date produces a Gregorian date and weekday, and that weekday mismatches the weekday explicitly stated in the source, the conversion tool’s result must be adjusted. The historian must find the nearest Gregorian date that matches the source’s stated weekday.

Let us return to the death of Ahmed III, but this time using more detailed sources. The recordkeeper at office of the deputy grand vizierate, whether an anonymous scribe or the deputy himself Numanpaşazade Ahmed Paşa, records the ex-sultan’s death as occurring on “14 Safer 1149,” and he specifies that it was a Saturday. The diarist, Göynüklü Ahmed Efendi records this event as occurring on “13 Safer 1149,” also specifying it was a Saturday.

This new information is a methodological breakthrough. Let us first analyze the date at the office of grand vizier: 14 Safer 1149. If we use the simple style conversion on this date, the TTK calendar suggests it corresponds to “Sunday, June 24, 1736.” This creates a direct contradiction: the record at the register of the grand vizierate says it was a Saturday, but the simple conversion says it was a Sunday.

The weekday style methodology instructs us to trust the recordkeeper’s stated weekday. The author knew what day of the week it was. His error, if any, was in the lunar counting of the month-day (14). To resolve this, we ignore the simple style conversion (Sunday, June 24) and instead find the correct Gregorian date. We are looking for the Saturday that is closest to the simple conversion. This adjustment immediately yields “Saturday, June 23, 1736.”

Now, let’s look at the sources side-by-side:

- The register of grand vizierate: 14 Safer 1149 = Saturday
- Göynüklü Ahmed Efendi: 13 Safer 1149 = Saturday

The apparent discrepancy on the day of the month (13 vs. 14) is reconciled by the consistent reference to Saturday. Both recordkeepers are, in fact, pointing to the exact same Gregorian day: “Saturday, June 23, 1736.”

The tables below visualize this problem and its solution. The first table shows the unaligned chronologies of the sources, demonstrating their different starting-points for the month of Şaban. This table shows the raw, contradictory chronologies as perceived by each source.

Table 3.9: The weekday style of Hegira conversion, Safer 1149, not aligned

| Gregorian System           | Hegira System            |                            |                          |
|----------------------------|--------------------------|----------------------------|--------------------------|
|                            | Source A                 | Source B                   | Source C                 |
| 11/06/1736-Monday          | 1149/02/01-Tuesday       | 1149/02/01-Monday          | 1149/02/01-Sunday        |
| 12/06/1736-Tuesday         | 1149/02/02-Wednesday     | 1149/02/02-Tuesday         | 1149/02/02-Monday        |
| 13/06/1736-Wednesday       | 1149/02/03-Thursday      | 1149/02/03-Wednesday       | 1149/02/03-Tuesday       |
| 14/06/1736-Thursday        | 1149/02/04-Friday        | 1149/02/04-Thursday        | 1149/02/04-Wednesday     |
| 15/06/1736-Friday          | 1149/02/05-Saturday      | 1149/02/05-Friday          | 1149/02/05-Thursday      |
| 16/06/1736-Saturday        | 1149/02/06-Sunday        | 1149/02/06-Saturday        | 1149/02/06-Friday        |
| 17/06/1736-Sunday          | 1149/02/07-Monday        | 1149/02/07-Sunday          | 1149/02/07-Saturday      |
| 18/06/1736-Monday          | 1149/02/08-Tuesday       | 1149/02/08-Monday          | 1149/02/08-Sunday        |
| 19/06/1736-Tuesday         | 1149/02/09-Wednesday     | 1149/02/09-Tuesday         | 1149/02/09-Monday        |
| 20/06/1736-Wednesday       | 1149/02/10-Thursday      | 1149/02/10-Wednesday       | 1149/02/10-Tuesday       |
| 21/06/1736-Thursday        | 1149/02/11-Friday        | 1149/02/11-Thursday        | 1149/02/11-Wednesday     |
| 22/06/1736-Friday          | 1149/02/12-Saturday      | 1149/02/12-Friday          | 1149/02/12-Thursday      |
| <b>23/06/1736-Saturday</b> | <b>1149/02/13-Sunday</b> | <b>1149/02/13-Saturday</b> | <b>1149/02/13-Friday</b> |
| 24/06/1736-Sunday          |                          | 1149/02/14-Sunday          | 1149/02/14-Saturday      |
| 25/06/1736-Monday          |                          |                            | 1149/02/15-Sunday        |

This table illustrates that the observed discrepancies in the day of the month stem from differing lunar calculations. The models diverge on the first day of Safer 1149:

- Source A (Hypothetical) places it on a Tuesday.
- Source B (Göynüklü’s diary) places it on a Monday.
- Source C (Grand Vizierate register) places it on Sunday.

By using the weekday as the anchor, we can now align all sources to the stable Gregorian calendar, as shown in the table below. This table aligns all sources to the Gregorian week, solving the puzzle.

Table 3.10: The weekday style of Hegira conversion, Safer 1149, aligned

| Gregorian System  | Weekday         | Hegira System     |                   |                   |
|-------------------|-----------------|-------------------|-------------------|-------------------|
|                   |                 | Source A          | Source B          | Source C          |
| 10/06/1736        | Sunday          |                   |                   | 1149/02/01        |
| 11/06/1736        | Monday          |                   | 1149/02/01        | 1149/02/02        |
| 12/06/1736        | Tuesday         | 1149/02/01        | 1149/02/02        | 1149/02/03        |
| 13/06/1736        | Wednesday       | 1149/02/02        | 1149/02/03        | 1149/02/04        |
| 14/06/1736        | Thursday        | 1149/02/03        | 1149/02/04        | 1149/02/05        |
| 15/06/1736        | Friday          | 1149/02/04        | 1149/02/05        | 1149/02/06        |
| 16/06/1736        | Saturday        | 1149/02/05        | 1149/02/06        | 1149/02/07        |
| 17/06/1736        | Sunday          | 1149/02/06        | 1149/02/07        | 1149/02/08        |
| 18/06/1736        | Monday          | 1149/02/07        | 1149/02/08        | 1149/02/09        |
| 19/06/1736        | Tuesday         | 1149/02/08        | 1149/02/09        | 1149/02/10        |
| 20/06/1736        | Wednesday       | 1149/02/09        | 1149/02/10        | 1149/02/11        |
| 21/06/1736        | Thursday        | 1149/02/10        | 1149/02/11        | 1149/02/12        |
| 22/06/1736        | Friday          | 1149/02/11        | 1149/02/12        | 1149/02/13        |
| <b>23/06/1736</b> | <b>Saturday</b> | <b>1149/02/12</b> | <b>1149/02/13</b> | <b>1149/02/14</b> |
| 24/06/1736        | Sunday          | 1149/02/13        | 1149/02/14        | 1149/02/15        |
| 25/06/1736        | Monday          | 1149/02/14        | 1149/02/15        | 1149/02/16        |

The weekday style alignment confirms that “23 June 1736” is the correct date. It also provides a crucial framework for interpreting the simple style sources. We can now confidently state that the register of grand vizierate “14 Safer 1149” (from Table 3.9) corresponds to Göynüklü’s system and also refers to June 23. Furthermore, other chronicles, like Şemdanizade, that note the event on “12 Safer” (without a weekday) align with Göynüklü’s system and also refer to June 23 (The hypothetical source represents Şemdanizade’s text).

By focusing on the weekday, historians can bypass all speculation about lunar counting, achieve greater precision, and, as in this case, prove that six sources citing four different Hegira dates (11, 12, 13, or 14 Safer) are all, in fact, in perfect agreement.

Table 3.11: Hegira dates for the death of Sultan Ahmed III, 1736

| Ottoman Sources <sup>192</sup> | Hegira Date    | Day of the Week |
|--------------------------------|----------------|-----------------|
| Mustafa Efendi                 | 11 Safer 1149  | -               |
| Şemdanizade Efendi             | 12 Safer 1149  | -               |
| Göynüklü Ahmed Efendi          | 13 Safer 1149  | Saturday        |
| Hıfzı Ağa                      | 13 Safer 1149  | Saturday        |
| Numanpaşazade Ahmed Paşa       | 14 Safer 1149  | Saturday        |
| Anonymous                      | 14 Safer 1149  | Saturday        |
| Subhi Efendi                   | (-) Safer 1149 | -               |

<sup>192</sup> For the sources, see Table 2.18.

### 3.3.1.3 The Sunset Style: Navigating the Gray Area of Night

The third and most granular method, the sunset style, is required when sources specify the time of day an event occurs. This is crucial because of the most significant, and most often overlooked, difference between the two calendars: the definition of a “day.”

- A Gregorian day spans from midnight (00:00) to the following midnight (23:59).
- A Hegira day spans from one sunset to the next sunset.

This creates a “zone of ambiguity.” For example, the Hegira “Day of Saturday” (*Yevm-i Sebt*, *Şenbe*, or *Cumartesi* in Ottoman Turkish) begins at sunset on Gregorian Friday. Therefore, an event occurring one hour after the sunset on a Friday in the Gregorian system falls on already “Saturday night” (*leyle-i Sebt*) in the Hegira system.

An event in the daytime (e.g., “morning” or “afternoon”) is simple. “Saturday afternoon” (Hegira) is the same as “Saturday afternoon” (Gregorian). Both fall in the daylight hours after sunrise on Saturday, when the two calendars are aligned.

An event at nighttime is the critical problem. An event described as “Saturday night” in an Ottoman source refers to the night preceding Saturday’s daylight, that is, the period we call Friday night today.

In the case of death of Sultan Ahmed III, the Ottoman sources unanimously state that he died in around the morning. This simplifies the conversion immensely. Since the event occurred during the daylight hours, the “sunset” ambiguity is not a factor. The daylight portion of Hegira Saturday (11, 12, 13 or 14 Safer 1149) perfectly overlaps with the daylight portion of Gregorian Saturday (23 June 1736). This provides an exact and confident conversion.

Table 3.12: The sunset style of Hegira conversion, Safer 1149

| GREGORIAN SYSTEM |                  |                      | HEGIRA SYSTEM        |                    |              |            |            |
|------------------|------------------|----------------------|----------------------|--------------------|--------------|------------|------------|
| Day of the Month | Definiton of Day | Day of Week          | Definiton of Day     |                    | Day of Month |            |            |
|                  |                  |                      |                      |                    | Source A     | Source B   | Source C   |
| 21/06/1736       | Midnight (00:00) | Thursday             | Thursday             | Nighttime (Sunset) | 1149/02/10   | 1149/02/11 | 1149/02/12 |
|                  | Daytime          |                      |                      | Daytime (Sunrise)  |              |            |            |
|                  | Midnight (23:59) |                      |                      |                    |              |            |            |
| 22/06/1736       | Midnight         | Friday               | Friday               | Nighttime          | 1149/02/11   | 1149/02/12 | 1149/08/13 |
|                  | Daytime          |                      |                      | Daytime            |              |            |            |
|                  | Midnight         |                      |                      |                    |              |            |            |
| 23/06/1736       | Midnight         | Saturday<br>THE DATE | Saturday<br>THE DATE | Nighttime          | 1149/02/12   | 1149/02/13 | 1149/08/14 |
|                  | Daytime          |                      |                      | Daytime            |              |            |            |
|                  | Midnight         |                      |                      |                    |              |            |            |

A more complex example illustrates the gray area of the sunset style. Nader Shah, the founder of the Afsharid dynasty in Iran, was killed in his tent on the night of June 20-21, 1747. The sources, both Ottoman and others, agree he was assassinated in his tent “in the middle of the night” or “around midnight.” They also agree on the weekday: Wednesday or, more accurately, “Wednesday night.”<sup>193</sup> The Hegira month-day varies (11, 12, or 13 Cemaziyelahir 1160), but using the weekday Style, we can confidently identify the 24-hour period in question.

The weekday style conversion for “Wednesday, 11-13 Cemaziyelahir 1160” points to “Wednesday, June 21, 1747.” But the sunset style forces a more precise question. The event happened around midnight.

- In the Gregorian system, midnight is the divider between Tuesday, June 20, and Wednesday, June 21.
- In the Hegira system, the entire night, from sunset on Tuesday to sunrise on Wednesday (Gregorian) is part of the single Hegira day of “Wednesday.”

<sup>193</sup> The *name-i hümayun defters*, register of official correspondences, gives the date as “11 Cemaziyelahir 1160,” without a weekday. İbrahim Küreli et al. (eds.), *I. Mahmud-Nadir Şah Mektuplaşmaları: 3 Numaralı Name-i Hümayun Defteri (Transkripsiyon/Tıpkıbasım)* (İstanbul: Başbakanlık Arşivleri Genel Müdürlüğü Osmanlı Arşivi Daire Başkanlığı, 2014), 218. Lockhart and Külbilge refers to this date, see Lockhart, *Nadir Shah: A Critical Study Based Mainly upon Contemporary Sources*, 261. İlker Külbilge, *18. Yüzyılın İlk Yarısında Osmanlı-İran Siyasi İlişkileri (1703-1747)* (Ege University, PhD Dissertation, 2010), 351. Also see, Muhammet Habib Saçmal, *Sunni-Shiite Political Relations in the First Half of the Eighteenth Century and Early Modern Ottoman Universal Caliphate* (University of California, PhD Dissertation, 2021), 507. Ebu Sehl Numan Efendi gives the date as “Wednesday, 12 Cemaziyelahir 1160.” Ebu Sehl Numan Efendi, *Tedbirat-ı Pesendide*, ed. Ali İbrahim Savaş (Ankara: Türk Tarih Kurumu, 1999), 211. Rahmi Mustafa Efendi gives the date as “Wednesday, 13 Cemaziyelahir 1160.” Süleyman Toğaç, *Kırımlı Mustafa Rahmi Efendi’nin İran Sefaretnamesi* (Ankara University, MA Thesis, 2000), 84.

The question, “Did Nader Shah die on June 20 or June 21, 1747?” is therefore a modern, anachronistic question that the primary sources are incapable of answering. For the chronicler, an event at 23:55 (Gregorian Tuesday) and an event at 00:05 (Gregorian Wednesday) are both simply “in the middle of Wednesday night.”

Table 3.13: The sunset style of Hegira conversion, Cemaziyelahir 1160

| GREGORIAN SYSTEM |                  |                   | HEGIRA SYSTEM     |                    |                    |            |            |
|------------------|------------------|-------------------|-------------------|--------------------|--------------------|------------|------------|
| Day of the Month | Definiton of Day | Day of Week       |                   | Definiton of Day   | Day of Month       |            |            |
|                  |                  |                   |                   |                    | Source A           | Source B   | Source C   |
| 19/06/1747       | Midnight (00:00) | Monday            | Monday            | Nighttime (Sunset) | 1160/06/09         | 1160/06/10 | 1160/06/11 |
|                  | Daytime          |                   |                   | Daytime (Sunrise)  |                    |            |            |
|                  | Midnight (23:59) |                   | Tuesday           | Tuesday            | Nighttime (Sunset) | 1160/06/10 | 1160/06/11 |
| 20/06/1747       | Daytime          | Daytime (Sunrise) |                   |                    |                    |            |            |
| 21/06/1747       | Midnight (23:59) | Wednesday         |                   | Wednesday          | Nighttime (Sunset) | 1160/06/11 | 1160/06/12 |
|                  | Daytime          |                   | Daytime (Sunrise) |                    |                    |            |            |
|                  | Midnight (23:59) |                   |                   |                    |                    |            |            |

As the table shows, the event occurred squarely in the gray area where the two calendars’ definition of a day is in direct conflict. This remains a debated question with potential, and equally valid, answers on both sides. This ambiguity was not just a problem for modern historians; it was a lived reality for the Ottomans themselves, especially in legal and religious contexts where the exact moment of a day’s transition was paramount. How did they refer to an event that occurred precisely during this ambiguous crossover period of sunset?

The reverse scenario, the moment of the new day’s birth, provides the answer. A court register from Istanbul, documenting the official sighting of the Ramadan crescent in 1766, reveals the linguistic pattern the Ottomans used to prevent this very misunderstanding. In the court register entry, witnesses come to the court to give their testimony. They must swear to when they saw the new moon, a moment that happens by definition in the minutes just after sunset. Their testimony, as recorded by the court scribe, uses a specific, two-part temporal reference to eliminate all ambiguity. The witnesses state they saw the crescent “on the twenty-ninth day of Şaban, on Monday, which is the night of Tuesday” (*yevm-i İsneyn leyle-i Selase*).

