

Pages 182–187: Full Summary, Themes & Extended Critical Questions

Detailed Summary

- Lorraine Daston opens with two powerful images from revolutionary France:
 - First, the **Festival of Reason** at Notre-Dame, where Christian imagery was replaced by symbolic figures of **Reason and Liberty**—an overt dramatization of Enlightenment ideals.
 - Second, the **massive computational tables** overseen by Gaspard de Prony—logarithmic and trigonometric values calculated to ten decimal places.
 - De Prony's project was modeled after **Adam Smith's division of labor** in factories: hundreds of human "computers" (mostly unemployed hairdressers post-Revolution) performed basic calculations by hand.
 - Ironically, these tables, meant to serve the new metric system, were **too large to be used effectively**, and were **never published in full**.
 - Daston argues that the **tables became a kind of monument**, not in function but in **form and symbolism**: their **rational excess** was meant to perform the values of Enlightenment thought—precision, order, reason, and universality.
 - She introduces the idea that these projects were part of a **cultural fantasy of calculability**, of creating a fully rational world through measurement and numerical systems.
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Course Theme Connections (Deep)

Interface Function

- These tables are proto-interfaces: not digital, but **mediators between abstract knowledge and applied governance**.

- They are **not meant to be interactive**, but they embody the Enlightenment idea of an **interface that disciplines the world** through structure and number.
 - In form, they parallel modern algorithmic systems: vast, unreadable by individuals, yet claimed as **rational tools of control**.
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Fantasy vs. Reality

- The idea that calculation alone could reorder the world is a classic Enlightenment fantasy.
 - These tables represent a **fantasy of mastery**, of reason overcoming chaos—not unlike the **interface fantasies** we see in Schüll's gambling machines or McCarthy's TV settings.
 - Reality breaks through, however: the tables were impractical, overengineered, and functionally useless—a symbolic project **masquerading as utility**.
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Time and Space Reconfiguration

- De Prony's tables were designed for the **metric system**—a revolutionary act that sought to **rationalize space and time itself**.
 - Traditional, embodied, and local rhythms (e.g., sundials, seasons, footsteps) were replaced with **universal, abstract units**.
 - The effort reveals a deep **anxiety about measurement, standardization, and governance**—how do you make space/time legible to the state and science?
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Full-Length Critical Questions + Expanded Answers

Q1. Why does Daston position the logarithmic tables as a monument to Enlightenment ideals rather than as a tool of practical utility?

Answer:

Because their creation was more **ideological than functional**. Like cathedrals or revolutionary festivals, the tables were **ceremonial artifacts of belief**—in this case, belief in **reason, precision, and human calculative power**. Though technically precise, they were never meant to be read by individuals or used daily. Instead, their sheer scale and exactitude **visualized the rational order** Enlightenment thinkers dreamed of. In this sense, they function like modern data dashboards or predictive models: they **perform mastery**, even when they don't produce tangible action.

Q2. How does the metaphor of the tables as “fetishes of rationalism” complicate our understanding of Enlightenment rationality?

Answer:

Fetishes are objects imbued with **symbolic or spiritual power**, often disproportionate to their actual function. By calling the tables fetishes, Daston suggests that Enlightenment rationality—often thought of as **anti-mystical and anti-symbolic**—had its **own irrational symbols**. The tables, like religious icons, **manifest belief** rather than serve practical use. This destabilizes the Enlightenment's claim to cold objectivity by revealing its **ritualistic side**—it had saints (scientists), relics (tables), and temples (observatories).

Q3. How does Daston's account of the division of labor in calculation prefigure contemporary concerns about automation and the invisibility of human work in interface systems?

Answer:

De Prony's method of splitting up calculation into **repetitive, mindless steps** performed by dozens of anonymous workers anticipates the way **modern interfaces hide labor behind algorithms**. Today, algorithms feel seamless, but they depend on armies of low-paid data workers (e.g., content moderators, click farms). The Enlightenment project was an early version of this: **dividing knowledge production** into micro-tasks so that **the system, not the subject, appears to think**. The labor behind reason becomes **invisible**, which parallels how digital systems often present themselves as autonomous despite deep human entanglement.

Q4. In what ways can the log tables be seen as a kind of proto-interface for state rationality and control?

