

THESIS

CONSTELLATIONS

Submitted by

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In partial fulfillment of the requirements

For the Degree of Master of Fine Arts

Colorado State University

Fort Collins, Colorado

Spring 2023

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## ABSTRACT

### CONSTELLATIONS

*Constellations* is a researched book-length lyric essay concerning notions of faith and belief weighed against science and the bodily experience, of layers of meaning, of personal truth. The piece takes the form of “constellations” of text in place of stars. The text appears on 4x6” cards against a black background with speckled white to indicate “space”; white lines suggest an assembly which corresponds to a map with instructions. However, the same instructions encourage user agency in how to assemble and navigate the work—flipping through the cards in a numbered sequence, or in a random sequence, or assembling them according to the map, or assembling them as they, the audience, see fit.

## ACKNOWLEDGEMENTS

*Constellations* took me a year-and-a-half to write. It would be impossible to thank everyone who helped form this book, either directly or through their presence in my life, but here are a few constellations:

Thank you to everyone who has ever workshopped my writing during this program, in particular Courtney Zenner, Nicole Piasecki, Bryce O'Tierney, and River Grabowski. You have been so tender and scrupulous with my work; your words will always be of value to me.

Special thanks, as well, to my workshop professors EJ Levy, Camille Dungy, and Harrison Candelaria Fletcher, the latter of whom has also been a mentor to me since 2014 and served as a secondary reader on my committee. Thanks also to Sasha Steensen, my advisor and brilliant poet, and Marius Lehene, another committee member and brilliant artist, for your praise, rigor, and willingness to play with my work.

Thank you to Lara Lilibridge, my mentor and friend from the AWP Writer to Writer Program, and Meriah Crawford, who provided guidance and friendship in the earlier days of my writing career. Thank you to Jessie and Chris from my writers group back in Richmond, VA, for helping keep my writing practice afloat in the chaos following undergrad. Thank you to A Few Don'ts, a now defunct writers group from my years in Madrid, for your continued support and community outside of academia. Terry and Joan, in particular—how you have made me feel seen and loved as a writer.

Thank you to my English teachers from my early years: Mrs. Sumner, Mrs. Steffan, Mrs. Price, Mrs. Johnson, Mr. Sauls, and Ms. Mills. You played crucial roles in fostering my love of reading, writing, words, and language itself.

And of course, thank you to the family who believed in me long before this program,  
long before I ever knew I wanted to be a writer. Your unwavering support is wind in my sails.

## DEDICATION

For my mother, and the gravity of her love.

## TABLE OF CONTENTS

ABSTRACT.....	ii
ACKNOWLEDGEMENTS.....	iii
DEDICATION.....	v
INTRODUCTION.....	1
CONSTELLATIONS.....	11

## INTRODUCTION



Could an essay burst into song? Burst from prose into poetry, snap into a script, dissolve into a QR code and then unfold into a broadside? What about app-essays? Virtual reality essays? Performance essays? And what of those works which have deviated from their genre's original conventions yet are continuously siloed under an inadequate category? From Montaigne *essais* to Anne Carson's *Nox*; from Chaucer to Claudia Rankine. How are we to handle the dissonance of including all of these names and works under the same genre umbrellas?

As tools, written and spoken language have co-evolved with humans and—following Stiegler's expansion on Hegel's theory of retentions—our supplementary technologies such as paper, the printing press, word processing software, and so on. In recent essays from the craft anthology *Bending Genre*, David Lazar and Kazim Ali remind us that gender and genre, coming from the same impulse to classify and categorize different “bodies”, have similarly evolved with humans, technology, language and writing, and other cultural and political influences.

My hypothesis, building upon the above influences catalyzed by Butler's gender performativity theory, is that no single work can encompass a full genre and that, like gendered actions, every work within a genre is necessarily a variation rather than a copy—largely because the authors and their contexts shift significantly with time. Because genre is in some sense as unstable as our own gendered bodies, there is no real question of “if”—in order for the concept to continue serving us, genre will inevitably shift as it always has.

In particular, the influence of continuously evolving digital technologies opens innumerable doors for form, content, and genre possibilities. We already see this in the

emergence and evolution of video essays, both the “higher art” version like Dinty Moore’s “History”—in which Moore reflects on his lineage through immersion in and observation of contemporary Ireland—as well as the casual video essays on YouTube. Projects like CodeLit are taking even recognizable forms and pushing them, or enabling them, to take on new textures. For example, in Kate Lucas’s “Poem in which foreboding again figures prominently”, words fade in and out of existence across the screen, suggesting, alternatively, lines and their breaks, to a field of text, like trying to read a poem through fog. In her 2021 *Believer* essay “Ghosts”, Vauhini Vara incrementally ruminates on her sister’s death with the help of A.I. technology. Again and again, Vara tries to tell her own version before letting A.I. step in and attempt to continue the narrative based on the information she’s given it. As a teacher at the time of this writing in 2023, with such impressive developments in the technology, I still have little to no idea how to combat A.I. generated writing in my classroom.

To be sure, this isn’t an argument for the erasure or death of other genres—I am of the opinion that New Journalism is a genre which, by convention, cannot grow dull, only ever adapting with us. Instead, I champion an expansion simultaneously within our reach and beyond our current vision, an expansion which looks to legitimize still-contested subgenres (such as the lyric essay), as well as to look forward toward future branchings. Hybridity and cross-disciplinary work is on the rise across disciplines, and the literary community is no exception—nor is it exempt, I believe, from the inevitability of this crossover, what some call a muddling and others a natural evolution. Why not work with this inevitability? There are literary, narrative, structural possibilities likely beyond our imagination at this point—and that is the space I want to work in, both theoretically and in my own practice.



My interdisciplinary practice is heavily influenced by both my B.F.A. in sculpture and my extensive involvement with theatre from middle school through the first few years after I graduated from college. From as early as first semester freshman year, professors recommended I take creative writing classes; much of my work involved narrative and/or textual elements, including performances of my writing. For example, my third year, I created an interactive installation piece in the form of a color-by-numbers template; each number corresponded to three prompts based on viewer experiences. “Color the number 3: the color of your bed sheets or; the color of your car or; the color of your first kiss.” Upon reading these series of choose-your-own-adventure prompts, my professor said simply, “This is a poem.”

I revisited the form years later, at the beginning of the pandemic, this time purposefully shaping the instructions into a poem, one which played with but inevitably discarded the form. This poem was my first published work.