Table 3.14: The record from Istanbul court register, 1766, shortened

| <u>Text</u>                                                                                                                                                                                                                                                                                                                   | <u>Translation</u>                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ...Biz bin yüz yetmiş dokuz senesi Şaban-ı şerifi'nin yirmi dokuzuncu Pazartesi günü ki Salı gecesi bade'l-gurub cami-i mezkurun sağ minaresinde iltimas-ı hilal-i Ramazan-ı şerif eylediğimizde ukf-ı semada hilal-i Ramazan-ı mübareki iki uçları kible canibine müteveccihen reyü'l-ayn müşahade eyledik... <sup>194</sup> | ...When we sought the crescent of the noble Ramadan at the right minaret of the aforesaid mosque on Monday, the twenty-ninth of Şaban 1179, that is, the night of Tuesday, after sunset, we visually observed with our own eyes the blessed crescent of Ramadan on the horizon of the sky, its two tips inclined toward the qibla... |

This phrasing is a brilliant and precise legal tool. The witnesses are not being redundant; they are defining a single, liminal moment. “Monday” refers to the daylight hours that had just concluded, while “night of Tuesday” refers to the new Hegira day that had just begun at the moment of sunset. By using both weekdays, the testimony legally and unambiguously brackets the exact moment of the sighting, fixing it in the twilight crossover period.

This is conceptually identical to how we, in the modern Gregorian system, must refer to the winter season. The new year (January 1) divides the season in two. To speak of “the winter of 2025” is ambiguous, does it mean the beginning or the end of the year? We are therefore forced to use a two-part reference, “the 2025-2026 winter.”

The Ottoman scribe’s “day of Monday, night of Tuesday” is the same linguistic solution to the same structural problem: how to define a period that is split by a calendrical boundary.

All three styles of conversion include specific periods of uncertainty. The gray area of inaccurate conversion can span:

- Simple Style:  $\pm 1$  to 3 days, due to observational variance.
- Weekday Style:  $\pm 1$  day, but only for events happening during the nighttime “crossover” period.
- Sunset Style:  $\pm 1$  hour, narrowing the ambiguity to the minutes around midnight.

<sup>194</sup> Kahrıman - Yıldıztaş, *İstanbul Mahkemesi 25 Numaralı Sicil (H. 1179-1180 / M. 1765-1767)*, 475.

Accurate date conversion is therefore critical for any historical study requiring precise timelines. If a Hegira date in a source is converted using a lower-tier method than the data allows (e.g., using the simple style on a weekday style source), it can lead historians to mistakenly correct a source that was never wrong.

### 3.3.2 Distance and Misinterpretation

Besides the metrological ambiguity of a calendar based on the physical sighting of the new moon, there are two other main factors: the vast geographical distances within the empire, which created inevitable administrative and informational lag; and common human errors in the transmission, copying, and subsequent interpretation of chronological data.

This complex temporal landscape cannot be understood through a simplistic search for a single correct date. Rather, these apparent conflicts often reveal the very mechanics of Ottoman governance, communication, and historiography. A biographical study of an eighteenth-century Ottoman governor assigned to a distant province provides a compelling illustration of these chronological difficulties. The career of Ahmed Pasha, the governor of Baghdad and one of the most powerful political figures of his era, serves as a prime case study for dissecting how these factors intertwine, forcing a reevaluation of what constitutes a correct historical date.

To understand the significance of the chronological data surrounding Ahmed Pasha, one must first grasp his unique political position. He was not a rotational appointee from Istanbul, but rather the heir to a provincial dynasty that had carved out Baghdad as its own semi-autonomous center of power.

His father, Hasan Pasha, had served as governor of Baghdad for two decades (1704-1724), a period of remarkable longevity in an age of frequent administrative turnover. Hasan Pasha's primary achievement was bringing order to a turbulent frontier region by skillfully negotiating with and subduing local forces. In recognition of his indispensable service, the Sublime Porte (the central Ottoman government) allowed him to govern Baghdad uninterrupted. This stability allowed him to extend his household's influence to

the nearby and strategically vital provinces of Basra and Şehrizer, often placing them under the administration of his relatives and loyal retainers.

When Hasan Pasha died during the Ottoman campaign in Iran in 1724, his son succeeded him.<sup>195</sup> Ahmed inherited not just his father's title but, more importantly, his extensive household (*kapı*) of slaves, retainers, and mamluks (military slaves, often of Georgian origin). He consolidated and expanded this household, transforming it into the dominant provincial power in the region. Ahmed Pasha ruled Baghdad almost continuously, first from 1724 to 1734 and again from 1736 until his death in 1747.

This entrenchment of familial power was so complete that after Ahmed's death, his son-in-law, Süleyman Pasha (known as "Abu Layla"), successfully secured the governorship of Basra in 1748 and Baghdad in 1749. This event initiated the line of Mamluk governors who would rule Iraq as a virtually autonomous province within the empire until their suppression by centralizing reforms in 1831. This context is vital. The Mamluk household in Baghdad was a powerful, localized entity. Its history was recorded not only by the central government but also by local sources, creating a perfect test case for center-periphery chronological analysis.

Ahmed Paşa's governorships before he succeeded his father in Baghdad illustrate the complexities of administrative and communication lag. Reconstructing his early career requires consulting at least two distinct types of contemporary sources: the official Ottoman court chronicles written from the perspective of the capital, and the reports of Carmelite missionaries in Iraq, written from the perspective of the province.

Silahdar Fındıklılı Mehmed Ağa's chronicle, a key source covering the period from 1695 to 1721, presents a chronology from the perspective of Istanbul. According to Silahdar, Ahmed was appointed governor of Şehrizer on June 4, 1715, and then of Basra on September 20, 1716. The chronicle further notes that he was discharged from Basra on February 9, 1720, and ordered to stay in Baghdad under his father's command. Ahmed

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<sup>195</sup> Raşid Mehmed Efendi - Çelebizade İsmail Asım Efendi, *Tarih-i Raşid ve Zeyli*, 1391.

Pasha was then appointed governor of Karaman (August 19, 1720), Aleppo (March 4, 1721),<sup>196</sup> and Basra for a second time (December 1721).<sup>197</sup>

Another contemporary source, the chronicles and reports of the Carmelite missionaries stationed in Basra, provides a different chronology. The Carmelites' Basra chronicle notes that Ahmed Pasha's first term in Basra ended in June 1720: "About the end of June, Hamid [Ahmed] Pasha, after three and a half years' government of the city, was removed..."<sup>198</sup>

At first glance, these sources conflict. Silahdar (center) records the discharge in February 1720, while the Carmelites (periphery) record the removal in June 1720. This is not a contradiction; it is a perfect example of the geographical/logistical lag. The February date represents the imperial decree of dismissal being issued in Istanbul. The June date represents the implementation of that order in Basra, likely upon the arrival of Ahmed Paşa's replacement. The four-month gap is the combined travel time of the courier and the new appointee, plus the time needed to formally hand over power.

This pattern repeats. Silahdar's chronicle mentions two governors of Basra between Ahmed Paşa's first and second terms. After Ahmed's removal (in February 1720, by Istanbul's clock), Sarı Mustafa Paşa was appointed. He governed until December 11, 1720,<sup>199</sup> when he was replaced by Sirke Osman Paşa. However, a report by the Carmelites dates Sarı Mustafa's removal (and Sirke Osman's arrival) to around February 1721.<sup>200</sup>

Once again, we see a two-month gap between the central record (December 1720) and the provincial one (February 1721). This lag is the administrative friction of the empire made visible. These different dates for the same event are both valid, reflecting distinct perspectives based on the location of recordkeeping.

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<sup>196</sup> Topal, *Silahdar Fındıklılı Mehmed Ağa, Nusretname Tahlil ve Metin (1106-1133/1695-1721)*, 832, 860, 911, 914, 932.

<sup>197</sup> Fahameddin Başar (ed.), *Osmanlı Eyalet Tevcihatı (1717-1730)* (Ankara: Türk Tarih Kurumu, 1997), 283.

<sup>198</sup> Hermann Gollancz, *Chronicle of Events between the Years 1623 and 1733, Relating to the Settlement of the Order of Carmelites in Mesopotamia (Bassora)* (London: Oxford University, 1927), 567. Herbert Chick, *A Chronicle of the Carmelites in Persia, and The Safavids and the Papal Mission of the XVIIth and XVIIIth Centuries* (London: Eyre & Spottiswoode, 1939), 1188.

<sup>199</sup> Topal, *Silahdar Fındıklılı Mehmed Ağa, Nusretname Tahlil ve Metin (1106-1133/1695-1721)*, 930.

<sup>200</sup> Chick, *A Chronicle of the Carmelites in Persia, and The Safavids and the Papal Mission of the XVIIth and XVIIIth Centuries*, 1188.

The records of Ahmed Paşa's death in 1747 provide an equally clear example, this time illustrating the problem of scribal or historiographical error. Here, we can trace the data trail from the local event to the capital, and finally to the errors of later historians.

- The Local Event (Baghdad): Multiple sources present in or near Baghdad corroborate the exact date of the governor's death. Rahmi Mustafa Efendi, a scribe accompanying an Ottoman ambassadorial envoy to Iran, was present in Baghdad at the time. He recorded the death of Governor Ahmed Paşa as occurring on Thursday, Şevval 10, 1160.<sup>201</sup> This corresponds to October 19, 1747, in the Gregorian calendar.

Rahmi's account is strongly corroborated by contemporary Carmelite missionaries. Bishop Emmanuel, in his report from Iraq, verifies the timing, noting, "...in the year 1747, in the month of October, on the death of the celebrated Ahmad Pasha..."<sup>202</sup> The late eighteenth-century Ottoman historian Hafız Hüseyin Ayvansarayi also references the correct month, Şevval 1160, though he does not provide a specific day.<sup>203</sup> The ground truth of the event in Baghdad is clearly October 19.

- The News Arrives (Istanbul): The news of Ahmed Pasha's death, a major political event, was dispatched to Istanbul. As expected, it arrived several weeks later. Two key central sources document its arrival in the capital. The official chronicle by İzzi Süleyman Efendi and the sultan's diary kept by Ömer Ağa both document the news' arrival in the capital on Sunday, Zilkade 16, 1160,<sup>204</sup> or November 19, 1747. This 31-day gap between the event (October 19) and the arrival of the news (November 19) is perfectly consistent with the known 3-4 week travel time for a courier.

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<sup>201</sup> Toğaç, *Kırımlı Mustafa Rahmi Efendi'nin İran Sefaretnamesi*, 92.

<sup>202</sup> Chick, *A Chronicle of the Carmelites in Persia, and The Safavids and the Papal Mission of the XVIIth and XVIIIth Centuries*, 1257.

<sup>203</sup> Hafız Hüseyin Ayvansarayi, *Vefayat-ı Selatin ve Meşahir-i Rical*, ed. Fahri Ç. Derin (İstanbul: İstanbul Üniversitesi Edebiyat Fakültesi, 1978), 113.

<sup>204</sup> İzzi writes: "...mah-ı merkumun on altıncı günü Asitane-i sadet'e varid ve Bağdad ve Basra eyâletleri bu vechile mahlul olmağla..." İzzi Süleyman Efendi, *İzzi Tarihi*, 483. "On altıncı yevm-i Ahad'de... ve Bağdad valisi Ahmed Paşa kulları tekml-i müddet-i ecel-i müsemma etmekle..." Soydemir, *Sultan I. Mahmud Ruznameleri (1730-1754) (İnceleme ve Çeviriyazı Metin)*, 993.

- The Historiographical Error (Later Sources): The problem arises with later historians who, when consulting these sources, conflated the two dates. Historians like Şemdanizade Fındıklılı Süleyman Efendi (late eighteenth century) and Mehmed Süreyya (early twentieth century) inaccurately placed Ahmed Pasha's death in Zilkade 1160, or November 1747, without noting the month-day.<sup>205</sup>

It is highly probable that Şemdanizade encountered the Istanbul-based sources, like İzzi's chronicle, which recorded the news in Zilkade, or he saw a provincial source for Şevval and an imperial source for Zilkade and, lacking the proper context, assumed the later, imperially recorded date was the correct one. This error was then codified in Mehmed Süreyya's foundational biographical dictionary, *Sicill-i Osmani*, and transmitted into modern scholarship, creating a persistent, erroneous competing date.

Such discrepancies underscore the importance of cross-referencing multiple, multi-lingual, and multi-regional sources. In the Ottoman context, however, even these precautions are not always sufficient to establish a single correct date. The critical realization is that conflicting dates do not necessarily invalidate each other. They may instead reflect different, equally valid criteria, such as the location of recordkeeping (center vs. periphery) or the nature of timekeeping itself (local moon sighting).

Modern Ottoman studies have often implicitly, and at times explicitly, assumed that historical sources adhered strictly to a centralized, standardized calendar system. This top-down perspective, which presumes a uniformity dictated by the capital and followed throughout the provinces, fundamentally oversimplifies the lived complexities and logistical realities of the pre-modern empire. Such an approach projects a modern, synchronized temporality onto a past that operated by a different, and far more textured, clock.

The archives, however, tell a different story. As the case of Ahmed Pasha demonstrates, the inconsistencies emerging from the use of multiple lunar dates, where different sources record the same event on different days of the month, are not merely bureaucratic failures or isolated scribal slips. They are, in fact, rooted in the very fabric of Ottoman

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<sup>205</sup> Şemdanizade Fındıklılı Süleyman Efendi, *Mürî't-Tevarih*, 1/138. Mehmed Süreyya, "Ahmed Paşa," *Sicill-i Osmani* (İstanbul: Tarih Vakfı, 1996).

administrative and social life. These variations are the documented artifacts of a polychronological system, where time itself was a negotiated process, shaped by the localized practice of religion (specifically, the sighting of the new moon), the vast physical geography of the empire (which created unavoidable delays in communication), and the essential human mediation of information.

If scholars in the twenty-first century continue to overlook these intricacies, the challenges in understanding Ottoman history will only become more pronounced. By attempting to flatten this dynamic system into a single, unified timeline, often by correcting sources to fit a pre-calculated calendar, we risk fundamentally misunderstanding the Ottoman state's own perception of time and its methods of governance. We do not just miss a detail; we obscure our grasp of the empire's complex history.

However, a crucial methodological distinction must be made. While this study's central argument rests on the existence of these legitimate, systemic variations, it does not claim that all date discrepancies are evidence of this complex system. On the contrary, in certain cases, a mistake is simply a mistake. Before we can confidently analyze the profound, systemic discrepancies, we must first identify and clear the table of the mundane, obvious scribal errors. Failing to differentiate between a simple slip of the pen and a systemic chronological divergence is a critical error in itself. The following two cases are presented expressly for this purpose. They serve as foils to the main argument, illustrating the clear-cut, unambiguous errors that must be bracketed and set aside so that the more complex phenomena, the "negotiated" or "lagged" time of the Ahmed Pasha case, can be brought into sharper focus.

The first example of a straightforward error comes from the chronicle of Mehmed Akif Bey, which covers the years 1757 to 1764. During his account of Ramadan 1175 (which corresponds to late March-late April 1762), Akif Bey makes an entry that is a physical impossibility. As shown in the manuscript, the text records two consecutive days as having the same weekday:

Table 3.15: Mehmed Akif Bey's chronicle, Ramadan 1175

|                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <div> <p>رمضان شریفک بشنبی صالی کوجیسر</p> </div> <div> <p>Ramazan-ı şerifin beşinci Salı gecesi<br/>[On the night of the fifth Tuesday of the blessed Ramadan]</p> </div> <div> <p>رمضان شریفک التنبی صالی کوجیسر</p> </div> <div> <p>Ramazan-ı şerifin altıncı Salı gecesi<sup>206</sup><br/>[On the night of the sixth Tuesday of the blessed Ramadan]</p> </div> |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

This entry, a “fifth Tuesday” followed immediately by a “sixth Tuesday,” is not a silent lunar date alteration of the kind this study explores elsewhere. It is not a case where a weekday is skipped or a month-day is repeated to align with a new lunar count, as those processes would still respect the inviolable, sequential nature of weekdays. The seven-day cycle, unlike the variable lunar month, was a universally fixed and accepted constant in Ottoman society, as it was across the Mediterranean world for millennia. Therefore, two consecutive days cannot be both Tuesday.