Answer:

The tables were part of a larger Enlightenment project to **govern through knowledge**: to make

land, people, time, and measurement **transparent and calculable**. Though static, the tables represent a vision of **interface as authority**—a tool that channels invisible labor into visible order. Like today’s bureaucratic dashboards or biometric databases, the tables were meant to **mediate between individual inputs and state policy**. They didn’t just calculate—they **enforced a worldview** that prized rational abstraction over lived experience.

Q5. How do these Enlightenment calculations relate to your course theme of the interface as a mediator of social imagination?

Answer:

The tables mediate an **imagined relationship between knowledge and power**—not unlike how a smartphone interface mediates social capital or desire today. They were not functional objects, but **imaginative artifacts**—interfaces for **projecting an ideal society**, where every measure is precise, every system coherent. Just as interkom lines or gambling screens organize rhythms of social life, these tables attempted to **organize the cosmos itself**—turning Enlightenment fantasy into mathematical form.

Pages 188–193: Summary, Themes & Full-Length Questions

Detailed Summary

- Daston explains that **calculation**, once a marker of **intellectual depth and philosophical genius**, became increasingly associated with **mechanical labor**, especially in the late 18th and 19th centuries.
- In the early Enlightenment, **calculating was thinking**—a sign of rational mastery, associated with Newton, Euler, and Laplace. To calculate was to **touch the divine**.
- But with the emergence of **large-scale projects** like de Prony’s tables, the act of calculation was broken into **discrete, mindless steps**.
- A new class of “computers”—actual human workers, often lower class or female—began to perform calculations **without understanding** their content.
- This shift **introduces a new split between designers of systems (thinkers) and executors of systems (doers)**.

- Daston refers to this shift as a “**disenchantment of calculation**”: what was once sublime becomes **rote**, mechanical, alienated.
 - She anticipates that this shift will lay the groundwork for the **rise of machines** and the eventual replacement of human calculators by **mechanical devices**.
 - What’s at stake here is **who is allowed to think, and how interface work gets valued**—an issue as alive today in algorithmic culture as it was in the Enlightenment.
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Course Theme Connections

Theme	Analysis
Interface Function	Interfaces become split-level systems : those who design versus those who interact. Calculation turns from an interface of thought into an interface of labor discipline .
Fantasy vs. Reality	The fantasy of universal calculability masks the reality of alienated, stratified labor . The dream of rationalism becomes a system of hierarchical execution .
Space & Time	Calculation becomes modular, fragmentary, and de-temporalized . It’s no longer about cosmic rhythms or philosophical time—it becomes clocked, task-based labor , much like modern data entry or gig work.

Critical Questions + Longform Answers

Q1. How does Daston trace the transformation of calculation from intellectual pursuit to mechanical labor?

Answer:

Daston shows that in early Enlightenment culture, **calculation was deeply tied to intellect, philosophy, and even the divine**. It was what geniuses like Newton or Euler did—it was **creative, abstract, and transcendent**. But as large-scale projects like de Prony’s emerged, the process of calculation was **divided, standardized, and depersonalized**. Instead of producing knowledge, calculation became about **executing instructions**, turning the calculator into a **passive component of a larger system**. This transition prefigures modern concerns about how

users today **interact with software without understanding its logic**, caught in systems they don't design or control.

Q2. What does the “disenchantment of calculation” suggest about broader Enlightenment contradictions?

Answer:

The Enlightenment is often remembered as a time of **rational awakening and liberation**. But Daston reveals an internal contradiction: as rational systems scaled, they began to **alienate and devalue human labor**. What was meant to be empowering became **hierarchical**—an early form of bureaucratic and cognitive stratification. The very systems designed to express freedom and reason began to **reproduce class distinctions**, separating **those who conceptualize systems** from **those who execute them**. This tension—between rational ideals and material hierarchies—echoes strongly in today's interface culture, where platforms promise democratization but often rely on **invisible, deskilled labor**.

Q3. How is the historical division between “thinking” and “doing” in Enlightenment calculation echoed in contemporary digital interface culture?