In hindsight, of course, I see the writing on the wall, how I was exploring every possible avenue trying to make work I couldn’t quite articulate in the vocabulary of any discipline I’d inhabited thus far. But many of my favorite artists and works of that time spoke directly to my sensibilities as not only a writer, but an interdisciplinary maker. When her partner broke up with her via email, closing with a formal “take care of yourself,” Sophie Calle reproduced the letter



and sent it to over 130 women of varying professions from dancer to linguist to psychiatrist. This outsourcing to various positions of authority in an attempt to understand a significant event, to dissect it or approach it from as many angles as possible, heavily mirrors the drive of the traditional essay. Can *Take Care of Yourself* therefore be read through the lens of, if not an essay as a noun, then essay as a verb? Is essay even enough to describe a project which feels like an essay, a performance, a deconstructed narrative, and an attempt at objectivity? A creation yet release or surrender of authorship and authorial intent, to whatever extent that is actually possible?

Tara Donovan's sculptures make the familiar foreign and hypnotizing again.



Fig. 1. Donovan, Tara. *Untitled (Styrofoam Cups)*. 2003/2008



Fig. 2. Donovan, Tara. *Colony*. 2005

And Sarah Sze's installations telescope in scale, immersing audiences in everyday objects, asking us to reevaluate our relationship to them the way an essay can elevate the mundane to something almost holy.





Fig. 3. Sze, Sarah. *Just Now Dangled Still*. 2008



Fig. 4. Sze, Sarah. *Seamless*. 1999.



## Constellations

*Constellations* began with two kernels of curiosity: the moon's influence on tides, weather, and other terrestrial phenomena, and astrology, with its rich, enduring, and misunderstood aspirations of mapping the human terrain in the stars. Between these ideas, I found myself wondering, not for the first time, whether any celestial forces had a direct, terrestrial impact on humans—on our personalities, on our development, on the biology that composes us. Through a cyclical process between research, writing, repeat, I found myself exploring ideas of belief (religion, spirituality, mythology) and science (genetics, chronobiology, astronomy), of origins and development, of nature versus nurture—of our constantly shifting selves.

As I researched, I found myself drafting various interconnected text groupings which refused a linear organization—much to my initial frustration and eventual obsession. Once I accepted I'd found content which resisted a received form, the work became as much a puzzle as inquiry. Constellation as a form emerged quickly and organically both as a way of organizing the information, but also as a way of subversion of astrology's origins. Where ancient astrologers imposed narrative onto existing stars and planets, *Constellations* does not follow predetermined constellations; their connections are specific to my experiences. In this way, I hope much of the original implications have fallen away, allowing for the idea of constellations to divorce itself from "Nature."



In addition to the subversion of the form, I found myself endeavoring to surrender authorial intention in favor of “audience” interaction, “completion”, and interpretation, much as I had in earlier works during undergrad. The piece both comes with a map for assembly, as well as the option for randomized reading. The resulting hybrid, book-length creative work melds lyricism with a memoir-cum-cultural-critique. We might even classify this as a kind of hermit crab form where the personal material nestles into the “shell” of constellations to hold what another container cannot. While I wouldn’t say I feel vulnerably about any material I’ve shared, I do think the work and its form still do the job of a hermit crab piece in encasing what might otherwise be formless and incongruous.

While I don’t recall thinking about them *actively* during my writing practice, I can easily identify a number of crucial influences in the thinking behind this work. In *Nox*, I considered Anner Carson’s productive, controlled unraveling through form, and how it’s accordion shell physically mirrored the expansiveness of grief. I think also of Sarah Minor’s *Bright Archive*, which challenged my understanding of the shape and structure of essays much like Ander Monson’s *Neck Deep* and *Vanishing Point* did. In Minor’s essay “Handling the Beast”, the dotted lines and scissor silhouette simultaneously evoke childhood crafts while inviting actual participation. Cut them out! Shuffle them around! Read in whatever order you choose! Such surrender of authorial intention continues to inspire me. Paisley Rekdal similarly facilitates audience agency in her recent project *West: A Translation* in which participants are able to choose one of several Chinese characters, each of which links to a different poem, some videos and others not. Each is self-sustained; each is part of a larger web. Subconsciously at the time, I was trying to steal from each of these masters, trying to solve the same puzzle differently.



As much as this introduction serves to diagram my background, influences, personal practices and philosophies, and my assessment of the works themselves—as much as I’ve discovered about myself and my writing—I look back at the last few pages and see a lot of questions, direct and indirect, addressed and implied. They sprout and multiply like a hydra, but like more like a chimera, each head different.

After my college graduation, when I chose to pursue writing, I’d thought I had to choose; I’d thought I had to leave visual arts behind. 8 years later, I see everything I’ve done as tools within a larger toolbox, one not necessarily bound by disciplines that comprise it. In some ways, I feel like I am working my way toward an interdisciplinary practice at the intersection of past and potential future skill sets. I feel liberated to make the work I want to make, regardless of disciplinary boundaries.

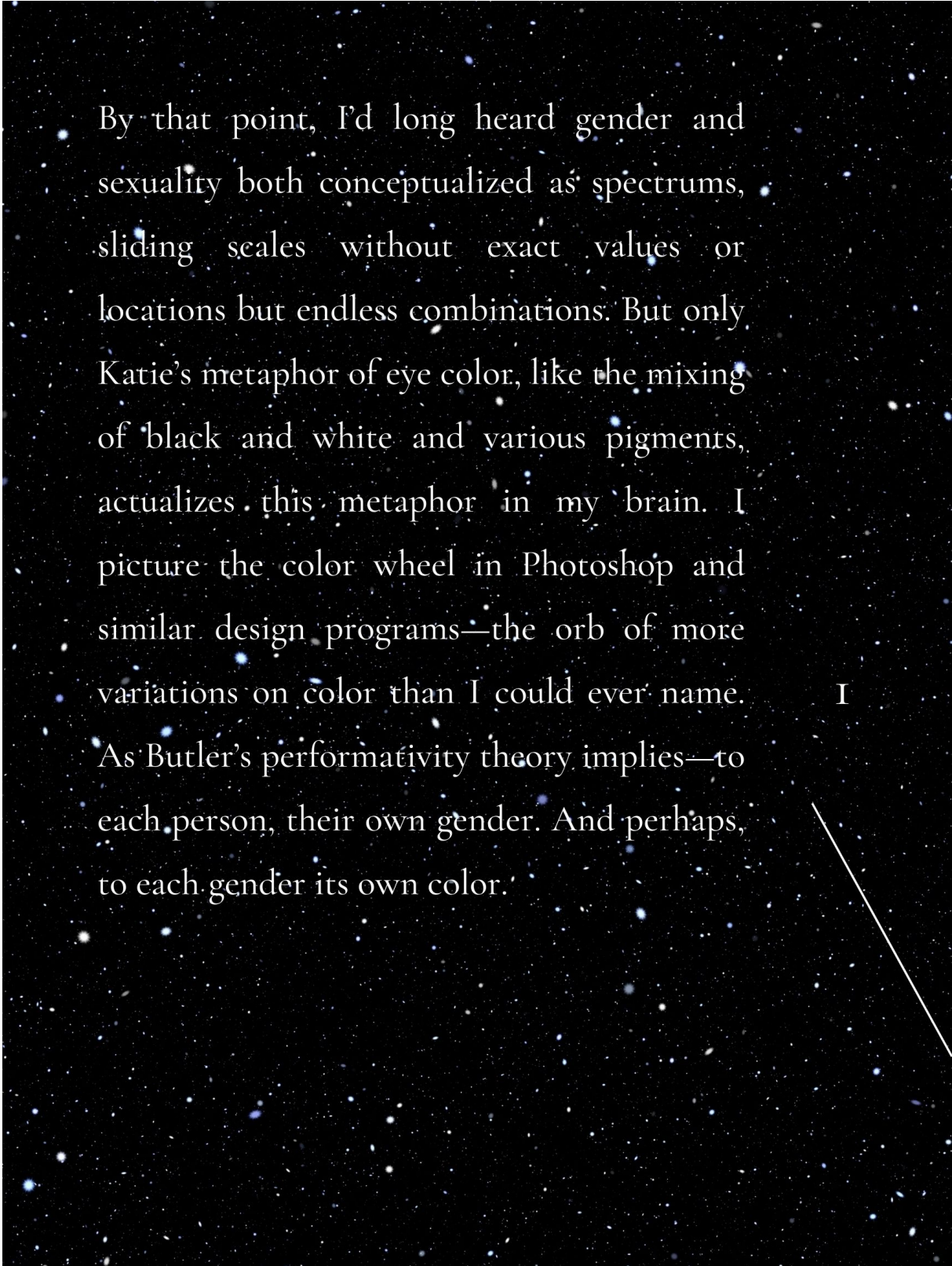
Dear reader:

My study of astrology grew from a misguided obsession and general ignorance of its history. Mesopotamian astrologers were second to kings. How they interpreted the stars could mean the difference between war and peace, hunger and famine, among other crucial, communal concerns. And yet, though their constellations were inspired by a mixture of religious beliefs and rigorous astronomy, what remains is not their gods or heroes or monsters so much as their arbitrariness, barely matching the names and myths these groupings of stars have accumulated through human narration.

In 2008, H.A. Rey's *The Stars: A New Way to See Them* reimagines the constellations through the same names with groupings better matching their names. But even this is a means of upholding a history of projection, of imposition of our narratives onto the outside world.

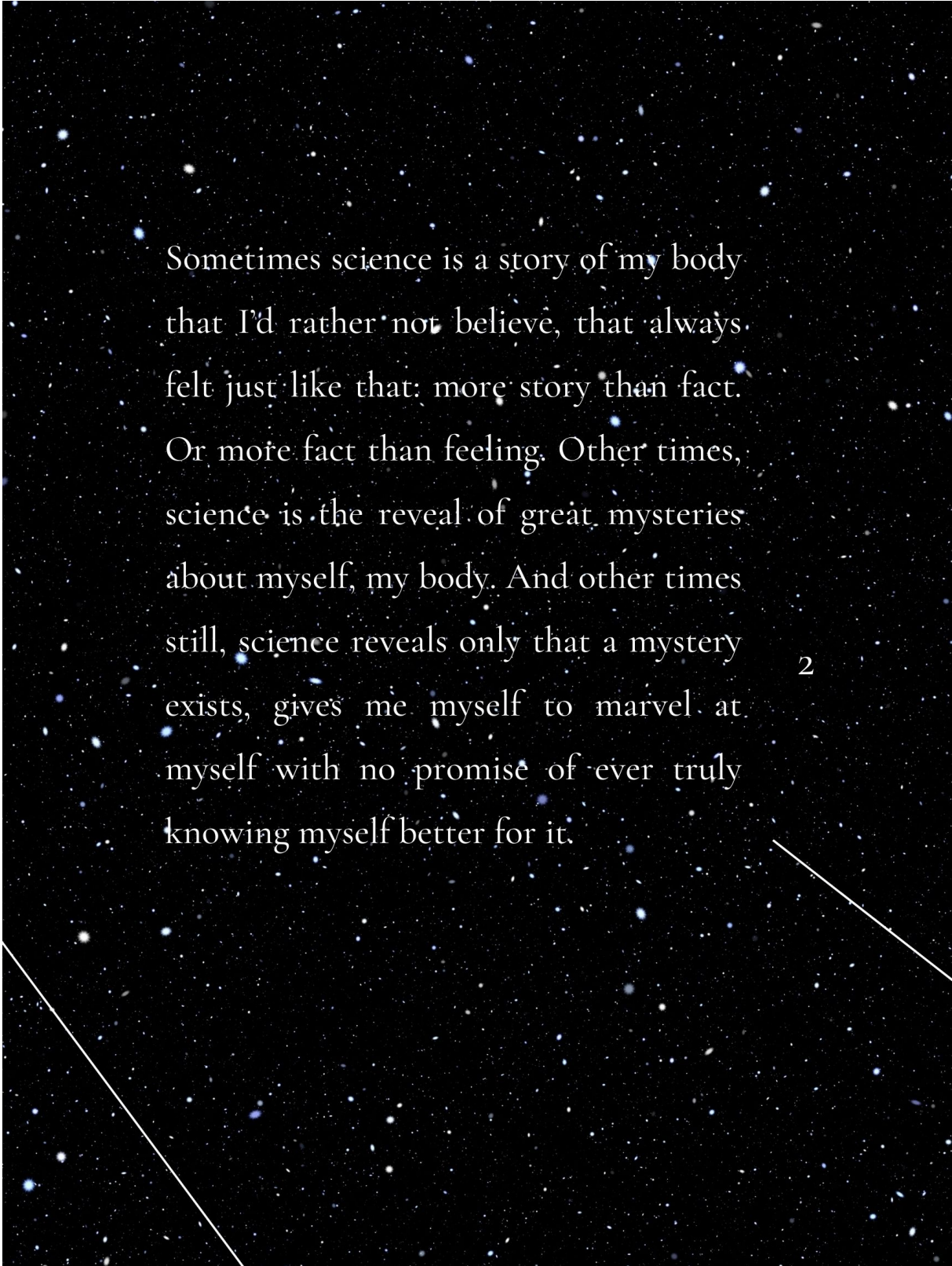
This piece began with a basic inquiry: even if western astrology is not "true" in the way its founders and shapers believed, if the moon and other cosmic bodies can influence terrestrial life through things like the tides, could these forces have a deeper impact on human life, personality or otherwise? From this initial curiosity sprung a web of research into astronomy, moon and earth cycles, chronobiology, philosophy, mythology, and more. The constellation form emerged organically from the rhizomatic branching of the material. But rather than try to map my experiences onto the stars as we see them, I have let the text bodies become stars in themselves. And while you may choose to follow the constellations as I've mapped them, you may as easily find your own connections.