This is a transparent scribal error. The copyist or the author, in the process of recording the day's events, simply repeated “Tuesday” (*Salı*) by mistake, when the entry for the sixth of Ramadan should have read “Wednesday” (*Çarşamba*). The error is as obvious in the eighteenth century as it is today, and it is, in fact, corrected on the very next page of the chronicle. The subsequent entry records the following day as: “Yedinci Pencşenbih gecesi...” (On the night of the seventh Thursday...).<sup>207</sup> By jumping from the “sixth Tuesday” (which should have been Wednesday) to the “seventh Thursday,” the chronicle snaps back into the correct, sequential flow of weekdays. This self-correction confirms

<sup>206</sup> Mehmed Akif Bey, *Tarih-i Cülus-i Sultan Mustafa Han-i Salis*, Istanbul Research Center Manuscript Library, Şevket Rado, 329, 353b.

<sup>207</sup> Mehmed Akif Bey, *Tarih-i Cülus-i Sultan Mustafa Han-i Salis*, ed. Erhan Afyoncu (İstanbul: Türkiye Yazma Eserler Kurumu Başkanlığı, 2024), 542.

that the repeated “Tuesday” was a simple, isolated mistake of transcription, not a feature of Ottoman timekeeping. It holds no deeper chronological significance and should be recognized as such.

The second case demonstrates a different kind of obvious error, one that concerns the year rather than the day. This example comes from the travelogue of Tanburi Arutin Efendi, a musician in the court of Mahmud I.

Arutin Efendi’s background is fascinating. He joined the military band (*mehteran*) of Mustafa Paşa’s diplomatic mission to the court of Nader Shah in 1736. This mission was related to the arrival of the Iranian envoy, Abdülbaki Khan, an event detailed previously. In May 1737, Tanburi decided not to return with the Ottoman mission and instead stayed at Nader Shah’s court at Qandahar. He traveled with the Shah’s army to India, and for the next three years, he documented his meetings with Iranian, Arab, Indian, and Uzbek musicians. He finally left the Iranian army at Herat in June 1740 and returned to Istanbul. His memoirs (*tevarih*)<sup>208</sup> and musical treatise (*edvar*) are invaluable sources.<sup>209</sup>

However, despite the general coherence of his observations, his travelogue contains a significant chronological error. Arutin Efendi gives the date of the Ottoman mission’s departure from Istanbul as H. 1148/1735.<sup>210</sup> This is factually incorrect. We know from numerous other state records and chronicles that this mission definitively left in Hegira 1149 or 1736.

Why does the text state the wrong year? This is not a complex, poly-chronological problem related to lunar sighting. A discrepancy of an entire year cannot be explained by local religious practice or administrative lag. It is a factual mistake. The question, then, is at what point this error was introduced into the text. There are several possibilities, all related to the text’s long history of transmission:

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<sup>208</sup> Tanburi Küçük Arutin Efendi, *Tahmas Kulu Han’ın Tevarihi*.

<sup>209</sup> Tanburi Küçük Arutin Efendi, *A Musical Treatise of the Eighteenth Century*, ed. Judetz Eugenia-Popescu (İstanbul: Pan, 2002).

<sup>210</sup> “Bin yüz kırk sekiz tarihinde, mirahurluktan çıkma Mustafa Paşa ve Abdülbaki Han ile İran’a azimet ettik ve sekiz ayda İran’a kadem bastık.” Tanburi Küçük Arutin Efendi, *Tahmas Kulu Han’ın Tevarihi*, 15.

- Authorial Error: Tanburi Arutin Efendi may have been writing his memoir years after the fact. The memory of an event from Hegira 1148 versus 1149 could easily be blurred. This is a common issue in autobiographical sources.
- Scribal/Manuscript Error: The original text is in Ottoman Turkish, but written in Armenian characters (Armeno-Turkish), a specialized script. The original manuscript is located in Yerevan, Armenia. A scribe copying this manuscript, perhaps unfamiliar with the specific numerical notations, could have easily made a mistake.
- Printing Error: The work was first published in Venice in 1800. An Italian typesetter, working with a difficult Armeno-Turkish manuscript and entirely unfamiliar with the Hegira calendar, could have easily misread the year “1149” and set it as “1148.”
- Editorial Error: The modern Turkish edition was produced by Esat Uras, who latinized the text, transliterating from the Armenian alphabet into the modern Turkish alphabet. This process of decodifying the alphabet is another critical juncture where an error could have been introduced.

Further manuscript research would be required to pinpoint the exact origin of this mistake. But for our methodological purposes, the answer does not matter. Whether the fault lies with the author, the Venetian printer, or the modern editor, the conclusion is the same: this is a discrete, factual error, not a systemic feature of eighteenth-century timekeeping. It is a problematic discrepancy only in that it is factually wrong, but it requires no complex explanation. It stands completely apart from the day-level negotiations of lunar time that are the true, complex, and intentional subject of this study.

By identifying these examples from Akif Bey and Arutin Efendi as clear-to-see scribal or transmission errors, we can confidently set them aside. Their nature, a physically impossible repeated weekday, a factually incorrect historical year, is fundamentally different from the systemic discrepancies rooted in geography, administrative practice, and the very physics of lunar observation. Having now distinguished these simple errors from the complex systems of time, we can proceed to analyze the latter with the necessary conceptual clarity.

### 3.4 Conclusion

This chapter has sought to dismantle the anachronistic assumption of a single, unified Ottoman time. It argues that the chronological incoherence found in primary sources is not a failure of recordkeeping, but a systemic and logical feature of an observational, sighting-based lunar calendar. The “lunar date zones” mapped in the synchronic study of 1746 reveal a negotiated and fluid temporality, where discrepancies of  $\pm 1$  day were common even within the imperial palace, and these gaps widened to  $\pm 2$  or  $\pm 3$  days across the empire. This was not chaos; the diachronic study of Istanbul demonstrated an active, centralized effort to manage this very fluidity, creating a “lunar synchronization zone” by processing sighting reports, especially for the high-stakes month of Ramadan.

The true cost of ignoring this complex reality has been borne by modern historiography. As the case studies of Hacı Beşir Ağa and the Iranian ambassador demonstrated, a failure to critically evaluate sources has led to the canonization of significant chronological errors. The Beşir Ağa case exposed a widespread methodological flaw: privileging an inconsistent lunar month-day over the unanimous weekday. The ambassador case revealed a more severe error: the uncritical acceptance of an official chronicler’s report over the triply-verified, primary source evidence of the ambassador, the sultan’s diarist, and foreign dispatches.

Ultimately, this chapter provides a constructive path forward. The proposed “Three Levels of Calendar Conversion” is a practical toolkit for historians. It recenters the weekday as the indispensable trans-calendrical anchor (the weekday style) and accounts for the crucial sunset-to-sunset definition of the day (the sunset style). By moving beyond simple, calculated conversions and embracing the methodological rigor of source triangulation, scholars can navigate the fluid landscape of Ottoman time, not as a flawed system, but as a complex and coherent one, understood on its own terms.

## 4. Dual Timekeeping Style

The eighteenth century in the Ottoman Empire was an era of profound recalibration, a period in which the very consciousness of time was reconfigured. This chapter argues that this period saw the emergence and consolidation of a sophisticated documentary practice I term “dual timekeeping.” This was not a simple, transitional phase, a halfway house on an inevitable march from “traditional” to “modern” temporalities, nor was it a mere alternation between different systems, using lunar coordinates for one purpose and solar for another. Rather, dual timekeeping represents the stabilization of a “routinized co-presence,” a deliberate and consistent articulation of multiple temporal frames upon the same documentary surface.

At its core, dual timekeeping manifested as a complex layering of temporal information. It involved the coupling of the lunar Hegira calendar with the solar Rumi calendar, transforming what was once a specialized administrative tool into a more widespread social convention. It extended to the joint citation of weekdays with month-days, as well as the formation and regulation of lunar date zones. Most granularly, it appeared below the level of the day, where the familiar, qualitative cues of the prayer clock, “toward evening,” “after the afternoon prayer,” were increasingly paired with the precise, quantitative language of the mechanical clock: hours, half-hours, quarters, and eventually, minutes. This chapter seeks to explore this phenomenon on its own eighteenth-century terms, deliberately bracketing the revolutionary changes in communication and global integration, such as the telegraph, that would radically reshape temporal experience in the mid-nineteenth century. The focus here is on the intricate web of internal pressures and, to a lesser extent, external influences that compelled this shift from within the Ottoman world itself.

While the roots of this dual system can be traced to isolated instances in the seventeenth century, and its legacy is visible in the top-down calendrical reforms of the nineteenth and early twentieth centuries, the eighteenth century stands alone as the crucible of this transformation. The textual archives of the era, from imperial decrees and court registers to private ledgers and personal diaries, reveal a society grappling with time’s inconsistencies. This was not merely an intellectual exercise; it was a pragmatic struggle.

The temporal desynchronization between the lunar calendar, which governed religious and social life, and the solar calendar, which dictated the agricultural and fiscal cycles, created persistent administrative headaches. How could the state collect taxes based on the harvest (a solar event) while paying its soldiers according to a drifting lunar calendar? How could long-range military campaigns or diplomatic missions be coordinated across an empire that operated on multiple, often conflicting, temporal rhythms?

These challenges sparked a wave of experimental efforts, administrative anxieties, and subtle yet consequential scribal innovations. The heightened awareness of time's fractures manifested not as a steady, uniform progression, but as a series of surges, often catalyzed by moments of crisis, a military defeat, a fiscal shortfall, a logistical breakdown, and receding in periods of relative stability. Yet, the cumulative effect was a gradual but undeniable shift in how time was perceived, recorded, and valued. The eighteenth-century Ottoman subject, whether a high-ranking bureaucrat in Istanbul or a provincial merchant, did not simply discard old temporal frameworks. Instead, they learned to navigate and document their world by layering new systems atop the old, creating the dense, sophisticated, and hybrid temporal architecture of dual timekeeping.

To dissect this complex phenomenon, this chapter employs a twofold analytical approach. First, it will present a chronological and scalar analysis of the transformation, examining the three primary units of time in descending order of magnitude: the year, the day, and the hour. Second, it will reframe this same evidence through a qualitative lens, analyzing the shift in terms of the variety, frequency, and continuity of the temporal markers themselves. This dual framework allows us to understand not only what changed at each temporal level but also how the very practice of recording time was fundamentally altered.

Our first analytical lens examines the transformation across three distinct but interconnected scales:

1. The Macro-Level: The Socialization of the Dual Calendar. At the highest level, the eighteenth century witnessed the experimental administrative adoption and social dissemination of a dual solar-lunar system. While the Rumi (Julian/solar)

calendar had long been used in the Ottoman chancery for fiscal purposes,<sup>211</sup> this period saw its application expand dramatically beyond the confines of tax ledgers. It began to appear regularly in social records, diplomatic correspondence, and historical chronicles, placed alongside its Hegira (lunar) counterpart. This was a move toward creating a more stable, predictable, and universally legible temporal grid for governing a vast, diverse empire.

2. The Medium-Level: The Regulation of the Lunar Month. This scale reveals a crisis in synchronizing the existing lunar calendar, the bedrock of religious and daily life. The official start of a new lunar month depended on the sighting of the crescent moon, an event subject to weather, geography, and human error. This created what might be termed elastic “lunar date zones” across the empire, where Edirne or Damascus might be a day ahead of Istanbul. The eighteenth century saw intensified efforts to regulate and standardize this system, reflecting a growing administrative intolerance for ambiguity and a desire for greater temporal cohesion across the provinces. The meticulous documentation surrounding date corrections and sighting reports speaks to this new imperative for synchronization.
3. The Micro-Level: The Fragmentation of the Day. Perhaps the most revolutionary shift occurred at the smallest scale: the division of the day. This involved the adoption of a new linguistic style for expressing time, moving from event-based markers to a calibrated, abstract grid of hours and minutes. This innovation was directly linked to a crucial external factor: the influx of more accurate and affordable European timekeeping pieces. Beginning in the second half of the seventeenth century, mass-produced clocks and pocket watches, with a margin of error of less than a minute per day, became increasingly available. Their adoption spread from the gilded chambers of the imperial palace to the bustling coffeehouses where storytellers captivated their audiences. This new technology

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<sup>211</sup> “Çift-taxes and bennak-taxes, together with their supplements, used to be taken after the threshing, but it has now become the established kanun that they be taken in March.” Victor Louis Ménage, *Ottoman Historical Documents: The Institutions of an Empire*, ed. Colin Imber (Edinburgh: Edinburgh University, 2021), 100. “The customs of the Yürük tribe were traditionally collected during the lamb shearing season. Now, by law, they are collected in the month of April (Yürük taifesinin rüsumı evyailde kuzı kırılacak alınur imiş. Şimdi Abril ayında alınmak kanunı üzere mamuldır).” Ömer Lütfi Barkan, *XV ve XVinci Asırlarda Osmanlı İmparatorluğunda Zirai Ekonominin Hukuki ve Mali Esasları* (İstanbul: Burhaneddin, 1943), 1/3.

furnished a new language, enabling and encouraging precision in daily records that was previously unimaginable.

Our second analytical lens reframes this transformation by examining the qualitative characteristics of the documentary habit itself. This grammar of the new timekeeping style is defined by three interrelated developments:

1. **An Expanded Repertoire (Variety):** The vocabulary of time broadened significantly. The names of lunar months like Şevval and Zilhicce were now routinely joined by solar month names like Mart and Eylül. The traditional, tripartite division of the month into approximate thirds (*evail*, *evasıt*, *evahir*, or early, middle, late) was gradually supplanted by the far more precise system of numbered month-days. Sources that previously referred only to month-days began to add the weekday as well. Below the level of the day, vague cues gave way to calibrated formulations. An entry might now read not just “after the evening prayer,” but “three quarters of an hour after the evening call,” or specify an appointment at “a quarter to one,” blending the traditional prayer-based system with the new mechanical one.
2. **An Intensification of Usage (Frequency):** The multi-axis timestamp ceased to be an occasional flourish and gradually became a standard feature of official and even personal documentation. This practice permeated genres as diverse as sultanic diaries, court registers, bureaucratic expense ledgers, private commercial notebooks, and even the marginalia jotted in the blank leaves of manuscripts. The sheer frequency of these dual dates indicates a fundamental shift in scribal culture, where temporal precision was no longer a luxury but a necessity for creating a credible and useful record.
3. **A New Imperative for Unbroken Records (Continuity):** Finally, the records reveal a burgeoning obsession with creating a continuous and consistent temporal sequence. This is most evident in how recordkeepers handled gaps and errors. In some examples, if no events occurred on a given day, scribes would often still mark the date in the register, leaving the entry blank, thereby preserving the integrity of the timeline. Furthermore, when they were forced to alter a lunar date

due to a revised moon-sighting report, they would often write detailed explanations for the change. This new level of annotation demonstrates a growing anxiety about temporal ambiguity and a conscious effort to produce a seamless, rationalized, and defensible historical record.

By weaving together these two analytical frameworks, the chronological and the qualitative, this chapter will chart the course of this eighteenth-century temporal change. Drawing on selected cases from the imperial capital and the wider provinces, across a spectrum of genres and authors, it will demonstrate what changed and when it changed. The deeper question of why these shifts occurred, tied to broader social, economic, and intellectual currents, will be left for future studies. For now, our goal is to reconstruct the fascinating architecture of a world learning to live and write in multiple times at once.

## 4.1 A Chronology of Change

Within the eighteenth-century Ottoman world, the alignment between the lunar month-day and the weekday underwent a significant shift. What changed was not the existence of variability, lunar months had always been set by naked-eye sighting and were therefore locally elastic, but the visibility of that variability, the intensity of attempts to contain it, and the documentary residue left by those attempts. Across the century, officials and recordkeepers noted more sighting reports, more negotiations over when months began and ended, and more moments of misalignment between communities that shared space but not the same calendar day. This unprecedented effort to synchronize variations in lunar dating did not follow a steady, linear path; rather, it spiked in certain decades, relaxed in others, and gradually trended toward more communication, more comparison, and more techniques for cross-checking dates.

My intention is to analyze this phenomenon within the specific context of the eighteenth century, a period with its own distinct logic and momentum. While the roots of this dual system can be traced to isolated instances in the seventeenth century, and its legacy is visible in the top-down calendrical reforms of the nineteenth and early twentieth centuries, the eighteenth century stands alone as the crucible of this transformation. By leaving out the transformative technologies and globalizing pressures of the later

nineteenth century, such as the telegraph, the railway, and the demands of a fully integrated world economy, we can more clearly discern the internal dynamics and external influences that compelled this temporal recalibration. This section, therefore, focuses primarily on “what” and “when” of this shift, seeking to describe its mechanics and map its emergence, leaving a deeper investigation into the causal “why” for future studies.