Answer:

Just as 18th-century projects divided thinkers from doers, today's digital culture separates **interface users from system designers**. Coders, data scientists, and algorithm engineers design systems that **ordinary users merely interact with**, often without knowing how their data is processed. The interface **hides the architecture**, much like the printed tables obscured the labor behind them. This split also mirrors labor dynamics in gig economies, where workers operate within tightly designed platforms but have **no agency over their logic**. Daston's historical insight reveals that what we call “digital alienation” is **not new—it's Enlightenment alienation reengineered**.

Q4. In what way does Daston anticipate the emergence of the calculating machine (and by extension, modern computation)?

Answer:

By showing how calculation became **mechanized in process before it became mechanized in technology**, Daston foreshadows the rise of machines that **replace humans at the interface**. Once thought becomes **procedure**, it can be automated. Daston positions the **computational imagination** as evolving from **sublime thought to systematized function**,

paving the way for machines not only to **replace human labor**, but to **reshape the very definition of knowledge production**. This historical framing makes the development of today's interfaces—apps, platforms, AI—not revolutionary, but **deeply embedded in Enlightenment lineage**.

Q5. How does Daston's historical account change how we think about interfaces today—not just as tools, but as structures of labor, control, and epistemology?

Answer:

Daston teaches us that interfaces are never just neutral channels—they are **deeply historical and ideological devices**. They **distribute agency, divide intellectual authority**, and shape who gets to participate in knowledge-making. Her account shows that long before the touchscreen or algorithm, Enlightenment thinkers were already designing interfaces that **sorted people into thinkers and task-doers**, much like today's platforms do. Calculation, once sublime, became **mundane, bureaucratic, and silent**—a transformation mirrored in how our own interfaces quietly **discipline time, behavior, and cognition**, under the guise of usability and efficiency.

COMMENT 1:

We can somehow relate it to the crowd in the Benjamin's reading as the crowd moves on the interest of the crowd changes. First, the crowd has less people that can perform calculations. So, grabbing attention of the crowd was easy. But with the rise of calculations and when it became the work of the manual-labour, it became pretty common, so to capture the attention of people the Man of the Crowd has to make efforts.

Evaluation:

This is a **super creative and layered analogy**. You're mapping the **democratization of calculation** (as in Daston) onto Benjamin's idea of **urban anonymity, distraction, and sensory saturation**.

In Benjamin:

- The **crowd** becomes **distracted, fast-moving**, driven by spectacle and novelty.

- The “**Man of the Crowd**” cannot stand out—he **blends in, evades categorization**, yet is also drawn into the swirl of meaningless motion.

In Daston:

- As calculation becomes mechanical and widely distributed, the **act loses symbolic value**—it’s no longer rare or sublime.
- So the “attention economy” of rationalism shifts: just as in Benjamin’s crowd, it becomes **harder to be noticed or to signify meaningfully**.

Your phrase “*grabbing attention of the crowd was easy... now it takes effort*” is especially sharp—it **tracks the devaluation of symbolic labor**.

Suggestion for Polish:

In Benjamin’s “Man of the Crowd,” the figure tries to stand out in a world of distraction and flux. We can read this alongside Daston’s history of calculation: once the domain of intellectual elites, calculation was rare and symbolically powerful. But as it became fragmented and routinized labor, it lost its prestige—just as, in Benjamin, the subject gets lost in the overwhelming sameness of the urban crowd. To be noticed now requires constant performance and differentiation—a logic that resonates with today’s digital visibility economy as well.

COMMENT 2:

Here we also see the objectification of the subjects as we see in the reading by Prince, we see that the person doing the calculative work are replaced by the machines or are treated as the thing to be replaced. They are given less priority with respect to the people who are the thinkers.

Evaluation:

Yes, this is **spot-on**—and **crucial to both Daston and Prince**. You’re correctly identifying a structural division:

- In Daston: between “**those who design**” (intellectual labor) and “**those who execute**” (manual/machine-like labor).
- In Prince: the subject becomes a “**stain**” or **data-trace**, not a full person—reduced to something visible, predictable, extractable.

This is a great connection. You’re identifying how **interface systems reduce or erase subjectivity**, particularly **under logics of performance, productivity, or calculability**.