By that point, I'd long heard gender and sexuality both conceptualized as spectrums, sliding scales without exact values or locations but endless combinations. But only Katie's metaphor of eye color, like the mixing of black and white and various pigments, actualizes this metaphor in my brain. I picture the color wheel in Photoshop and similar design programs—the orb of more variations on color than I could ever name. I

As Butler's performativity theory implies—to each person, their own gender. And perhaps, to each gender its own color.



Sometimes science is a story of my body  
that I'd rather not believe, that always  
felt just like that: more story than fact.  
Or more fact than feeling. Other times,  
science is the reveal of great mysteries  
about myself, my body. And other times  
still, science reveals only that a mystery  
exists, gives me myself to marvel at  
myself with no promise of ever truly  
knowing myself better for it.

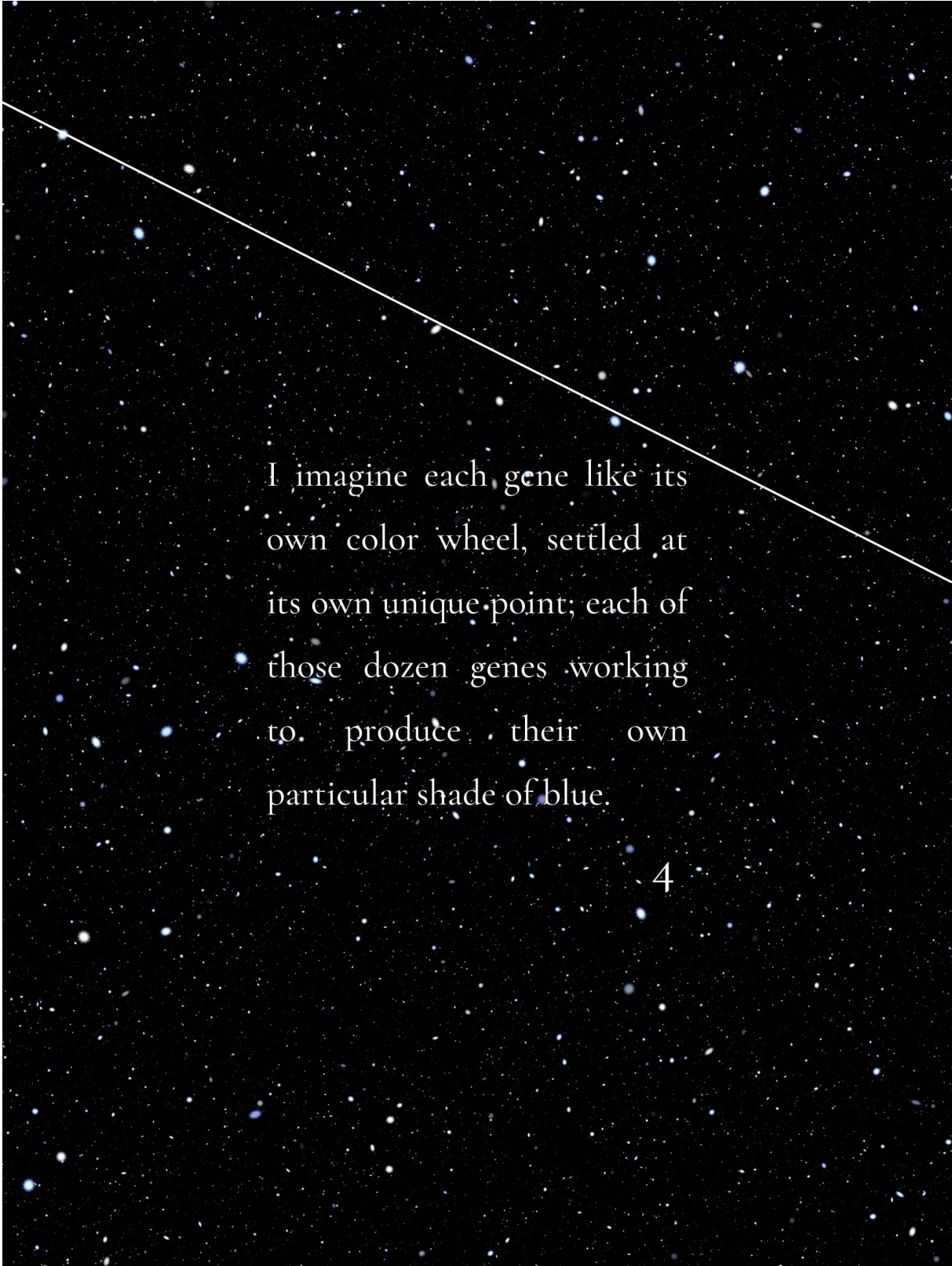
2



A deep space photograph showing a vast field of stars and galaxies against a black background. The stars vary in brightness and color, with some appearing blue and others white. Three thin white lines are drawn across the image: one from the left edge towards the top, one from the bottom left towards the center, and one from the right edge towards the center. The number '3' is centered in the upper half, and a quote is centered below it.

3

“But genes aren’t like a light switch  
—you don’t just flip them on and  
off. It’s more like... a spectrum.”



I imagine each gene like its  
own color wheel, settled at  
its own unique point; each of  
those dozen genes working  
to produce their own  
particular shade of blue.