The foundational rhythm of public and religious life in the Ottoman Empire was the Islamic lunar calendar. Its paramount function was the timing of sacred events, most critically the beginning and end of the fasting month of Ramadan. This system, reliant on the physical sighting of the new moon, carried an inherent tension between the cherished localism of religious tradition and the administrative desire of a vast, centralized empire for a unified, predictable calendar. The eighteenth century brought this tension to a breaking point, characterized by an unprecedented effort to manage and communicate sighting reports, effectively creating and regulating “lunar date zone,” centered around main provincial cities.

The problem of temporal disunity was starkly illustrated by the dating of major state events. When Sultan Mustafa II died in the capital in 1703, contemporary sources fractured in their dating. While all agreed on the weekday, Saturday, no fewer than three variations for the specific calendar day emerged, revealing a fundamental ambiguity at the very heart of the imperial record. This was not an isolated incident. When Sultan Ahmed III died in 1736, the same scenario unfolded: a consensus on the weekday, Saturday, but four different variations for the lunar date. The empire, it seemed, could not even agree on the precise date of its ex-sovereign’s passing, a potent symbol of underlying temporal fragility.<sup>212</sup>

This ambiguity, while problematic for chroniclers, became a full-blown crisis when it concerned Ramadan. Several episodes from the capital reveal a ruling elite increasingly exasperated by the logistical and political failures of the lunar system. As the chronicler Uşşakizade Efendi notes, in 1703, the same winter of Mustafa II’s death, the capital was thrown into chaos in the lead-up to Ramadan. A late-arriving sighting report and a

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<sup>212</sup> See the Section 2.2.2 “Moment of Death.”

subsequent delay in the official announcement meant that the city's Muslim population effectively missed the first obligatory day of fasting.<sup>213</sup> This was not merely an inconvenience. It was a communal failure of piety, a lapse in the state's primary religious duty to its subjects.

This failure of communication and authority could create public spectacles of disunity. A dramatic temporal crisis emerged in Edirne in 1711. The Grand Vizier, leading the returning army, and the local judge of the city entered an extended and failed negotiation over the determination of the last day of Ramadan. The dispute could not be resolved. Consequently, the city of Edirne, following its local judge, began the Eid al-Fitr celebrations, while the soldiers, loyal to the Grand Vizier's authority, continued to fast. The bizarre scene of soldiers fasting while their civilian hosts feasted, all within the same urban space, was a visceral illustration of a state unable to synchronize itself.<sup>214</sup>

The Edirne incident highlights a severe conflict between local judicial authority and a visiting central-military power. However, in the imperial capital of Istanbul, the stakes of such a conflict were exponentially higher. While provincial cities might contend with a local judge and a visiting governor or vizier, the capital's timekeeping realm was defined by many principal actors, including the Sultan himself. This complex dynamic raises a crucial question: when did Ottoman bureaucrats begin to explicitly seek or require the sultan's approval for temporal declarations?

Pinpointing a precise origin for this shift is difficult, but a case from Ramadan 1727 powerfully illustrates the causes and consequences of this tension. It reveals a critical disconnection between the local kadi and the Sultan, a scenario that appeared multiple times during the eighteenth century and threatened the very image of imperial order.

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<sup>213</sup> See the Section 2.4.1 "A Delayed Declaration, Istanbul 1704."

<sup>214</sup> See the Section 2.2.1 "Beginning of Fast."

Table 4.1: Şemdanizade Efendi's chronicle, Ramadan 1139

| <u>Text</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <u>Translation</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Ve lale ıraęanı iin padiřah vezirin ıraęan Yalı'sına řabanda gelp takvimlerde gurre-i Ramazan Salı'dan iřaret olunmaęla İsneyn gicesi vezir ve mfti ve sadr-ı rum Feyzullah Efendi ve sair mukarrebân-ı řehriyari daavet olup aheng ve ceng ve cef neler ile saf ve řumu ve kanadil ile zevk olunur iken vakt-i iřada minarelerde cabeca kandiller yandıęı grld.</p> <p>Meęer ryet-i hilal İslambol kadısı olan řeyhzade Efendi huzurunda sabit olmuř imiř. mmet-i Muhammed camiden ıkmadan teravihi kılsunlar dey padiřaha ilam itmeden yakdırup ahir-i řabanın Ramazanında fazileti noksan olmayup ba-husus yevm-i řek gicesi byle saz u sz ve menahi ve melahi irtikab olup ilan-ı fisk olunması nas indinde mezmum olduęunu gya İstanbul kadısı ilam itdi. Hele bu takrib leyle-i mbareke sıyanet olundu. Ve ıraęan'ın yıldızı dřmř gibi mumları synd.<sup>215</sup></p> | <p>For the sake of the tulip festivities, the Sultan and his vizier came to the ıraęan Palace during the month of řaban. Since the calendars indicated that the first day of Ramadan would fall on a Monday night, the vizier, the mufti, the chief judge Feyzullah Efendi, and other close companions of the Sultan were invited on the Sunday night. They gathered for music and dancing, various entertainments, and delights by candlelight and lanterns. However, at the time of the night prayer, it was noticed that lamps were being lit on the minarets here and there.</p> <p>It turned out that the sighting of the New Moon had been confirmed in the presence of řeyhzade Efendi, the judge of Istanbul. Without informing the Sultan, these lamps were lit so that the Muslims could perform the teravih prayer before leaving the mosque, ensuring that the final day of Sha'bn, which had effectively become Ramađn, would not lose any of its spiritual merit. All the same, on "the doubtful night" holding festivities with music, singing, amusements, and frivolities was considered an open proclamation of sin, and was regarded as reprehensible in the eyes of the people. It was as though the qadi of Istanbul issued a declaration to that effect. In any case, this blessed night was ultimately safeguarded, and it was as if the star of ıraęan had fallen, for its candles were extinguished.</p> |

As the 1727 account reveals, the sultan, the administrative, military, and spiritual head of the empire, found himself conspicuously "offside" and out of sync with his own capital's temporal infrastructure. The *kadi*, by acting independently to declare Ramadan, safeguarded the holy month's ritual requirements. However, in doing so, he publicly exposed the sovereign's disconnect from the city's temporal rhythm. This was not only a scheduling error; it was a profound political embarrassment that demonstrated a critical breakdown in the flow of essential information between the state's core institutions.

The 1730s appear to have been a turning point, spurred by a combination of these accumulating failures and a new emphasis on documentation. The emergence of sultanic diaries (*sultan ruznameleri*) as a distinct genre functioned as a royal daybook, and their very existence provided a new tool for tracking temporal problems. The first examples of this genre are revelatory, covering several months and noting multiple lunar date alterations within a single month, a clear admission of the problem's persistence.

<sup>215</sup> Mustafa ksz, *řemdanizade Fındıklılı Sleyman Efendi'nin Mri't-Tevarih Adlı Eserinin (180B-345A) Tahlil ve Tenkidi Metni* (Mimar Sinan Gzel Sanatlar, MA Thesis, 2009), 371.

The breaking point for the capital seems to have been the Ramadan crisis of 1739. Following in the months grand celebrations for a reconquest of Belgrade, and during sensitive diplomatic meetings to verify peace treaties, a late sighting report for the end of Ramadan once again threw Istanbul into confusion. The capital was forced to fast for an extra half-day. By the time the Eid was finally declared, it was so late that the communal Eid prayer, a cornerstone of the celebration, was missed by the entire populace. Only the sultan and his immediate entourage, able to mobilize quickly, managed to perform the prayer. This episode, a public humiliation occurring at a moment of military triumph and international scrutiny, appears to have triggered a permanent policy change. Preliminary findings suggest that the capital, it seems, never again witnessed such a last-minute alteration for the end of Ramadan for the rest of the century.

The solution was not to abandon the lunar system but to regulate it through communication. The state began to crystallize an elastic lunar date zone, primarily centered on Istanbul but encompassing a communication axis with the major nearby cities of Bursa and Edirne. The ruling elite in Istanbul began to proactively demand sighting reports, and, significantly, even reports on the lack of moon sighting, indicating a new, systematic approach to information gathering. This zone was elastic; it could, on occasion, stretch to evaluate reports from Plovdiv, Gelibolu, Kütahya, and İzmir, and in rare cases as far as Sofia or Aleppo. However, the core axis remained Istanbul-Bursa-Edirne.

This centralization, however, had its limits. The regulation efforts of the by the central government after 1739 reform solved the problem of last-minute Eid declaration for the capital, but the provinces remained vulnerable. In Damascus in 1759, the exact same scenario played out: a failure in the synchronization process led to a delayed announcement, forcing the populace to pray the Eid prayer just before noon, long after its proper time. Furthermore, the problem of alterations for other months continued. Official and private records show that the capital still averaged at least one lunar date alteration per year throughout the century.

The frustration became palpable. In 1786, Sultan Abdülhamid I personally wrote of his dissatisfaction with the timekeeping inconsistency between the first days of lunar months from one year to the next, explicitly worrying about the possible damage for the

international status of the state. By 1802, a sultanic diarist was subtly complaining in his text about the local judge accepting sighting reports despite a cloudy sky, a clear critique of the system's fallibility. The problem was never solved, but the eighteenth century had forged a new consciousness: an expectation of uniformity and a permanent, centralized administrative effort to achieve it.

If the lunar calendar posed a crisis of communal piety and state sovereignty, its inherent "skippage" against the solar seasons posed a chronic and increasingly untenable crisis for the state's financial and military bureaucracy. The lunar year, approximately eleven days shorter than the solar year, drifts continuously through the seasons. This lunar ambiguity was a logistical nightmare for administration that needed taxing agricultural harvests and deploying soldiers during fixed campaigning seasons. While dual references to lunar and solar calendars had long existed in financial records, the eighteenth century saw this practice spread, deepen, and become an experimental topic of social policy, solidifying dual timekeeping as a standard scribal habit.

The theoretical justifications for this shift accumulated. In 1720, İsmet Mehmed Efendi, on demand of the Grand Vizier, authored a treatise that furnished an earlier work from 1582. His text explicitly outlined the severe disadvantages of the lunar reckoning for taxation, arguing that a drifting calendar could not be reconciled with a predictable, seasonal-based economy.

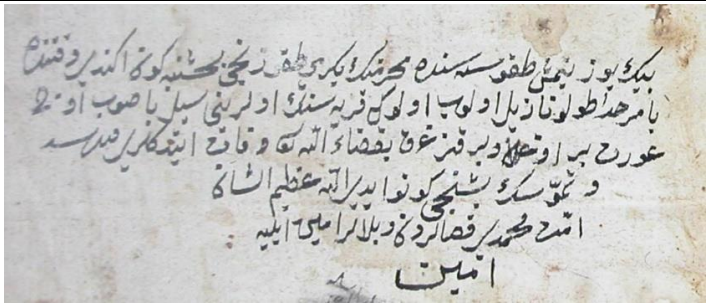
A more significant intervention came in 1739, the same year as the capital's Ramadan crisis. The head of the financial office, Defterdar Atıf Efendi, penned his own treatise on timekeeping. This document was different from its predecessors in two crucial ways. First, it came directly from the highest-ranking financial officer of the empire, signaling a top-down push for reform. Second, alongside the standard critique of lunar-based taxation, Atıf Efendi explicitly proposed adopting solar reckoning for the payment of soldiers, a subject not so clearly mentioned in previous treaties. The state, he argued, needed a stable, predictable fiscal calendar to manage its books and its armies.

While Atıf Efendi's proposal was not likely immediately adopted, the experimentation he championed was already underway. The clearest example of this shift appears in sultanic diaries. In 1752, the diarist Yenişehirli Ağa adopted a new recordkeeping style for every

single daily entry: he included both the lunar and the solar dates. When his successors, like Ustazade Ağa and Abdullah Ağa, continued this practice, it signaled a profound cognitive shift. The sultan's own life was now officially situated within two parallel temporal streams. This habit began to percolate beyond the confines of the palace and financial offices.

Evidence for this expanding temporal awareness appears in a striking sidenote, found on the first page of a manuscript from the Yozgat collection at the Süleymaniye Manuscript Library. An anonymous author, likely a scribe from the Yozgat region, records a devastating flood that caused five deaths in a local village. Crucially, he meticulously notes the event using both the lunar and solar calendars, dating it to Thursday, 29 Muharrem 1179, corresponding to 18 July 1765.

Table 4.2: A flood record, 1765

|                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Text                                                                                                                                                                                                                                                                                                                                                                    | Translation                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <p>Bin yüz yetmiş dokuz senesinde Muharrem'in yirmi dokuzuncu Perşembe günü ikinci vaktinde bi-emr-i Hüda dolu nazil olup ... karyesinin evlerini sel basıp üç avrat bir oğlan ve bir kız gark bi-kazaillahi Teala vefat ettikleri kayıt şod ve Temmuzun beşinci günü eder. Allah azimüş-şan ümmet-i Muhammedi kazalardan belalardan emin kıla. Amin.<sup>216</sup></p> | <p>In the year 1179, on the twenty-ninth day of Muharram, a Thursday, hail descended by the command of God at the time of the afternoon prayer. The houses of the village of ... were flooded, and by the decree of God Almighty, three women, one boy, and one girl drowned and died. This was recorded. And this corresponds to the fifth day of July. May God, the Most Glorious, keep the Ummah of Muhammad safe from accidents and calamities.</p> |

The significance of this small scribal act should not be understated. It demonstrates that this dual consciousness was no longer merely a tool for state elites or imperial bureaucrats. It had become a cognitive habit adopted by ordinary individuals to situate significant local events, even personal tragedies, within a shared, dual-temporal framework.

<sup>216</sup> Süleymaniye Manuscript Library, Yozgat Yazmalar, 686, 1a.

Different genres began to reflect this duality. In 1775, the naval logbook recording the voyages of the Grand Admiral Hasan Pasha was kept primarily with lunar dating, but the scribe was careful to note the first day of each solar month as it passed.<sup>217</sup> A navy, more than most, must operate in harmony with the solar seasons, and its records began to reflect this operational reality.

The administrative reform finally caught up with the practice. In 1792, certain customs registers began to be recorded only by solar dating. Then, in 1794, the head of the financial office, Moralı Osman Efendi, proposed a sweeping reform of timekeeping in finance. Following his proposal, registers for the malikane (tax-farming) system began to be recorded exclusively by solar dating. This act, nearly sixty years after Atıf Efendi's proposal, shows the final, formal acceptance of solar dating as the dominant language of the fiscal realm. While the full success of the 1794 reform requires further study, its implementation marks the culmination of a century-long, gradual, and pragmatic shift.

The most intimate and perhaps most visible change in eighteenth-century Ottoman time consciousness occurred at the smallest scale: the division of the day. This period witnessed the beginning of a profound linguistic and cognitive shift, moving from a relative, event-based understanding of the hour to an abstract, mechanical, and divisible one. Driven by the proliferation of mechanical clocks, the demands of state scheduling, and a new scientific interest in precision, the hour began to be fragmented into half-hours and, most significantly, into minutes.

Driven by the proliferation of mechanical clocks, the increasing demands of state scheduling, and a new scientific interest in precision, the hour began to be systematically fragmented into half-hours and, most significantly, into minutes. This mental shift is not hidden; it is rendered visible in the very ink of their records, as chroniclers, officials, and other recordkeepers alike grappled with a new language to pin down the moment.

This new precision was, at first, an experimental tool for the state elite, deployed to manage the complex, multi-actor choreography of the court and the state. The palace, as

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<sup>217</sup> Şenay Özdemir, "Osmanlı Donanmasının Bir 'Seyir Defteri' ve XVIII. Yüzyıl Osmanlı Denizciliğine İlişkin Bazı Gözlemler," *Tarih Araştırmaları Dergisi* 37 (2005), 113–163.

the center of power, necessarily became a center of experimentation in temporal synchronization.

A remarkable window into this experimental phase comes directly from Sultan Ahmed III in the 1720s. While anticipating a meeting at a royal pavilion, he personally scribbled a scheduling note. In it, he dictated that the imperial household should arrive “at two o’clock,” the Grand Vizier “at two and a quarter,” and he himself would arrive “at two and thirty four.” The sultan was scheduling his day, and coordinating his government, down to the minute.