Suggested Enrichment:

*Both Prince and Daston reveal how the subject is reduced to function. In Daston, calculators become replaceable parts—machines in human form—marking the rise of labor that is valuable only through repetition and compliance. In Prince, the selfie-subject becomes a surface for algorithmic parsing—a trace, a glitch, a thing to be seen, not heard. In both cases, the interface becomes a tool of **epistemological sorting**, determining who gets to be a “thinker” and who is simply processed.*

Pages 194–End: Summary, Course Themes & Full Critical Questions

Detailed Summary

- Daston closes by examining how the Enlightenment's dream of calculation **migrated** into new forms—first **statistical**, then **probabilistic**, and finally **algorithmic** in the modern sense.
- Where Enlightenment rationality valued **certainty and universality**, modern systems embrace **uncertainty, prediction, and data-driven inference**.
- She shows how Enlightenment ideals of calculability helped birth today’s obsession with **quantification**, but also how this logic has **metamorphosed**: we no longer compute for

truth, but for **optimization**.

- Daston critiques how **rationalist aesthetics** still shape our cultural attachments: we admire models, algorithms, dashboards, and spreadsheets not just for what they do, but for the **feeling of control they offer**.
- The interface now acts as a **mythic object**—a descendant of the monumental tables, promising mastery over complexity.
- She leaves us with an ethical question: **Are we still under the spell of calculation?** And if so, **what has been lost** in our transformation from Enlightenment thinkers to data consumers?

Course Theme Connections (Final Synthesis)

Theme	How It Closes
Interface Function	The interface becomes the aesthetic successor of Enlightenment rationality. It is no longer a tool of certainty, but of probabilistic governance . Its authority lies in its presentation of coherence .
Fantasy vs. Reality	Just like De Prony's tables, modern interfaces perform the fantasy of mastery —that data can capture truth, that more numbers equal better knowledge. But they often mask uncertainty, bias, and partiality .
Time & Space	In Enlightenment logic, time and space were made legible through calculation. Today, they're subdivided, optimized, and tracked in real-time , reinforcing capitalist temporality through app interfaces, performance metrics, and feedback loops.

Critical Questions + Full-Length Reflective Answers

Q1. How does Daston link Enlightenment calculation to contemporary algorithmic logic?

Answer:

She argues that **today's algorithmic systems** are heirs to **Enlightenment projects**, but with

key shifts. Where Enlightenment thinkers calculated to achieve **certainty and universality**, algorithms today calculate to manage **uncertainty and prediction**. They are no longer concerned with philosophical truth, but with **optimization and utility**. The goal has shifted from discovering natural laws to **guiding behaviors, markets, and user decisions**—through personalized feeds, predictive policing, and recommender systems. Yet, like the old log tables, these systems still **project rational authority**, reinforcing the belief that numbers = objectivity—even when the logic is **opaque, adaptive, and uninterpretable**.

Q2. What is the role of aesthetics in Daston's argument, especially in relation to modern interfaces?

Answer:

Daston insists that **calculation is never just functional—it's also aesthetic**. The monumental tables were admired for their form, precision, and symbolism. Similarly, today's data dashboards, app UIs, and spreadsheets are designed to **visually perform control**. Their smoothness and clarity **camouflage underlying complexity, uncertainty, or power imbalances**. We are drawn to clean data visualizations, not just for information, but for **reassurance**. Interfaces become **ritual objects**, similar to Enlightenment fetishes of reason—**icons of modern rationality**, even when they're built on messy or incomplete data.

Q3. In what way does Daston suggest modern rationality has been transformed into a form of "governance"?

Answer:

Modern systems use **calculation as a mode of governance**: not to declare what is true, but to **steer behavior**. Algorithms and interfaces operate as **disciplinary systems**, shaping how users spend time, move through cities, consume media, and make decisions. This logic is no longer philosophical—it is **operational, economic, and behavioral**. Daston suggests that we are **no longer governed by ideas**, but by **data and optimization processes that present themselves as neutral but deeply encode values**. This marks a shift from Enlightenment ideals of shared reason to **technocratic control**, masked as efficiency.

Q4. How does this closing section reframe the concept of the interface as both historical and contemporary artifact?