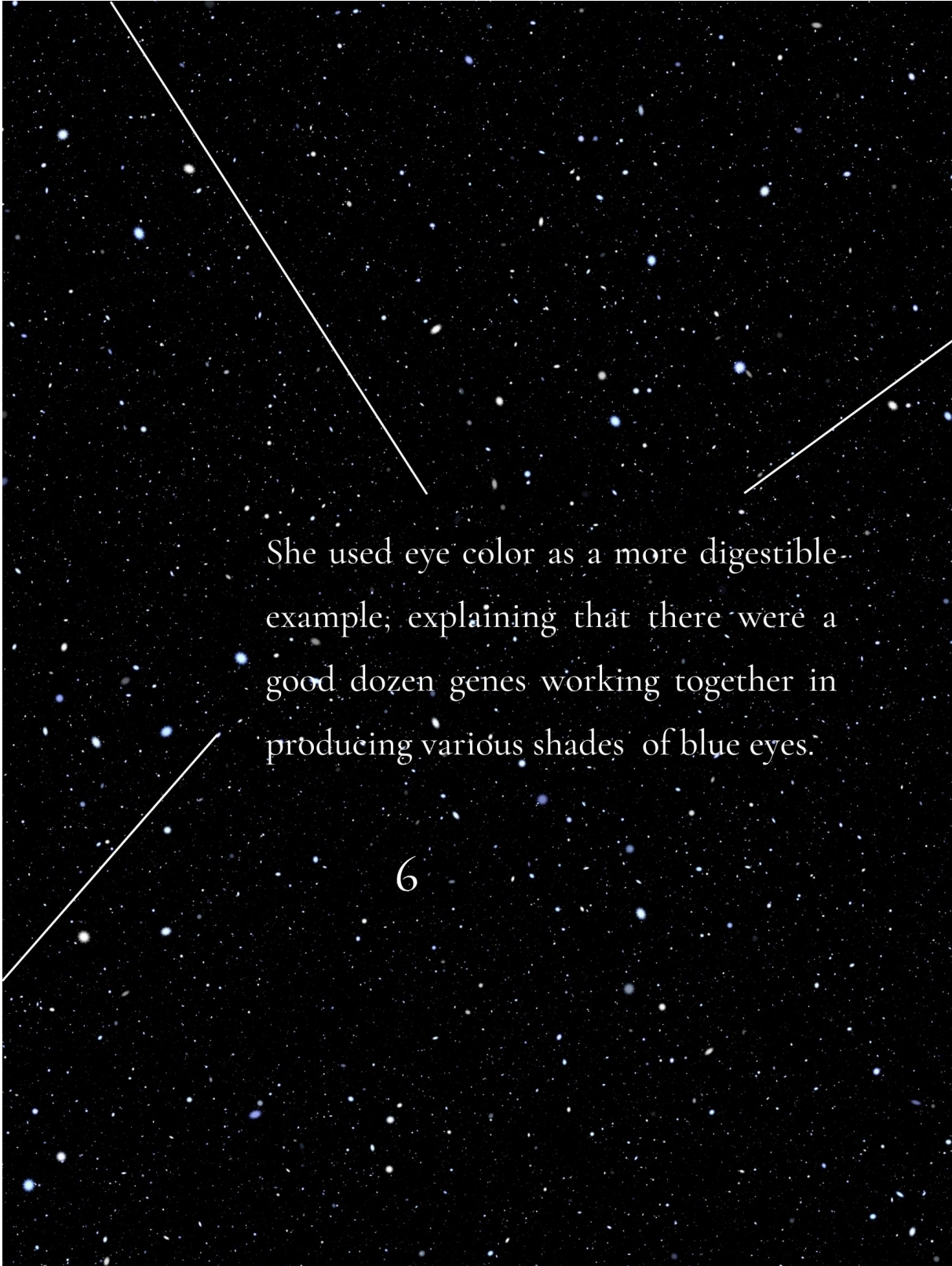
4





I try to imagine that with a person.

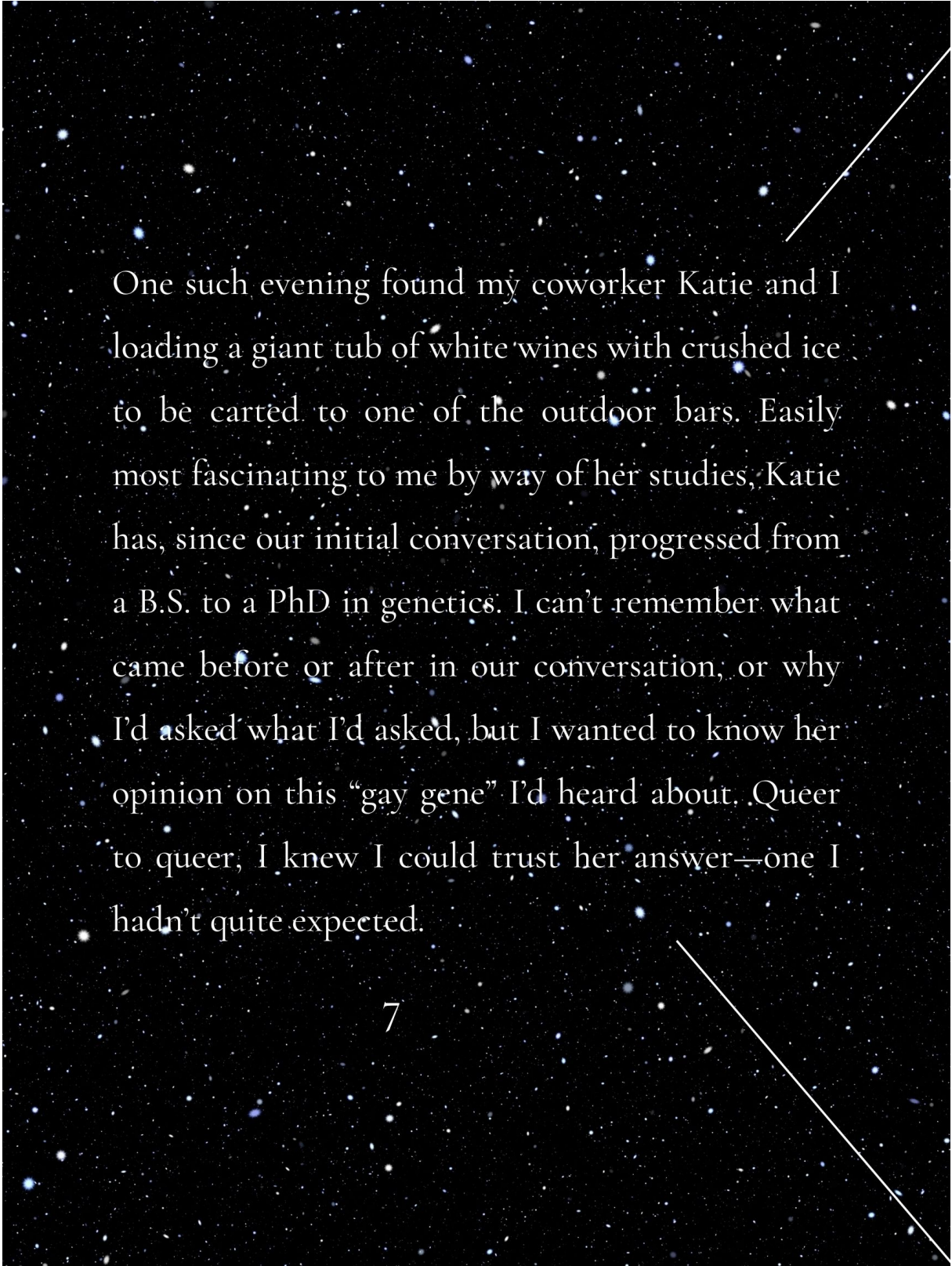
5



She used eye color as a more digestible example; explaining that there were a good dozen genes working together in producing various shades of blue eyes.