Table 4.3: Sultan Ahmed III’s meeting plan, 1720s

|  | Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>Sen ki vezirim İnşai'l-Mevla yarın saat akrebi iki ve otuz dört dakikada otağ-i hümayundan hareket olunur. Otağ-i hümayun pişgahına alay halkı saat ikide cem olmak ve iki çaryekte sen dahi otağ-i hümayuna hareket eylersin. Geldiğin saat...<sup>218</sup></p> <p><b>Translation</b></p> <p>O my vizier; tomorrow, at two hours and thirty-four minutes by the clock-hand, we shall depart from the imperial tent. The procession people are to assemble at the forecourt of the imperial tent at two o'clock, and at two quarters you too shall set out for the imperial tent. At the time you arrive...</p> |

From the view of the recordkeeper here, the Sultan himself, this note is revolutionary. The linguistic style is visibly experimental; he writes “two and thirty-four” (*iki ve otuz dört dakikada*) rather than the modern, consolidated “two-thirty-four” (*ikiyi otuz dört geçe*). We are witnessing a mind at work, forcing an old, descriptive grammatical structure to accommodate a new, abstract, and ruthlessly precise mathematical concept: the *dakika*, or minute. The implication is staggering. The sovereign was not just owning

<sup>218</sup> BOA., AE.SAMD.III (Ali Emiri Ahmed 3), Dosya: 221, Gömlek: 21339.

a clock; he was thinking in minutes. He was conceptualizing his day and coordinating the highest officers of his government not by the traditional rhythms of prayer or court ceremony, but by the relentless, mechanical ticking of a machine.

This elite, high-stakes precision quickly became essential for the practical business of diplomacy and state ceremony. In 1745, an Ottoman protocol officer (*teşrifati efendi*) was tasked with welcoming the Iranian ambassador. His detailed report reveals how this new temporal language had become the bedrock of state logistics.

The officer, as the official recordkeeper, does not rely on vague approximations. He notes that the ambassador's party began its journey "at the eleventh hour of the night" (*leyli on birde*) and that his own welcoming party departed "at the twelfth hour of the night" (*leyli on ikide*). They met at dawn, and he then records their arrival at the lodging "at three and a half hours of the day" (*nehari üç buçukda*).

This is the language of a man managing a complex logistical problem. The true challenge, however, was the next day's program: a high-profile crossing of the Bosphorus. The protocol officer lays out a precise, clock-based schedule: "at three o'clock, the morning meal" "at five o'clock, departure," "at six o'clock, arrival at Üsküdar," and "at seven o'clock, arrival at dock of Kerc."

For this recordkeeper, half-hours and o'clocks are not novelties; they are indispensable tools of his trade. Such a logistical quest and diplomatic coordination required a shared, precise temporal language to prevent embarrassing and potentially insulting delays. His report is the state imposing a new, shared, and legible time upon its agents, its guests, and the very geography of the capital.

Table 4.4: A report on the Iranian ambassador's arrival, 1746

| <u>Text</u>                                                                                                                                                                                                                                                                                                                                                                                                    | <u>Translation</u>                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Teşrifati efendi kullarının takriridir.                                                                                                                                                                                                                                                                                                                                                                        | This is the report of Master of Ceremonies.                                                                                                                                                                                                                                                                                                                                                                                                       |
| İran'dan gelen sefir işbu Salı gecesi Kartal'da beytutet idub saat leyli on birde iken mahall-i merkumeden hareket itmiş. Berü tarafından dahi müstakbel tayin olunan kapucıbaşı Bekir Ağa kulları kırk nefer pak atlu ile saat leyli on ikide iken yemeklikden hareket etmekle vakt-i sabahda Bostancıbaşı köprüsünde mülakat ve farize-i subhu anda edip saat nehari üç buçukda iken yemekliğe gelmişlerdir. | The ambassador arriving from Iran spent Tuesday night at Kartal and departed from the aforementioned location at 11 o'clock at night. From this side as well, Kapıcıbaşı Bekir Ağa, appointed to receive him, set out from Yemeklik at 12 o'clock at night with forty mounted men on fresh horses. They met at daybreak at the Bostancıbaşı Bridge, performed the dawn prayer there, and arrived back at Yemeklik at 3:30 o'clock in the daytime. |
| ...ve gelür iken yollarda zahmet ve külfet çekmediğini ve bir kadem evvel vusul ile evliya-ı niam efendilerimiz hazeratının mübarek cemalleri müşade-i kemal-i arzumend olduğunu serd ve beyan ve tarh-ı ulfet ve istinas zımında bir mikdar afaki musahebet güzeran eyledikten sonra saat dörtde iken taam keşide kılınmıştır.                                                                                | And while on the road he stated and declared that he had suffered no hardship or burden along the way, and that his utmost desire was to arrive one step earlier and behold the blessed countenances of our revered benefactors (evliyâ-ı ni'am efendilerimiz hazeratı). After some casual conversation meant to foster familiarity and ease, the meal was laid out at 4 o'clock.                                                                 |
| ...ve saat beş buçukda iken muma ileyh Nazif Efendi kulları...                                                                                                                                                                                                                                                                                                                                                 | ...and at 5:30 o'clock, Nazif Efendi, his humble servant, ...                                                                                                                                                                                                                                                                                                                                                                                     |
| Ve yarınki Çerharşenbe günü saat üçde iken kuşluk taamı virilüb beşde iken yemeklikden hareket altıda Üsküdar iskelesine ve yedide Kerc iskelesine gelinmek üzere dir.                                                                                                                                                                                                                                         | Tomorrow, Wednesday, the late-morning meal will be served at 3 o'clock; they will depart from Yemeklik at 5 o'clock, arrive at the Üsküdar pier at 6 o'clock, and reach the Kerç pier at 7 o'clock.                                                                                                                                                                                                                                               |
| Ve mihmandarı Gediklu Seyyid Mehmed Ağanın takriiri üzere sefir-i merkumun süvar cemiyeti yetmiş nefer balığdır. Lakin Kerc iskelesinden kendi ile bile ata süvar olacak mecmu yirmi iki nefer olduğu sefir-i merkumun kethüdası marifetiyle tashih olunmuştur.                                                                                                                                                | According to the report of his steward, Gedikli Seyyid Mehmed Ağa, the ambassador's mounted retinue amounts to seventy men. However, it has been corrected through the ambassador's kethüda that the total number who will mount horses together with him from the Kerç pier is twenty-two.                                                                                                                                                       |
| Ve "Bostancı başı ağanın sandalından maada dört kıta dörder çifte ve altı kıta dahi üçer çifte kayıklar Üsküdar iskelesinde mevcut bulunmak kifayet eder" diyu mihmandarı muma ileyh ağa kulları takrir eylemiştir.                                                                                                                                                                                            | The said steward, the aforesaid Ağa, also reported: "Apart from the Bostancıbaşı Ağa's boat, it will suffice for there to be present at the Üsküdar pier four craft with four pairs of oars each, and six craft with three pairs of oars each."                                                                                                                                                                                                   |
| Ve eşyalarını vaz için sekiz aded mavnalari Üsküdar ustası amade ideceğini haber verdiği malum-ı devletleri buyuruldukda emr ve ferman devletlu inayetlü sultanım hazretlerindir. <sup>219</sup>                                                                                                                                                                                                               | And when it was communicated that the Üsküdar master would prepare eight barges (mavna) for transporting their belongings, and this was made known to the state, the command and decree belong to my sovereign, the gracious and beneficent Sultan.                                                                                                                                                                                               |

<sup>219</sup> BOA, HAT, Dosya: 5, Gömlek: 173.

This impulse for precision, born from the state's need to schedule, soon moved into a new domain: the need to measure. The minute and its fractions evolved from being mere points on a schedule to becoming tools for quantifying duration. In 1747, the sultan ordered one of his servants to perform a run Beşiktaş to Tophane. The sultan's secretary, acting as the official recordkeeper, noted the result. The timing was recorded as "half hour and two minutes more" (*nısf saatden iki dakika mürurunda*).<sup>220</sup>

The royal secretary's preference on this specific phrasing, rather than the mathematically simpler "32 minutes," is profoundly revealing. His pen reveals his cognitive process. The "half hour" (*nısf saat*) was the traditional, familiar, and understood block of time. The "two minutes" (*iki dakika*) were the new, precise, mechanical supplement. We are observing a mind actively compiling two different temporal technologies, one approximate and familiar, the other new and specific. The record itself is the evidence of a consciousness grappling with a new tool, using it to append mechanical precision onto an older, established framework.

This new scientific interest in quantifying duration soon spread from human activity to natural phenomena. In 1752, the diarist Göynüklü Ahmed Efendi recorded a major earthquake in Istanbul.

Bin yüz altmış beş senesinin mah-ı Ramazan-ı şerif'in on dokuzuncı pazar gicesi ahşamdan sonra saat bire karib olduğu vakitte bir azim zelzele şehir-i İstanbul'da vaki olup vafir bacalar yıkılup ve bazı evlerin divarları dahi yıkılmışdır. Bir çeyrek kadar sürmüştür.<sup>221</sup>

He notes the time of the event ("around one o'clock at night") but then adds a crucial, new piece of data: its duration. He writes that the tremor lasted "around a quarter" (*bir çeyrek kadar sürmüştür*). This phrasing, likely an idiom for a quarter of a minute, should be read as a conscious attempt to quantify a duration of approximately ten or fifteen seconds.

As a diarist, Göynüklü Ahmed is a private recordkeeper. His act of recording shows that this new temporal mentality is migrating from the palace into the educated populace. He

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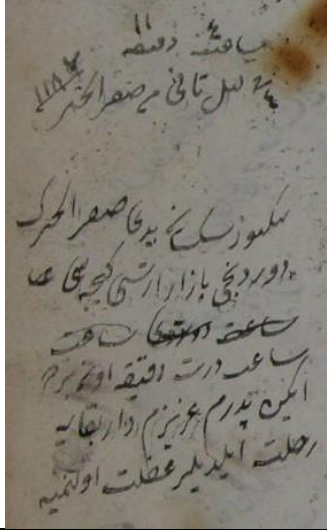
<sup>220</sup> Soydemir, *Sultan I. Mahmud Ruznameleri (1730-1754) (İnceleme ve Çeviriyazı Metin)*, 1014.

<sup>221</sup> Göynüklü Ahmed Efendi, *Tarih-i Göynüklü*, 518.

is not merely experiencing the terror of the earthquake; he is observing and measuring it. While he does not use the word “second,” his clock-based estimation implies it. His clock has become more than a scheduling device; it is a new scientific instrument for making sense of the natural world, transforming a subjective, chaotic event into an objective, quantified piece of data.

Even more profoundly, this new micro-temporal consciousness percolated from the public and scientific spheres into the most private spaces of the household. It began to frame the most intimate and foundational events of human life: death, leisure, and birth. One of the most striking pieces of evidence of this comes from 1773, in a small sidenote written on the first page of a manuscript by a grieving son.

Table 4.5: A death record, 1773

|                                                                                                                                                                                                  |                                                                                                                                                                             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Text                                                                                                                                                                                                                                                                               | Translation                                                                                                                                                                                                                                                    |
| <p>Saat 4 dakika 11<br/>Fi leyl-i sani min Saferü'l-hayr sene 1187</p> <p>Bin yüz seksan yedi saferül hayrın dördüncü Bazarertesı gecesi saat <del>dördü</del> saat saat dört dakika on birde iken pederim azizim darül bekaya rihlet eylediler gaflet olunmaya.<sup>222</sup></p> | <p>Hour 4 minute 11<br/>On the second night of Şafar, in the year 1187.</p> <p>In the year 1187, on the night following Sunday, the 4th of Şafar, at four, o'clock, o'clock my beloved father departed for the abode of eternity. Let it not be forgotten.</p> |

He writes to mark the exact moment of his father’s passing: “hour 4, minute 11” (*saat 4, dakika 11*). He continues, “on the fourth night of Safer 1173, the Monday night, at hour four, minute eleven, my dear father departed for the eternal abode. Let it not be forgotten.”

<sup>222</sup> Süleymaniye Manuscript Library, Esad Efendi, 3482, 1a.

This small, private act is perhaps the most powerful indicator of the new mentality. The recordkeeper, in his moment of profound loss, reaches for a new tool to anchor his grief. He is not content with “Monday night” or “after the night prayer.” He records the exact mechanical instant of this personal rupture. The clock was no longer just a public tower or a palace instrument; it was a household object, and its precise, minute-based time was now the framework for memorializing the most sacred of human events. The act of recording the minute is an act of bearing witness, a bid for a new kind of objective permanence in the face of the ultimate loss.

This precision soon entered the realm of everyday leisure as well. In 1757, a man in the capital wrote a note summarizing a storyteller’s performance he had attended at a local coffeehouse, in Galata district.

Table 4.6: A storyteller’s performance, 1757

| Text                                                                                                                                                                                                                                        | Translation                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Sene 1171 Ramazanının on sekizinci Pençşenbe gecesi teravihi Arab Cami’nde bade’l-eda, Arab çarşısında saat üçten dört buçuğa varınca Meddah Ahmed Çavuş Ağa’dan mesmudur, Dellalbaşızade oğlumuz kahvesinde mesmudur.<sup>223</sup></p> | <p>In the year 1171, on the night of Thursday, the 18th of Ramadan, after the tarawih prayer was performed at the Arab Mosque, it was heard in the Arab Bazaar, from three o’clock until four and a half. It was heard from Storyteller Ahmed Çavuş Ağa; it was heard at the coffeehouse of our son, Dellalbaşızade.</p> |

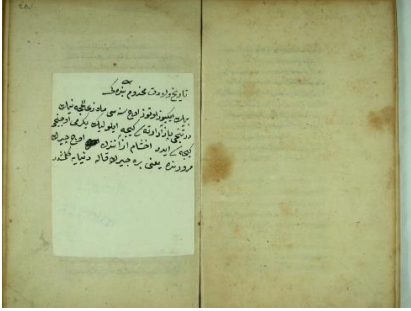
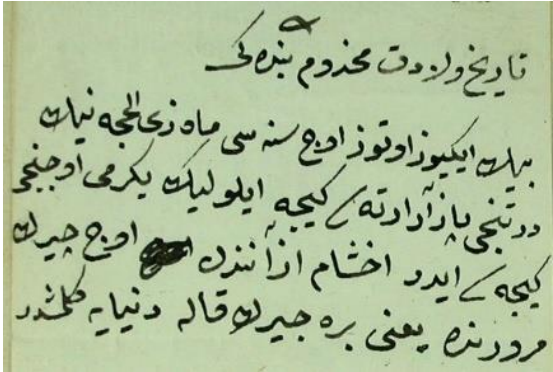
He records that the performance lasted “from three to four o’clock and a half” (saat üçten dört buçuğa varınca). The recordkeeper here is simply a consumer of culture. His note demonstrates the complete normalization of this new time. Clock-time was no longer just for sultans, diplomats, or recording deaths; it was for framing and measuring everyday social and cultural life. The note itself represents a fascinating intersection: a traditional, oral, and fluid cultural event (the *meddah* performance) is being captured, measured, and defined within the new, mechanical, and written framework of the clock.

<sup>223</sup> Özdemir Nutku, *Meddahlık ve Meddah Hikayeleri* (Ankara: Atatürk Kültür Merkezi Başkanlığı, 1997), 196.

By the turn of the nineteenth century, these three streams of temporal recalibration, lunar month-days with weekdays, the spread of solar references, and the fragmented, mechanical minute, had fully converged. The eighteenth-century Ottoman world had not simply replaced one time system with another. Rather, it had learned to compile them. It layered these systems to create a dual timekeeping consciousness that was flexible and capable of legible communication across multiple audiences for multiple purposes.

A single birth note from 1818, written by a new father, captures this new, dense choreography of time perfectly. It is the culmination of all the experiments of the previous century.

Table 4.7: A birth record, 1818

|                                                                                                                                                                                    |                                                                                                                                                                                               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Text                                                                                                                                                                                                                                                                 | Translation                                                                                                                                                                                                                                                                      |
| <p>Tarih-i viladet-i mahdum-i bendegi<br/>Bin iki yüz otuz üç senesi mah-i Zilhicce'nin<br/>dördüncü Pazarertesi gecesı Eylöl'ün yirmi<br/>üçüncü gicesi ider akşam ezanından üç çeyrek<br/>mürurunda yani bire çeyrek kala dünyaya<br/>gelmiştir.<sup>224</sup></p> | <p>Date of birth of my son,<br/>In the year 1233, on the night following Sunday, the<br/>4th of the month of Zilhicce, that is, on the night of<br/>September 23, he was born three quarters of an hour<br/>after the evening call to prayer, that is, a quarter to<br/>one.</p> |

As a recordkeeper, this father is not confused or redundant. He is, in fact, hyper-legible. In these few clauses, he consciously and seamlessly articulates every major time system of his world. By including lunar and solar references, month-days and weekdays, prayer times and mechanical clock precision, this note is the ultimate synthesis of the eighteenth-century's temporal journey. It is the product of a consciousness that manages time not by replacement, but by the deliberate and sophisticated articulation of multiple systems on the same page. The goal, forged in the crises and experiments of the preceding century,

<sup>224</sup> Süleymaniye Manuscript Library, *Yazma Bağışlar*, 2062, 28a.

was to ensure that the answer to the simple question of “when” would be legible, meaningful, and indisputable, whether to the state, the mosque, the family, or posterity itself.