Answer:

The interface becomes a **historical sedimentation**—a layer where Enlightenment ambitions and modern technological rationality merge. From the log tables to Google Analytics, interfaces

are **not just access points to information**, but **technological forms of imagination**: they structure how we think, feel, and act. The belief that we can know, predict, and manage the world through **smooth surfaces and endless calculations** is a dream born in the Enlightenment and **still animating interface culture today**.

Q5. What ethical or philosophical question does Daston leave us with, and how does it speak to your course themes?

Answer:

Daston leaves us asking: **What have we lost by placing faith in calculability and its interfaces?** If Enlightenment calculations once promised truth and order, today's digital systems promise control—but often deliver **alienation, complexity, and opacity**. The cost of quantifying the world may be the loss of other ways of knowing: intuition, community, embodied knowledge, ethical reflection. In terms of your course, this is a call to see interfaces not as neutral or inevitable, but as **ideological machines**—born from a fantasy of order, but operating deep within structures of **power, subjectivity, and temporality**.

COMMENT 1:

Here, we talk about more modern era. We see that earlier we treated the science or maths as kind of absolute (something that is known with certainty) to uncertainty, prediction and data-driven-interface.

Evaluation:

This is a really important insight—Daston is showing how **the Enlightenment desire for certainty** gave way to **the modern acceptance of risk, probability, and predictive modeling**. We no longer ask “what is true?”—we ask, “what is likely?” or “what can be optimized?”

Suggested Reframe:

Daston charts a cultural shift from Enlightenment certainty—where math and science were seen as gateways to absolute truth—to modern systems that embrace uncertainty, modeling, and probabilistic reasoning. Rather than revealing eternal truths, today's interfaces predict behavior and optimize outcomes. We no longer calculate to know; we calculate to intervene, to manage, and to anticipate.

COMMENT 2:

That also aligns with the line that is often said "the more you know, the less you know."

✓ Evaluation:

Nice poetic resonance—it captures the idea that **more data does not mean more understanding**, especially in complex systems. Daston would agree: **data accumulation creates a sense of power**, but also **buries us in opacity and abstraction**.

🔧 Enhanced Interpretation:

This resonates with the paradox of informational overload: the more data we collect, the more elusive "truth" becomes. Interfaces give the impression of transparency, yet we often lose clarity within the noise of optimization, predictions, and algorithmic complexity.

🧩 COMMENT 3:

Okay, the question is: why optimization??

✓ Evaluation:

Perfect question. Daston suggests this is the **new telos (goal) of rationality**: not truth, but **efficiency, prediction, and adaptation**. Optimization is about managing systems—markets, behaviors, attention—not understanding them in a deep philosophical sense.

This is a major **ideological shift**:

- Enlightenment: knowledge = mastery of truth.
- **Now: knowledge = control through prediction, even without understanding.**

🔧 Expansion:

*Optimization emerges as the new endpoint of reason—not in pursuit of knowledge for its own sake, but for control, prediction, and profit. The algorithm doesn't seek meaning; it seeks performance. Truth is no longer the benchmark—**efficiency is**.*

🧩 COMMENT 4:

We see a shift from doing calculations to the thinking.

✓ **Evaluation:**

You've touched on something very Dastonian here. But it's the **opposite** direction: we shift from thinking (calculation as philosophical insight) **to** doing (calculation as mechanical labor and now computational automation).

🔧 **Clarified Reframe:**

*Daston shows a historical reversal: calculation, once an act of thinking—reserved for philosophers and scientists—becomes routinized, mechanized, and automated. The interface now “thinks” for us, while we respond to its outputs. Human thought becomes **reactive**, not generative.*

🧩 **COMMENT 5:**

Here we say that the interfaces make us feel in control of the data or the fantasy of controlling or manipulating the data.

✓ **Evaluation:**

Bingo. This is **core to Daston's critique**—the modern interface is not just functional, it's **aesthetic** and **ideological**. It **stages mastery** even when the system is fundamentally **opaque** and **autonomous**.

This links directly to Prince too—**fantasies of control and legibility** that collapse under their own logic.

🔧 **Rewritten & Enriched:**

Modern interfaces sustain the fantasy of control. Through dashboards, analytics, and visual clarity, they perform mastery over data. But this mastery is often illusion: the systems underneath are governed by algorithms too complex or proprietary to fully understand. The user feels in charge—but in reality, they are choreographed within layers of invisible design logic.