6





One such evening found my coworker Katie and I loading a giant tub of white wines with crushed ice to be carted to one of the outdoor bars. Easily most fascinating to me by way of her studies, Katie has, since our initial conversation, progressed from a B.S. to a PhD in genetics. I can't remember what came before or after in our conversation; or why I'd asked what I'd asked, but I wanted to know her opinion on this "gay gene" I'd heard about. Queer to queer, I knew I could trust her answer—one I hadn't quite expected.



8

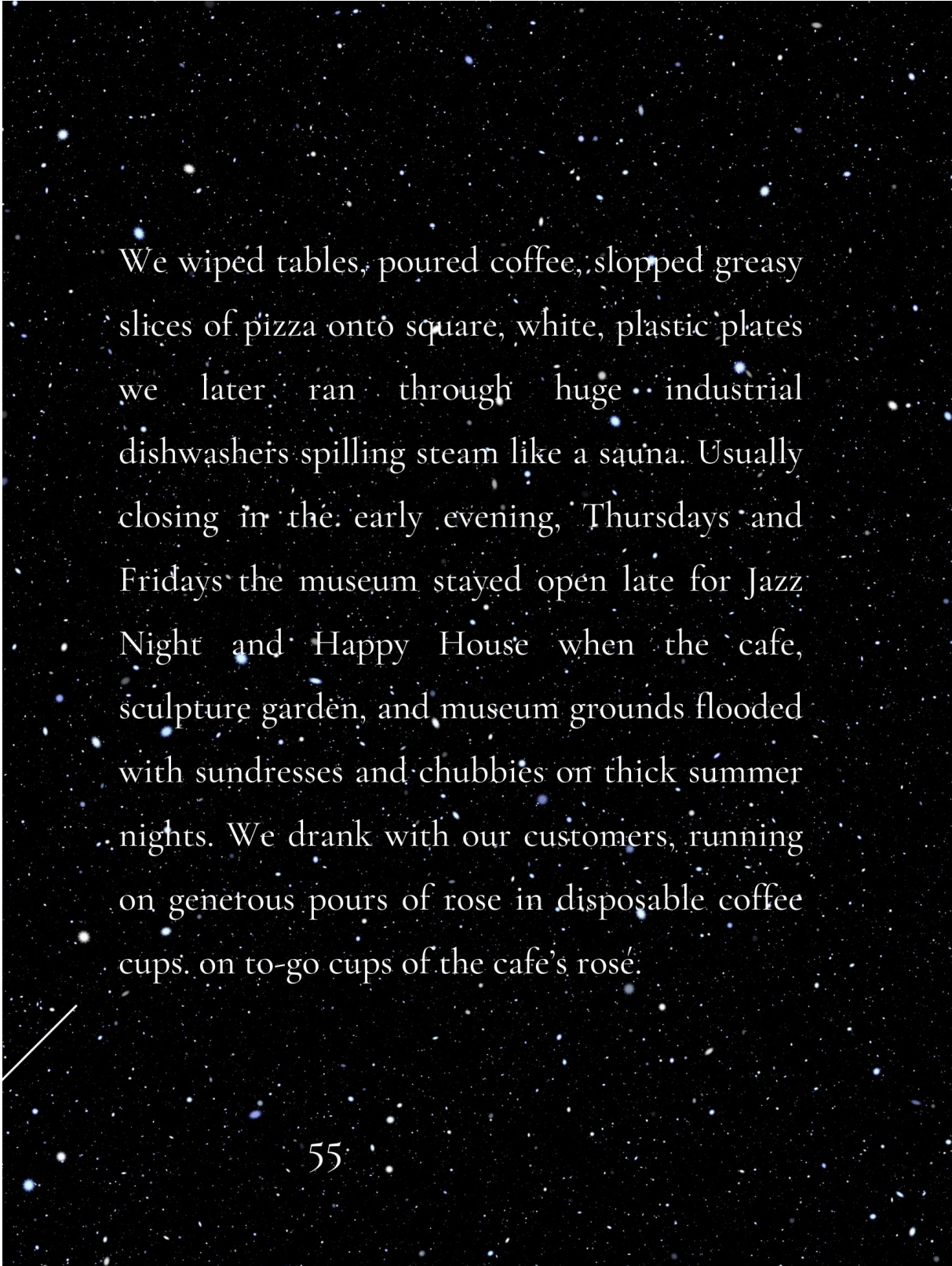
“We don’t necessarily advertise this...” She laughed nervously, her eyes darting side to side. “But there’s not really *one* gay gene. It’s more like a team of different genes working together to ultimately express someone’s unique gender identity and sexual preferences.”





9

In the year before I moved to Europe to teach, I worked at a glorified cafeteria on the bottom level of a well-respected art museum. We were a bit of a motley crew; most of us students, or had recently been students, or were thinking about becoming students again to get out of The Real World: a Spanish major, a business major, a violinist-painter.



We wiped tables, poured coffee, slopped greasy slices of pizza onto square, white, plastic plates we later ran through huge industrial dishwashers spilling steam like a sauna. Usually closing in the early evening, Thursdays and Fridays the museum stayed open late for Jazz Night and Happy House when the cafe, sculpture garden, and museum grounds flooded with sundresses and chubbies on thick summer nights. We drank with our customers, running on generous pours of rose in disposable coffee cups, on to-go cups of the cafe's rosé.