## 4.2 The Grammar of a New Temporality

The cases analyzed in this section illustrate that the move toward precision was not a simple, linear adoption of new tools, but a dynamic and multi-faceted process managed by the scribes themselves. The section is divided into three parts. First, it examines the “expanded repertoire” of temporal options (lunar, solar, and mechanical), and the unregulated experimentation by which scribes deployed them based on local needs. Second, it analyzes the “intensification of usage,” tracking the new, genre-specific urgency for horological precision in administrative texts. Finally, it explores the emerging “imperative for unbroken records,” an anxiety over ambiguity that drove scribes to rationalize the flexible lunar calendar through practices like “blank entries.” Through these case studies, this section frames the scribe as an active agent, not just recording time, but actively constructing, filtering, and verifying it.

### 4.2.1 An Expanded Repertoire

While the general eighteenth-century trend was a clear and cumulative drive toward temporal precision, this transformation was not a top-down, uniformly regulated mandate. It was, instead, a vast, messy, and fascinating unregulated experiment. The new grammar of time, with its expanded repertoire of solar months, weekdays, and mechanical hours, was adopted unevenly. It was a toolkit from which individual recordkeepers, from palace chroniclers to provincial judges, selected the specific instruments they needed for the task at hand.

This unregulated or experimental nature of recordkeeping means that looking for a single, standardized dating practice, even in the mid-eighteenth century, can be misleading. The priorities of the local scribe, the purpose of the register, and the nature of the event being recorded held enormous sway. Two cases from provincial court registers, one from

Amasya and one from Sofia, perfectly illustrate this dynamic. They show scribes grappling not with a lack of precision, but with which kind of precision truly mattered.

A striking example of this localized priority comes from the very first page of the Amasya court register. The record, dated November 1746, opens not with a legal case, but with a meticulous meteorological and agricultural observation. For the recordkeeper, likely the local qadi or his scribe, this entry is an act of profound precision. He employs a triple-axis timestamp, anchoring his observation in three distinct temporal systems:

1. The lunar calendar: “Elli dokuz senesi Şevvalü’l-mükerreminin yirmi üçüncü günü...” (The 23rd day of Şevval, [11]59).
2. The folkloric or seasonal calendar (*halk takvimi*): “...ki orta güzün dahi yirmi yedinci günü...” (which was also the 27th day of mid-autumn).
3. The solar calendar: “...ve Kasım’ın dahi ikinci günü idi” (and was also the second day of Kasım).

Table 4.8: The record from Amasya court register, 1746

| Text                                                                                                                                                                                                                                                                                                             | Translation                                                                                                                                                                                                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Elli dokuz senesi Şevvalü’l-mükerreminin yirmi üçüncü günü ki orta güzün dahi yirmi yedinci günü ve Kasım’ın dahi ikinci günü idi.                                                                                                                                                                               | In the year Fifty-Nine, on the twenty-third day of the blessed month of Şevval, which was also the twenty-seventh day of mid-autumn, and likewise the second day of November.                                                                                                                            |
| Yenice’den top kiras-ı reste ve cevz-i hindi mikdarı armud mahkeme-i şerife vurud itmekle Hüda-yı mütteal celle izze kesbe ve’l-eksar hazretleri bilâd-ı İslamiye’yi bahusus medine-i Amasya ahalilerini afat-ı derhten ve kahtdan ve taun şerrinden emin eyleye. Amin tahriren fahrü’l-müslimin. <sup>225</sup> | Pears the size of coconuts and large cherries arrived at the Sharia court from Yenice. May God Most High, exalted in His might, protect the lands of Islam, and in particular the inhabitants of the city of Amasya, from the calamities of the age, from famine, and from the evil of the plague. Amen. |

<sup>225</sup> Raziye Ünal, *44 Numaralı Amasya Şeriyte Sicili* (Sivas Cumhuriyet University, MA Thesis, 2022), 69.

The scribe's purpose is to record the arrival of specific goods at the court: a type of cherry (*top kiras-ı reste*) and enormous pears (*ceviz-i hindi mikdarı armud*, coconut-sized pears). For him, the most relevant temporal frameworks are the agricultural and fiscal ones. The folkloric "mid-autumn" and the solar November (*Kasım*) are what give this event its true context.

What is glaringly absent, however, is the weekday. This omission is not an error. The rest of the 120-page register confirms this choice, as weekdays are rarely mentioned. This scribe is not failing at modern timekeeping. He is simply demonstrating that the social and commercial time of the weekday is less relevant to his primary purpose, recording the agricultural and seasonal rhythm of Amasya, than the natural time of the harvest. His "dual timekeeping" is lunar-solar-folkloric, a model tailored to his economic and environmental reality. This register is a crucial piece of evidence, not because it conflicts with the study's central argument, but because it qualifies it, showing that the adoption of the weekday was a choice, not an inevitability, and one that competed with other, equally valid forms of precision.

A decade later, a court register from Sofia reveals a different, but related, form of experimental compilation. Here, the scribe uses different temporal recipes for different entries, acting as a fluid code-switcher depending on the event he is recording. Two records, written back-to-back in the spring of 1757, are illuminating. The first notes the arrival of Hızır Day (*Ruz-ı Hızır*), a foundational date in the folkloric calendar, marking the start of summer: "Sene-i mezburede Ruz-ı Hızır'ın vuku fi 15 min-Şabani'l-muazzam sene 1170" (In the mentioned year, the occurrence of *Hızır* Day was on the 15th of Şaban, year 1170).

For this record, the scribe only needed the lunar date and the folkloric name. The event is the date, no weekday is necessary. Just a few entries later, the scribe records another seasonal event, one almost identical to the Amasya case, the arrival of the first cherries: "Kirazın zuhuru min yevmi'l-Ahad fi 27 Şaban sene [1]170." (The appearance of cherries on Sunday, the 27th of Şaban, year 1170.)<sup>226</sup>

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<sup>226</sup> Selman İleri, *Bulgaristan Millî Kütüphanesi'nde Kayıtlı S 16 Numaralı Sofya Şeriyeye Sicili'nin Transkripsiyonu Ve Değerlendirilmesi* (Kırklareli University, MA Thesis, 2017), 77.

This time, the scribe's method is completely different. He drops the folkloric calendar and instead employs the study's central pairing, the month-day and the weekday (*Yevmi 'l-Ahad*, Sunday). This combination allows the date to be known with absolute, verifiable precision (Sunday, May 15, 1757).

The Sofia scribe, unlike the Amasya one, shows a mastery of both systems. He is experimenting, entry by entry, with the most effective way to be precise. The Amasya and Sofia cases, taken together, show that even when the weekday was available, its use was not automatic. Scribes were actively compiling time, sometimes prioritizing folkloric-natural cycles over the abstract social-commercial grid of the weekday.

These cases are not outliers. They are powerful illustrations of the experimentation that defined the eighteenth-century temporal landscape. The unregulated nature of these practices explains the many hybrid forms found in the textual legacy. We find numerous examples, for instance, of records that provide only the year, month, and weekday, omitting the month-day (e.g., "1159, Safer, a Friday"), simply because the day of the week was the only detail that mattered for that specific record.

However, when we zoom out from individual scribes and examine the general average of recordkeeping, the vector of change is undeniable. The preliminary findings of this research point to a clear, cumulative, and self-reinforcing trend: Scribes who only used years began adding months. Those using months added tripartite divisions (*evail*, *evasit*, *evahir*). Those using tripartite divisions replaced them with precise month-days. Those using month-days added weekdays. This was followed by day/night divisions, then prayer times, then 24-hour divisions, then half-hours and quarters, and finally, the minute.

The eighteenth century was the crucible for this great experimentation. The Amasya scribe, with his lunar-solar-folkloric focus, and the Sofia scribe, code-switching between a folkloric and a weekday-based model, are both products of this dynamic. Their messy records are not failures but byproducts of a system in flux. By the nineteenth century, this experimentation would largely conclude. The legibility, verifiability, and utility of the month-day/weekday pairing, amplified by the power of the mechanical clock, would become a dominant and expected feature of official records. Locating a nineteenth-century court register that, like Amasya's, noted solar and folkloric dates while omitting

the weekday would become exceptionally difficult. The experiment would be over, and a new standard of precision would be set.

#### 4.2.2 An Intensification of Usage

During the eighteenth century, the multi-axis timestamp, the combined use of different calendrical systems or the precise notation of the hour gradually ceased to be an occasional flourish and became a standard feature of official and even personal documentation. This practice permeated genres as diverse as sultanic diaries, court registers, bureaucratic expense ledgers, and private commercial notebooks.

This shift was not merely decorative. It represented a fundamental change in the cognitive labor demanded of the scribe, the administrator, and the record-keeper. For an empire managing increasingly complex military, diplomatic, and economic challenges, “when” something happened, or “how long” it took, was no longer just a matter of historical posterity. It was a matter of administrative urgency, financial accountability, and political synchronization. The scribe, sitting at the nexus of information flow, became the primary agent of this new temporal consciousness. Their decision of how to date a document, whether to simply note the day, to add a second calendar, or to specify the exact hour, was not an arbitrary one. It was a reflection of the evolving priorities of the state and the perceived function of the record itself.

To illustrate this argument, this chapter will analyze the growing frequency and changing nature of horological references in administrative texts. By focusing on the “record-keeper’s perspective,” we can move beyond a simple quantitative tally of references and understand why certain scribes, in certain genres, felt compelled to record time with newfound precision, while others, operating under different institutional logics, adopted different temporal strategies.

To trace this development, we will first establish a clear lexical framework for the primary term used to denote these concepts: the Ottoman Turkish word *saat* (ساعت). Following this, we will conduct a comparative analysis of three sequential sultanic diaries from the mid-eighteenth century. This comparison will establish a clear temporal intensification in

the heart of the imperial palace. We will then complicate this linear narrative by introducing two other case studies, a naval logbook from the 1770s and the long-term evolution of the *mühimme defters* (registers of important affairs), which demonstrate that this temporal turn was not uniform. Rather, it was a complex, genre-specific phenomenon, revealing the diverse ways in an eighteenth-century record-keeper could think with time.

Before we can analyze the frequency of hour references, we must first define what the term *saat* signified to the eighteenth-century scribe. The word was polysemous, carrying several related but distinct meanings. James W. Redhouse's nineteenth-century lexicon provides a useful framework, identifying five primary meanings:

1. A time, an interval or space of time; a moment; a while.
2. An hour.
3. A watch; a clock; any instrument for measuring time.
4. The time of day.
5. The distance usually walked by a traveler in one hour, being about three miles...<sup>227</sup>

For this study, which focuses on the act of temporal record-keeping, we can group these five definitions into three analytical categories, each representing a different cognitive framework for the scribe. First are the two primary temporal-measurement meanings: "time of day" (Redhouse's fourth meaning) and "duration" (implied in his first and second meanings).

- "Time of Day" is a positional concept. When a scribe noted an event happened "at the 5th hour," they were performing an act of synchronization, anchoring a specific event to a known, shared, external system of daily time-reckoning (whether *alaturka* or *alafranga*). This act situates the event in a precise sequence.
- "Duration," by contrast, is a quantitative concept. When a scribe recorded that a siege lasted "for 5 hours," they were measuring an elapsed interval. This act is not about sequence but about volume, the amount of time consumed.

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<sup>227</sup> James W. Redhouse, *A Turkish and English Lexicon* (İstanbul: A. H. Boyajian, 1890), 1028.

This distinction is critical. A record-keeper focused on "Time of Day" is, in essence, a scheduler or chronicler, concerned with when things happen. A record-keeper who meticulously notes "duration" is acting more as an auditor or manager, concerned with efficiency, labor, or resource expenditure.

The second category consists of the peripheral, non-measurement meanings. These include:

- "Distance" (Redhouse's fifth meaning): A reference to a "3-hour journey" is not a measurement of time itself, but a spatial measurement using time as a proxy. For the scribe, this is a unit of geography, not chronology.
- "Moment" (part of Redhouse's first meaning): This refers to an indeterminate, non-quantified instant, such as "at that moment" (*ol saat*). It is a literary or narrative device, not a metrological one.
- "Watch" (Redhouse's third meaning): This refers to the physical object, the clock or timepiece. A scribe noting the delivery of a "watch" is recording inventory, not measuring time.

These peripheral meanings are excluded from our primary analysis of "temporal density," as they do not represent an act of measuring the day's events. By focusing our analysis on the critical distinction between "time of day" and "duration," we can move from simply counting the word *saat* to understanding the specific temporal logic the scribe was employing.

The shift toward a more granular temporal consciousness is most vividly illustrated in the very center of the imperial administration: the sultanic diaries. A comparison of three sequential diaries from the 1740s and 1750s reveals a sudden and dramatic intensification of horological references, an event that can be pinpointed to the year 1752. This change in scribal practice suggests a new style for temporal precision.

The diary of Ömer Ağa, spanning a full decade and covering 3,489 days, serves as our baseline. His text is a comprehensive chronicle, yet his approach to time is representative of an older scribal tradition. In this extensive record, the word *saat* appears 103 times. Of these, the vast majority fall into the two main temporal categories: "time of day" (69

instances) and “duration” (25 instances). The remaining uses “watch” (7), “moment” (1), and “distance” (1), are peripheral, as defined above.

Table 4.9: Hour references in Ömer Ağa’s sultanlic diary, 1740-1750

| Year  | Time of Day |                         | Duration   |                         | Distance | Moment | Watch |
|-------|-------------|-------------------------|------------|-------------------------|----------|--------|-------|
|       | Full Hours  | Smaller than Full Hours | Full Hours | Smaller than Full Hours |          |        |       |
| 1740  |             | 1                       |            |                         |          |        |       |
| 1741  | 6           | 2                       | 4          | 3                       |          |        | 2     |
| 1742  | 6           |                         | 4          |                         |          |        | 1     |
| 1743  | 6           | 2                       | 4          | 1                       |          |        |       |
| 1744  | 4           |                         | 2          |                         | 1        |        |       |
| 1745  | 7           |                         | 1          |                         |          |        |       |
| 1746  | 10          | 1                       |            |                         |          |        | 2     |
| 1747  | 10          |                         |            | 1                       |          |        | 1     |
| 1748  | 3           |                         | 1          | 2                       |          |        | 1     |
| 1749  | 9           | 1                       |            | 1                       |          | 1      |       |
| 1750  | 1           |                         | 1          |                         |          |        |       |
| Total | 69          |                         | 25         |                         | 1        | 1      | 7     |

If we consider only the 94 primary temporal references (“time of day” + “duration”), this yields a usage density of only 2.69%. To put this in perspective, Ömer Ağa recorded a specific time or duration approximately once every 37 days. For Ömer Ağa, noting the hour was not a daily, habitual practice. It was an exception. His job as a record-keeper was to chronicle what happened, not obsessively when it happened.

In the diary, time was still largely event-driven, following the qualitative flow of the day (e.g., “after the noon prayer,” “at sunset”) rather than the abstract, numerical grid of the clock. The precise time was an addendum, likely included only when the event itself was of such ceremonial or political importance that its exact timing was noteworthy. For 97% of the days he recorded, the simple date was sufficient. In Ömer Ağa’s chronicle, precise time was still a flourish, not a requirement.

This established, decade-long norm is shattered in 1752 with the appointment of the royal secretariat of Yenişehirli Ağa. His diary is much shorter, covering only 147 days. However, in this brief five-month period, he uses the word *saat* 18 times. Critically, 17 of those references fall into the primary temporal categories: “time of day” (8 instances) and “duration” (9 instances), with one “moment” reference.

This small journal demonstrates an explosive increase in temporal density. With 17 temporal references in 147 days, the usage density leaps to 11.56%. This means Yenişehirli Ağa was recording a specific time or duration approximately once every 8.6 days, a frequency more than four times higher than his immediate predecessor.