## IO

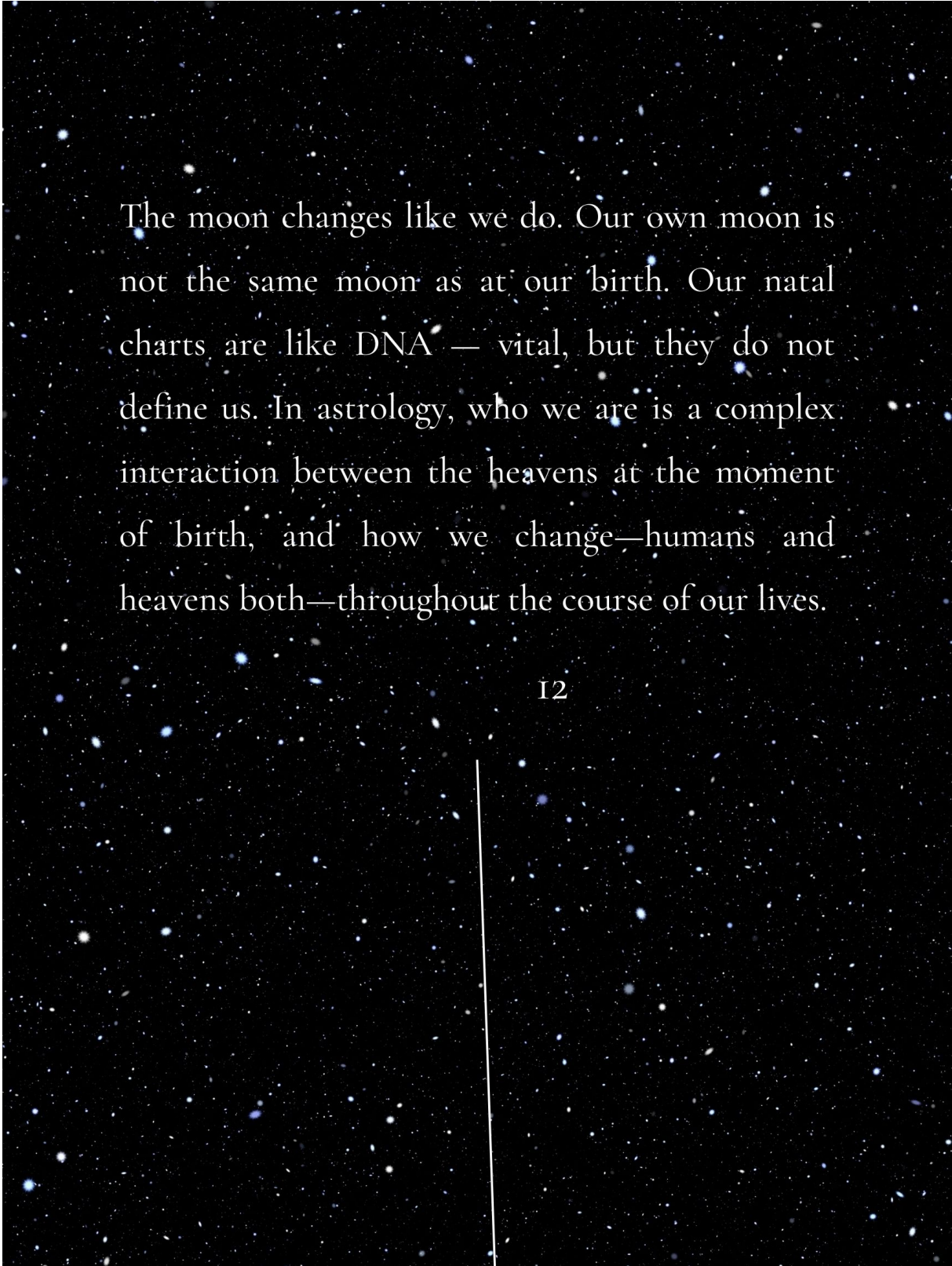
Much like reading tarot, true astrologers understand that, when interpreting natal charts or progressed charts, you cannot read too deeply into any single component—you must consider the parts relative to the whole.



## II

According to prominent astrologist Steve Forest, the moon birthed astrology. Observing its phases in the sky was perhaps our first sense of the passing time between the rise and set of the sun. The moon before the seasons. The seasons before the changing over bodies hormones, growth, aging, reproduction—many of these associated with the moon.



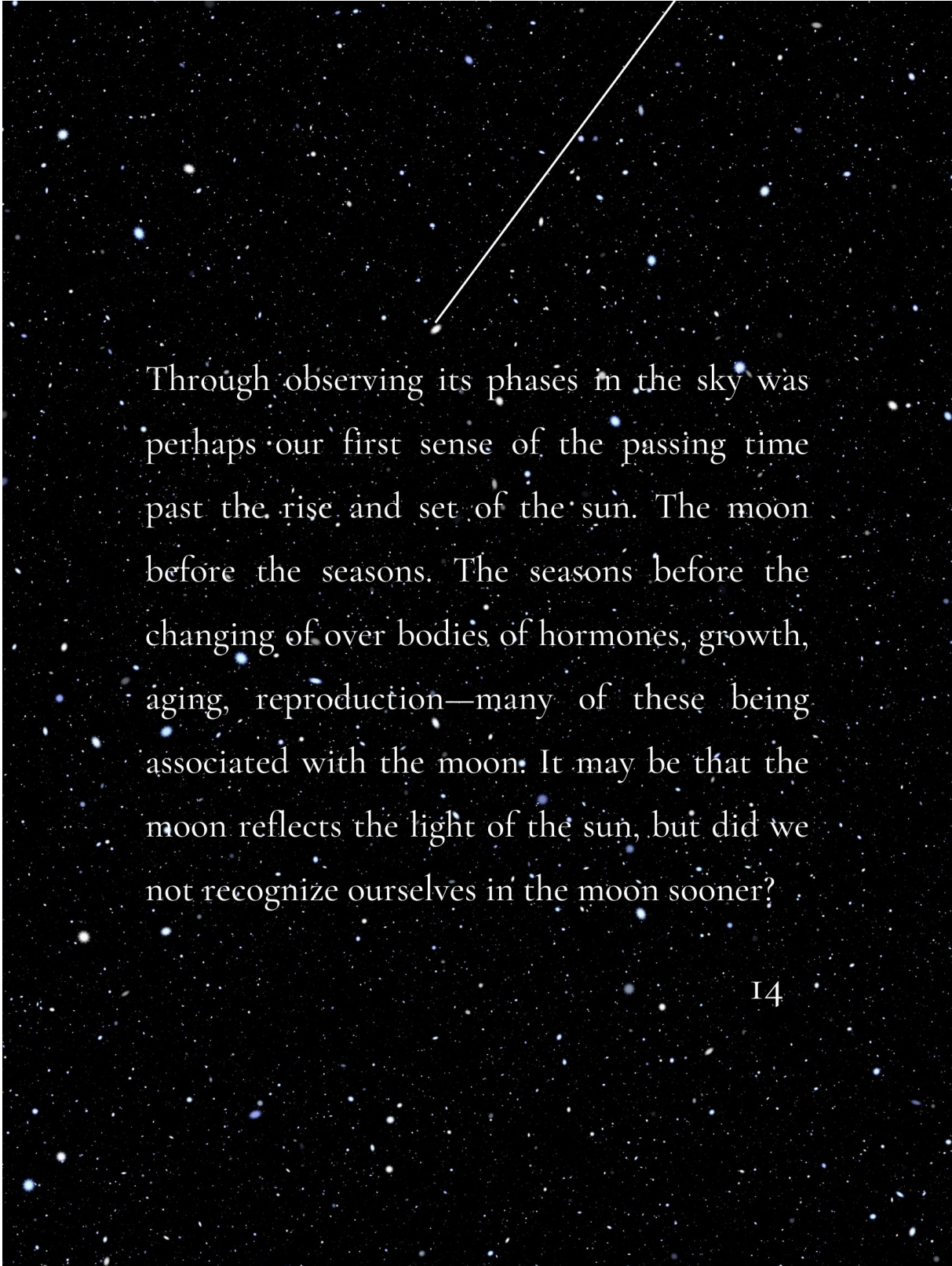


The moon changes like we do. Our own moon is not the same moon as at our birth. Our natal charts are like DNA — vital, but they do not define us. In astrology, who we are is a complex interaction between the heavens at the moment of birth, and how we change—humans and heavens both—throughout the course of our lives.