This is not a random statistical fluctuation; it is a systemic change. This chronological shift is not coincidental. It aligns precisely with when the sultanic diaries, starting with Yenişehirli, began to regularly incorporate both lunar (Hegira) and solar (Rumi) calendars in their entries. The scribal task had fundamentally changed. Yenişehirli Ağa was not just more interested in time; his role as a record-keeper now included the complex task of synchronization. The *saat* was the high-resolution tool he needed to pin down events within this new, complex, multi-axis temporal grid. His diary was no longer just a chronicle; it was a temporal ledger.

This new standard, set by Yenişehirli, is immediately cemented by his successor. The diary of Ustazade Ağa, which picks up where Yenişehirli left off and covers the next 810 days (1752–1754), confirms the new policy. His diary contains 78 references to *saat*. Of these, 75 are primary temporal references: “time of day” (61 instances) and “duration” (14 instances), with only 3 peripheral “watch” references. His total temporal references yields a density of 9.26%, or one reference every 10.8 days. While slightly less dense than Yenişehirli’s short record, Ustazade’s diary confirms that the high-frequency “new norm” was here to stay.

His usage is also revealing: it is overwhelmingly dominated by “time of day” (61 instances) over “duration” (14 instances). This reinforces the hypothesis that the primary administrative concern was situating events in time, not just measuring their length. The goal was to create an unassailable sequence of record. For the mid-eighteenth-century Ottoman bureaucrat, when an order was given, when a report was received, or when an ambassador arrived was now a critical piece of data, integral to the credibility and utility of the administrative record itself.

Together, these three diaries provide a clear narrative. The 1740s represent the old model. The year 1752 marks a temporal turn, a clear policy rupture where horological precision became a key component of the sultanic record. This sharp rise in the frequency of full,

half, and even quarter-hour references represents a parallel development to the adoption of dual-calendar systems. As the table below illustrates, this change demonstrates a profound shift in administrative consciousness, where the precision of record-keeping became inextricably linked to the precise management of time itself.

Table 4.10: Hour references in the sultanic diaries, 1740-1754

| Secretary       | Time Period | Days  | Meanings of Hour |          |       |        |          | Total | Density |
|-----------------|-------------|-------|------------------|----------|-------|--------|----------|-------|---------|
|                 |             |       | Time of Day      | Duration | Watch | Moment | Distance |       |         |
| Ömer Ağa        | 1740-50     | 3,489 | 69               | 25       | 7     | 1      | 1        | 103   | 2.69%   |
| Yenişehirli Ağa | 1752        | 147   | 8                | 9        | 0     | 1      | 0        | 18    | 11.56%  |
| Ustazade Ağa    | 1752-54     | 810   | 61               | 14       | 3     | 0      | 0        | 78    | 9.26%   |

This narrative of a linear, accelerating temporal intensification is powerful, but micro-analysis of other texts shows that the trend was not universal, uniform, or without its exceptions. The scribal impulse for precision was mediated by genre conventions, administrative purpose, and the gap between lived practice and formal representation.

A fascinating case study is the naval logbook (*seyir defteri*) kept by an anonymous scribe detailing the voyages of Grand Admiral Hasan Pasha in 1775 and 1776.<sup>228</sup> This is a document from a highly technical environment, where one would expect maximum precision. The logbook's meticulous entries for 1775 (228 entries) and 1776 (235 entries) offer a rich dataset aligned with Hegira (Lunar) dates, and notably mark the first days of each month in the Rumi (Solar) calendar, confirming that multi-axis dating was a feature of this genre as well.

Within these entries, the term *saat* is referenced 63 times in 1775 but only 16 times in 1776. This sharp decrease is notable. The records for both years are detailed, with references to specific "times of day" (e.g., morning, noon, afternoon) being consistently high (69 in 1775, 98 in 1776). Yet the use of the specific, horological term *saat* declines dramatically.

<sup>228</sup> Özdemir, "Osmanlı Donanmasının Bir 'Seyir Defteri' ve XVIII. Yüzyıl Osmanlı Denizciliğine İlişkin Bazı Gözlemler."

Table 4.11: Hour references in naval logbook, 1775-1776

| Year  | Time of Day |            | Duration   |            | Distance | Moment | Watch |
|-------|-------------|------------|------------|------------|----------|--------|-------|
|       | Full Hours  | Half Hours | Full Hours | Half Hours |          |        |       |
| 1775  | 51          | 7          | 2          | 2          | 1        |        |       |
| 1776  | 14          | 1          |            |            |          | 1      |       |
| Total | 73          |            | 4          |            | 1        | 1      | 0     |

As the table shows, the use of *saat* was overwhelmingly for “time of day” (73 instances) over “duration” (4 instances). But what explains the precipitous drop from 63 to 16 references? And, perhaps more pointedly, why is there a complete absence of references to minutes, or even quarter-hours, in a logbook for a highly technical, time-sensitive operation like a naval fleet?

This is where the record-keeper’s perspective becomes essential. It is highly unlikely that a late-eighteenth-century naval fleet, engaged in complex navigation and maneuvers, was operating without precise time. Given the other meticulous measurements in the log (such as depth soundings), it is logical to assume that officers on deck were referring to time with quarter-hours or even minutes, likely using marine chronometers or other timepieces.

The discrepancy, therefore, is not likely in the practice of time-keeping, but in the etiquette of recording. The logbook is not a raw data stream from the deck; it is a formal, translated summary of the day’s events. The anonymous scribe, in transferring the “lived time” of the deck to the “recorded time” of the log, may have been operating under a different set of protocols. His task may have been to cleanse the data of its minute-by-minute granularity, translating “ship weighed anchor at 02:17” into the more formally acceptable “ship weighed anchor at the second o’clock” or simply “in the evening.”

This etiquette may have dictated that formal records for the admiralty should be clean, favoring whole-hour units. Tellingly, the decrease in hour references (63 to 16) is offset by an increase in qualitative time-of-day references (like “morning,” “noon,” “afternoon”), which rose from 69 in 1775 to 98 in 1776. The 1776 scribe simply traded one form of temporal locator for another, perhaps judging the qualitative term to be more proper or sufficiently precise for the official record. The precision of the deck was filtered out by the conventions of the desk.

A final example reinforces the idea that temporal logic is genre-specific. A brief comparison of the *mühimme defters* (registers of important imperial orders) from the mid-sixteenth century and the mid-eighteenth century reveals a surprising shift that seems to defy the trend toward granular precision.

As other research has shown, sixteenth-century *mühimme* entries are often full of precise month-day and weekday pairings (e.g., “Sunday, the 14th of Muharrem”). This practice served a crucial synchronizing function, locking the order into both the lunar-monthly and solar-weekly cycles, ensuring the recipient understood its chronological anchor.

When one turns to the eighteenth-century examples, however, this practice is often replaced by a different system: the tripartite division of the month into thirds (*evail*, *evasit*, *evahir*, the first, middle, and last ten-day periods). An order might be dated simply to the “middle third of Safar.” From a purely chronological-historical perspective, this appears to be a loss of precision. Why would a state ostensibly more concerned with time abandon the precision of a weekday pairing for a vague ten-day window?

The answer lies in the function of the document. A *mühimme defter* is not a diary. It is not a logbook. It is an order book. From the perspective of the bureaucratic recordkeeper, the shift from a chronological date of issue to a tripartite processing window is a shift from history to operations management. The scribe is no longer just recording when the Sultan issued an order. He is categorizing that order into a work-batch. This system is a form of bureaucratic triage. It tells the recipient (and the central archives) not when the order was written, but what its general window of execution is. This is the logic of a file clerk, not a historian. This imprecision is, in fact, a different kind of administrative precision.

This divergence, which requires further study, shows that the eighteenth-century temporal intensification was not a monolithic march toward the minute-hand. It was an adaptation of temporal tools to specific administrative tasks.

The temporal intensification of the eighteenth century was a complex and multi-faceted phenomenon. The overarching trend, as my extensive research suggests, was a gradual increase in the average frequency and precision of dating practices across the century.

The temporal turn of 1752 in the sultanic diaries provides a stark, quantitative example of this new consciousness taking hold at the very center of power.

However, the exceptions and counter-trends are, in many ways, more illuminating. They force us to move beyond a simple, linear narrative of modernization. The naval logbook of 1775-76 demonstrates the crucial gap between lived practice and formal record, highlighting the scribe's role as a curator and filter of data. The evolution of the *mühimme defters* shows that in some administrative contexts, the logic of bureaucratic processing (triage, batching) could supersede the logic of chronological precision (day-of-week).

The eighteenth-century Ottoman scribe, therefore, was not just a passive recorder of a pre-existing, objective time. They were an active agent in its construction. They wielded a diverse toolkit of temporal technologies, lunar calendars, solar calendars, weekdays, horological hours (*saat*), and administrative windows (*evasıt*), and deployed them strategically, based on the specific function and etiquette of the document they were creating. The result was not a single, uniform eighteenth-century time, but a composite, genre-specific, and deeply pragmatic landscape of temporal practices, all managed by the hand of the recordkeeper.

#### 4.2.3 A New Imperative for Unbroken Records

The eighteenth-century Ottoman world was governed by a temporal system that, while perfectly suited for social and religious life, presented a profound challenge to the emerging needs of a growing bureaucracy. The lunar-based Hegira calendar is inherently flexible; its months begin only with the certified sighting of the new crescent moon. This system means that a month could be 29 or 30 days, and its precise start could be subject to revision, weather, or regional debate. For the pre-modern chronicler, this ambiguity was simply a fact of life. Chronicles were often event-focused, written retrospectively, and less attentive to gaps, which were seen not as failures but as periods of no note.

However, the eighteenth-century archival records reveal a seismic shift in this consciousness. We see the rise of a new administrative class and a new historical sensibility, one that was increasingly uncomfortable with ambiguity and fragmented time.

This era marks the birth of a new imperative for unbroken records. From the private diaries of palace officials to the grand, state-sponsored chronicles, a burgeoning obsession with creating a continuous, consistent, and defensible temporal sequence becomes paramount.

This was a fundamental change in how the state conceptualized its own memory. The focus shifted from merely recording what happened to meticulously proving when it happened, anchoring each event within an unbroken chain of days. This new anxiety about temporal ambiguity is most evident not in what the scribes wrote, but in how they handled the absence of things to write. The gaps, errors, and mundane repetitions of daily life became sites of intense scribal intervention, revealing a conscious effort to produce a seamless, rationalized, and verifiable historical record.

To understand this shift, we must first redefine what a “gap” in a record means. The archival entries that appear “skipped” in eighteenth-century sources can be categorized into two distinct types: missing entries and blank entries.

A missing entry is a true rupture, a chronological leap, for example, a record that jumps from the 5th of a month to the 9th without acknowledgment. This suggests a lapse in recordkeeping, lost pages, or a simple lack of information.

A blank entry, however, is something far more significant. This involves an entry that includes a complete date (the year, the month, the day of the month, and crucially, the day of the week) but is followed by no accompanying text or narrative. These entries, which become increasingly common, should not be seen as signs of negligence. On the contrary, they are powerful evidence of the scribe’s diligence.

Why would a recordkeeper meticulously write down “Tuesday, 14 Receb 1130” and then write nothing else? Because his primary goal was no longer just to record events; it was to maintain the structural integrity of the timeline. In a flexible lunar system, the coherence between the day of the month (e.g., “the 14th”) and the day of the week (e.g., “Tuesday”) was the single most important guarantor of temporal accuracy. By recording a date even without a corresponding narrative, the scribe demonstrated his commitment to the daily counting of time. He was, in effect, building a temporal scaffold. Each blank

entry serves as a load-bearing column, proving that a day passed, was counted, and was correctly aligned with the weekly cycle, thereby ensuring the solidity of the entries that do contain information.

This practice can be observed in numerous contemporary sources outside of the sultanic court, reinforcing the argument that blank entries were a conscious method of preserving the integrity of the chronological record rather than simple omissions or lapses. A fascinating micro-example of this practice appears in a *teşrifat defteri*, or register of ceremonies, compiled by Selman Efendi. What little we know of Selman Efendi is defined entirely by his bureaucratic role as *teşrifatçı* (master of ceremonies), a post he held twice (1718-1725 and again by 1738).<sup>229</sup>

This specific register is illuminating precisely because Selman Efendi was not its originator but its curator. He was tasked with compiling and organizing the documents from the tenure of his immediate predecessor, el-Hac Ahmed Efendi (1716-1718). This act of curation, distinct from the separate register he compiled for his own first term (1718-1725),<sup>230</sup> reveals a distinct administrative anxiety. Selman Efendi was responsible not just for recording, but for rationalizing and preserving his predecessor's institutional knowledge to ensure a seamless handover of the ceremonial record.

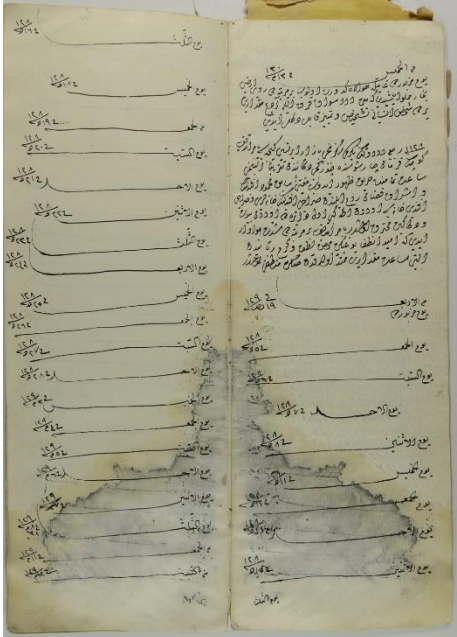
In the register compiled from his predecessor's papers, a small but remarkable detail reveals this deliberate effort to maintain the alignment of lunar month-days and weekdays. Selman Efendi inscribed 217 blank entries in a continuous sequence, spanning from Wednesday, 19 Receb 1129, to Monday, 1 Safer 1130. For some months within this period, he recorded all date pairings (month-day and weekday) perfectly, for other months, he included these blank entries alongside missing ones.

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<sup>229</sup> Fahd Alhamad, *III. Ahmed Devri Teşrifatı (A.d. 346: 1716-1718)* (Mimar Sinan Güzel Sanatlar University, MA Thesis, 2019), 1.

<sup>230</sup> BOA., A.}d., (Sadâret Defterleri), 347. Also see, Hayriye Büşra Uslu, *III. Ahmed Devri Teşrifatı (A.d. 347: 1718-1725)* (Mimar Sinan Güzel Sanatlar University, MA Thesis, 2017).

Table 4.12: Blank entries in register of ceremonies, 1717

|                                                                                    |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|   |   |
| Page 46-47                                                                         | Page 48-49                                                                          |
|  |  |
| Page 50-51                                                                         | Page 52-53 <sup>231</sup>                                                           |

This raises a critical question: why would he meticulously note 217 consecutive dates without any accompanying text, including only the Hegira year, month, day, and weekday for each? Several possibilities, all rooted in the emerging scribal mentality of the era, present themselves. The first is fidelity to the source. Selman Efendi may have been replicating the exact recordkeeping style of the original author, el-Hac Ahmed Efendi. If

<sup>231</sup> BOA., A. }d., (Sadâret Defterleri), 346.

this is the case, it demonstrates a new, almost reverent respect for the form of the record itself, suggesting that the temporal framework was now considered as valuable as the content it was meant to hold.

Alternatively, this may be an act of deliberate curation. Selman Efendi might have actively omitted the original text, perhaps judging the events his predecessor described as trivial or redundant. In this scenario, he decided that while the narrative was disposable, chronological scaffolding was essential and could not be discarded.

While further research is needed to provide a conclusive answer, the outcome is inseparably linked to the flexible nature of lunar timekeeping. By noting these hundreds of blank dates, Selman Efendi was providing a definitive, day-by-day confirmation of the calendar's alignment during that period. He was retroactively building a defensible historical record, ensuring that the ceremonial precedents of his predecessor's tenure were built upon a solid, verifiable, and unbroken timeline. The absence of an event was, for him, a recordable fact. He prioritized the structure of time over the narrative of events, a choice that speaks volumes about the new anxieties of the eighteenth-century recordkeeping.

This same impulse, driven by the flexible nature of lunar timekeeping, is even more apparent in the sultanic diary kept by Ahmed Faiz, which centered on the daily activities of Sultan Selim III in the late century. As a daily recordkeeper, Faiz's challenge was not gaps, but repetition. How does one meticulously log the mundane, regular activities of the royal entourage without losing one's mind or, more importantly, without corrupting the record?

A typical, narrative-focused scribe, when faced with three consecutive days where the Sultan stayed indoors due to rain, might write: "For the next three days, the weather was rainy, so the Sultan rested at the palace." This approach is efficient, clear, and prioritizes the narrative. Ahmed Faiz, however, adopts a remarkably different method, one he repeats hundreds of times. His style reveals a methodical insistence on prioritizing the date-day pairing above all else. For instance, in Rebiyülahir 1206 (1791), he begins with a standard, individual entry: "Ertesi mah-ı Rebiyülahir'in gurreşi Pazar günü Topkapu'yı teşrif ve

akşama dek eğlenilüp yukaru avdet buyuruldu.”<sup>232</sup> (The next day, the first of Rebiyülahir, Sunday, [the Sultan] graced Topkapı, lingered until evening, and returned up [to the palace]).

This is a normal record. But note what happens immediately after, when the events become repetitive. He combines the narrative but carefully separates the dates: “Ferdası ikinci Pazarertesi günü ve ertesi üçüncü Salı günleri ke’l-evvel Topkapu’da aram buyurdular.” (The following day, the second, Monday, and the next day, the third, Tuesday, he rested at Topkapı as before.) This pattern is his standard. The following entry is: “Ertesi dördüncü Çaharşenbih ve beşinci Pençşenbih günleri heva gaym olmağla Topkapu’da istirahat buyuruldu” (The next day, the fourth, Wednesday, and the fifth, Thursday, the weather was cloudy, so he rested at Topkapı).<sup>233</sup>

Ahmed Faiz frequently employs this technique, grouping two, three, or in rare cases even four consecutive dates. He gives the specific month-day and weekday for each, and then provides a single, common reason for the lack of activity, such as “the weather was cloudy,” “it was rainy,” or “the sultan and his entourage stayed in this location.” From a purely narrative perspective, this is inefficient. He was clearly tired of repeating the same mundane facts day after day. He could have simply written, “For the next three days, the Sultan rested at Topkapı due to bad weather.”

His deliberate refusal to do so is the entire point. Ahmed Faiz was clearly tired of repeating the same mundane events such as “rested at Topkapı” or “weather was cloudy.” He solves this by bundling the narrative. But he never bundles the time. He deliberately gives the specific pairing of the month-day and the weekday for each day, one by one, whether the common point is the sultan’s location or the weather.

This deliberate preference, repeated hundreds of times from the first years of his diary to the last, can only be related to the fundamental anxiety of lunar timekeeping. Ahmed Faiz’s primary duty, as he saw it, was not to be a compelling storyteller; it was to be an accountant of time. His meticulous repetition of “the second, Monday,” “the third, Tuesday,” “the fourth, Wednesday” was a rigorous methodology of verification. Each

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<sup>232</sup> Ahmed Faiz Efendi, *III. Selim’in Sıratibi Ahmed Efendi Tarafından Tutulan Ruzname*, 53.

<sup>233</sup> Ahmed Faiz Efendi, *III. Selim’in Sıratibi Ahmed Efendi Tarafından Tutulan Ruzname*, 53.

pairing of a month-day and a weekday was an atomic unit of the historical record that must be logged. He is, in essence, creating a form of “blank entry” within his narrative. The narrative is minimal (“as before,” “cloudy weather”), but the temporal data is precise and absolute. He is offering a defensible historical record, proving his meticulousness, one day at a time.

These examples from Selman Efendi and Ahmed Faiz constitute micro-cases. They are the small, almost subconscious tics of the archivist. But when we zoom out to the level of high state historiography, we see the exact same impulse at work, now as a matter of explicit state policy.

This brings us to the chronicle of Raşid Mehmed Efendi and the very concept of the “official chronicler” (*vakanüvis*). The early eighteenth century saw the production of the famed Naima’s chronicle, a masterpiece of historiography covering the years 1574-1660. But Naima’s work, like most before it, was a fragment, albeit a brilliant one. It ended in 1660. Raşid Efendi was appointed *vakanüvis* later, holding the post from 1714 to 1723. His chronicle (*vekeyiname*) ultimately covers the years 1660-1722, positioning itself as the direct continuation of Naima’s work. But how it came to cover this period is the crucial point.

Raşid did not initially set out to do this. He was first ordered by the Grand Vizier Şehid Ali Paşa to begin his chronicle in 1703 (1115). This, in the old style, would have been perfectly normal, leaving a 43-year gap (1660-1703) in the official record. But then Damad İbrahim Paşa, intervened. He gave Raşid a new directive: go back and fill the gap.<sup>234</sup> He was explicitly commissioned to research and write the history of the 1660-1703 period, thereby stitching his own work seamlessly to Naima’s.

This directive is a watershed moment. It reflects a new state-level anxiety: a gap in the official, continuous record was no longer tolerable. The old style of fragmented, brilliant pieces of history was giving way to a new demand for an unbroken, year-by-year institutional memory.

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<sup>234</sup> Raşid Mehmed Efendi - Çelebizade İsmail Asım Efendi, *Tarih-i Raşid ve Zeyli*, 5–10.

Raşid fulfilled this duty. As the original text notes, his narrative for the 1660-1703 period is clearly shorter and lacks the detail of his contemporary sections. But this thinness is the most telling evidence. The act of filling the gap was more important than the richness of the narrative. He was acting as an archivist, not just a historian, completing the timeline as a matter of bureaucratic necessity.

This case forces us to reconsider the traditional label for Naima as the first official Ottoman chronicler (“ilk resmi Osmanlı vakaanüvisi”).<sup>235</sup> If official implies an unbroken chain of state-sponsored history, the title may be misplaced. Naima wrote in the old style. It was Raşid, at the behest of Damad İbrahim Paşa in the second quarter of the eighteenth century, who truly began the tradition of continuous state historiography, a tradition that would last until the end of the empire.

From Selman Efendi’s 217 blank entries to Ahmed Faiz’s compulsive pairings and Raşid Efendi’s state-sponsored gap-filling, the evidence is clear. The eighteenth-century scribe, whether consciously or not, was driven by a new imperative: to tame the flexible nature of lunar time and forge a single, unbroken, and defensible record of the state.

### 4.3 Conclusion

The eighteenth-century Ottoman world, as this chapter has argued, did not simply wait for a European, “modern” temporality to arrive. Instead, it actively forged its own sophisticated and internally driven solution to the mounting pressures of administrative, social, and economic life: dual timekeeping. This was not a chaotic or transitional phase, but the stabilization of a routinized co-presence of multiple temporal frames. It was a system where the lunar coexisted with the solar, the qualitative prayer time was layered with the quantitative mechanical minute, and the sacred calendar was anchored to the secular weekday.

This chapter has traced this phenomenon across two analytical frameworks. The chronological and scalar analysis demonstrated how this recalibration occurred at every

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<sup>235</sup> Mehmet İpşirli, “Naima,” *Türkiye Diyanet Vakfı İslam Ansiklopedisi* (Türkiye Diyanet Vakfı, 2006), 32/316.

level. At the macro-level, the Rumi solar calendar spread from a specialized fiscal tool to a widespread social convention, driven by the pragmatic needs of a state managing seasonal armies and harvests. At the medium-level, the inherent flexibility and elasticity of the lunar calendar ceased to be an accepted fact and became a source of administrative crisis, sparking unprecedented efforts to regulate and synchronize moon sightings across the empire. Most profoundly, at the micro-level, the infiltration of the mechanical clock provided a new, granular language of hours and minutes, a precision that migrated from a sultan's scheduling note to a grieving son's record of his father's death.

This transformation was enacted through a new grammar of documentation. Scribes, acting as the primary agents of this shift, deployed an expanded repertoire of temporal tools, intensified the frequency of their use, and, most critically, adopted a new imperative for continuity. This new anxiety over ambiguity, seen in the meticulous logging of blank entries and the state-sponsored gap-filling of official chronicles, reveals a fundamental cognitive shift. The goal was no longer just to record events, but to create a seamless, rationalized, and verifiable temporal scaffold. The 1818 birth record, with its dense and deliberate compilation of every available time system, stands as the ultimate emblem of this new consciousness. Eighteenth-century Ottomans were not caught between two times; they learned to live, and write, in all of them at once.

## Conclusion: A Society Negotiating Its Rhythms

This dissertation began with a simple observation: in the eighteenth-century Ottoman Empire, the official time of a royal celebration, the death of a sultan, or the start of a holy month was frequently a matter of negotiation, dispute, and correction. From this chronological ambiguity, this study has advanced a central argument: the eighteenth century was not a period of temporal stagnation awaiting European modernity, nor was it merely a transitional phase. Instead, it was the pivotal era in which a sophisticated, internally driven, and distinctly Ottoman “dual timekeeping” consciousness was forged and consolidated. This was not a simple replacement of one system with another, of lunar with solar, or prayer with mechanical, but the stabilization of a routinized co-presence. It was a deliberate layering of multiple temporal frameworks onto a single documentary surface, a move from the singular act of “watching the sky” to the complex, compilatory practice of “reading the minutes.”

This study has argued that this profound shift was not a passive response to imported technologies but an active, indigenous solution to a set of interlocking internal pressures that defined the eighteenth century. As established in the first chapter, this new, anxious preoccupation with temporal precision was catalyzed by four mutually reinforcing transformations. First, the demands of administrative consolidation required a predictable grid for managing logistics, taxation, and communication across a vast territory. Second, a profound economic restructuring toward a monetized, cash-based economy built on credit and contracts, managed by *sarrafs* and state financiers, made the seasonal ambiguity of a purely observational lunar calendar untenable. Third, a new cultural reorientation manifested as a widespread impulse to codify and preserve ephemeral knowledge, seen in the professionalization of libraries, the standardization of musical notation, and the expansion of personal chronograms to memorialize individual, biographical time. Finally, a new era of diplomatic demarcation saw the abstract, flexible frontier (*serhad*) replaced by the modern, fixed border (*hudud*), creating a parallel, dialectical need for fixed, citable, and mutually-agreed-upon dates.

If these four pressures tentatively sketch the why behind this temporal shift, the subsequent chapters deconstruct the how. This transformation was not a top-down decree issued by experts or high-ranking bureaucrats. As this dissertation has demonstrated, the

authority of the chief astronomer (*müneccimbaşı*) and his calculated calendars was often theoretical. In practice, time was a socially negotiated reality. The second chapter dismantled the image of a single, rigid calendar, reframing chronological discrepancies as the system's core functional feature: the "lunar date alteration." We saw that in the most critical domains of daily life, the practical, legal authority of the local judge validating eyewitness testimony consistently superseded the abstract authority of the expert.

This fundamental conflict between observation and calculation, between legal precedent and mathematical proof, was the central drama of eighteenth-century timekeeping. It was a tension embodied in the chaotic 1711 Eid schism in Edirne, where the army and the city celebrated on different days, and tragically personified in the death of the mathematician-judge Gelenbevi İsmail Efendi, who perished, according to tradition, after rejecting an astronomically false but socially validated moon sighting based on his own correct calculations. This dissertation has argued that time in the Ottoman Empire was not an astronomical fact to be measured, but a human-centered, legally grounded reality to be negotiated.

This flexible, negotiated system had profound consequences, not only for the Ottomans but for the modern historians who study them. The third chapter mapped this fluid landscape, revealing a patchwork of "lunar date zones." The synchronic study of 1746 demonstrated that temporal discrepancies of  $\pm 1$  day were common even within the imperial palace, a gap that widened to  $\pm 2$  or  $\pm 3$  days when compared to the records across the empire. This was not chaos, but a system managed by active "lunar dates zones" centered on provincial hubs, which processed a constant flow of sighting reports from its periphery.

This reality, however, has been largely invisible to modern scholarship, leading to a cascade of historiographical errors. This study's tracing of "lunar date reference chains" exposed the methodological flaws that have become canonized in the field. The misdating of Hacı Beşir Ağa's death revealed a widespread failure to privilege the weekday as the indispensable trans-calendrical anchor. The 25-day error in the Iranian ambassador's arrival revealed an uncritical privileging of flawed official chronicles over archival primary sources whose evidence had been verified multiple times. By offering the "Three

Levels of Calendar Conversion” as a corrective toolkit, this dissertation provides a new, more accurate methodology for navigating the archives, one that honors the internal logic of the Ottoman system.

Ultimately, this dissertation has defined the new temporal landscape that emerged from these pressures. The fourth chapter articulated the “dual timekeeping style” as a conscious layering of temporal information. This new consciousness operated at every scale. At the macro-level, the solar Rumi calendar was routinely layered onto the lunar Hegira year to stabilize administrative and fiscal planning. At the medium-level, the stable, seven-day weekday was used to anchor the flexible, observational month-day. And at the micro-level, the quantitative, mechanical language of the hour and minute was layered onto the qualitative, traditional rhythms of the prayer clock.

This new style was defined by a new grammar of timekeeping. This grammar featured an expanded repertoire of terms (solar months, minutes, weekdays), an intensified frequency of their use, and, most critically, a new imperative for continuity. This anxiety over ambiguity, this new desire for an unbroken, rationalized, and verifiable timeline, is the hallmark of the eighteenth-century cognitive shift. It is visible in the state-sponsored gap-filling of official chronicles like Raşid’s, in the meticulous logging of “blank entries” by ceremonial masters like Selman Efendi, and in the compulsive date-bundling of sultanic diarists like Ahmed Faiz. This journey culminates in the 1818 birth record, a single, dense note where a new father, in an act of profound cultural synthesis, articulates all five temporal units (lunar, solar, weekday, prayer, and mechanical) to ensure his son’s entry into the world was recorded with indisputable, multi-layered precision.

If we look for the kind of top-down, uniformly enforced reform familiar from the later Tanzimat era, we will not find in the eighteenth century. But if we trade the Newtonian hope for clean laws for a quantum-like attention to small-scale variations, a microhistory of dating, then a different picture emerges. Solar references can be seen as colored flashes in a lunar cosmos: locally bright, then gone; intense in one stream of writing, absent in another; sometimes personal experiments, sometimes institutional routines. The fiscal world remains crucial, as one would expect, since agricultural cycles and financial reckonings lean naturally toward solar regularity, but the habit is no longer purely financial. Sultanic diaries provide an instructive example: around 1752, the recordkeeping

style of the office has shifted toward including solar dates alongside lunar ones. The practice was not universal, nor consistently maintained through 1809, but its recurrence suggests an institutionalized experiment rather than idiosyncrasy. It also complicates overly simplistic claims that Rumi dating beyond financial realm belongs to the post-Tanzimat decades alone.

In reevaluating this entire process, one figure emerges as the central, indispensable agent of this transformation: the recordkeeper. This dissertation, in the end, has been a study of practice, not theory. It has deliberately shifted the vantage point from the scholar's treatise to the scribe's desk, the clerk's ledger, and the diarist's journal. It is here, in the daily, cognitive, and practical labor of writing, that the new time consciousness was forged.

The recordkeeper was the ultimate arbiter. They were the ones who had to navigate the central conflict between the *kadı*'s declaration and the *müneccimbaşı*'s calendar. They were the ones who, faced with the expanded repertoire of temporal tools, made the crucial, genre-specific choice of which precision to deploy: the Amasya scribe prioritizing a lunar-solar-folkloric axis for an agricultural record, while the sultan's secretary deployed mechanical minutes to choreograph a diplomatic ceremony.

It was the recordkeeper who managed the "lunar date alterations," silently correcting the timeline to align with a new consensus, or noting the change with an explicit justification. It was the recordkeeper, driven by the new "imperative for continuity," who performed the meticulous labor of logging blank entries or bundling dates to prove his vigilance against the system's inherent fluidity. These errors, corrections, alterations, and seams in the archive are not flaws to be smoothed over by modern historians; they are the archive itself. They are the documentary fossils of a mind at work, the tangible evidence of a scribe actively managing, rationalizing, and constructing time.

The eighteenth-century Ottoman world did not simply receive a new kind of time; it built one from the materials at hand. The journey from "watching the sky to reading the minutes" was not a passive technological adoption but an active, anxious, and creative compilation. The recordkeepers were the architects of this new, dense, and dual consciousness. Their hands, moving across the page, did more than just document the events of an empire; they drew the very lines of its new reality.

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<sup>236</sup> Genç et al., *Başbakanlık Osmanlı Arşivi Rehberi*, 322–336.

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