12

I like to imagine even further back than the ancient astrologers and astronomers watching the skies with some idea of stars and planets —with some idea of what they were looking at, some idea of what they were looking for. I like to imagine even further back, to ancestors before language, watching the sky.





Through observing its phases in the sky was perhaps our first sense of the passing time past the rise and set of the sun. The moon before the seasons. The seasons before the changing of our bodies of hormones, growth, aging, reproduction—many of these being associated with the moon. It may be that the moon reflects the light of the sun, but did we not recognize ourselves in the moon sooner?



16

I try to imagine the imagination of  
ancestors before speech, what the  
night, the dark, the shadows, the  
moon, all must have been to them.



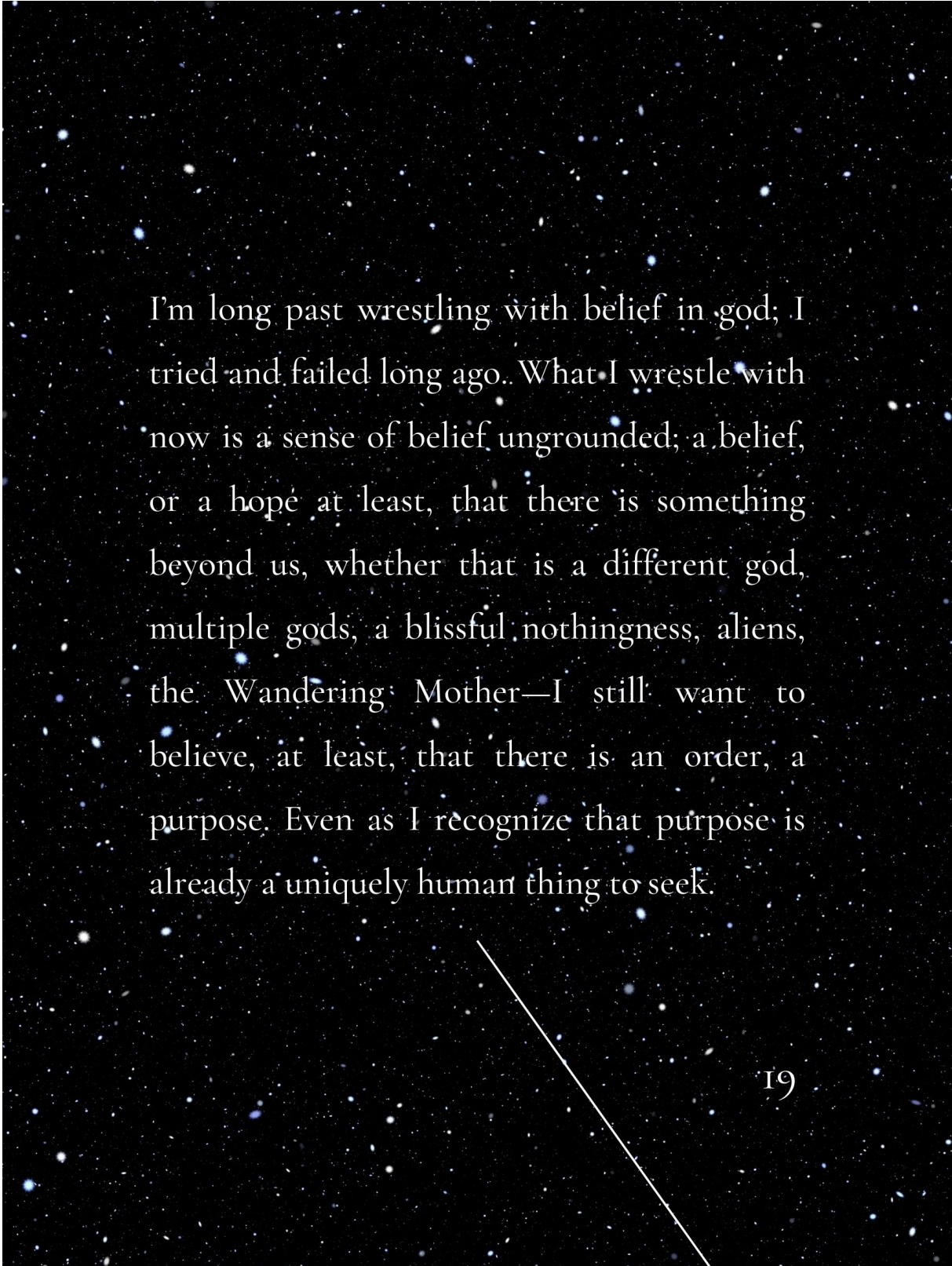


17

It's a romantic notion, I think,  
to imagine the moon this way.

We are the ones who need meaning—not the trees, or the earth beneath them. Why should we ask meaning of them? Why should we ask of them what not even we should need? Proof of our existence? Proof that we are special? Why? Why do we think we are owed this, guaranteed it? When did we start to dream that the universe owed us some debt? Are we not, ourselves, gift enough?





I'm long past wrestling with belief in god; I tried and failed long ago. What I wrestle with now is a sense of belief ungrounded; a belief, or a hope at least, that there is something beyond us, whether that is a different god, multiple gods, a blissful nothingness, aliens, the Wandering Mother—I still want to believe, at least, that there is an order, a purpose. Even as I recognize that purpose is already a uniquely human thing to seek.

Whether it's programmed into our genes in a way we can see or not, human beings believe—in angels, in demons, in heaven, in hell, in nirvana, in all manner of other things reflected in the world around us and not. This belief is something specific, special to us. And what I want to know is, when did that happen? When, in the complex feedback loop of evolution, of body to brain and back again—? When, from ape to the mix of Neanderthal and other sapiens—? When did we start to see ourselves outside ourselves? When did we begin to see faces in twisted knots of tree bark? When did we first look at the mountains and see earth's breasts, a woman who had laid herself bare to us, as if we might walk through her valleys without so much as a question of permission?

her.

even now.

do you see?





21

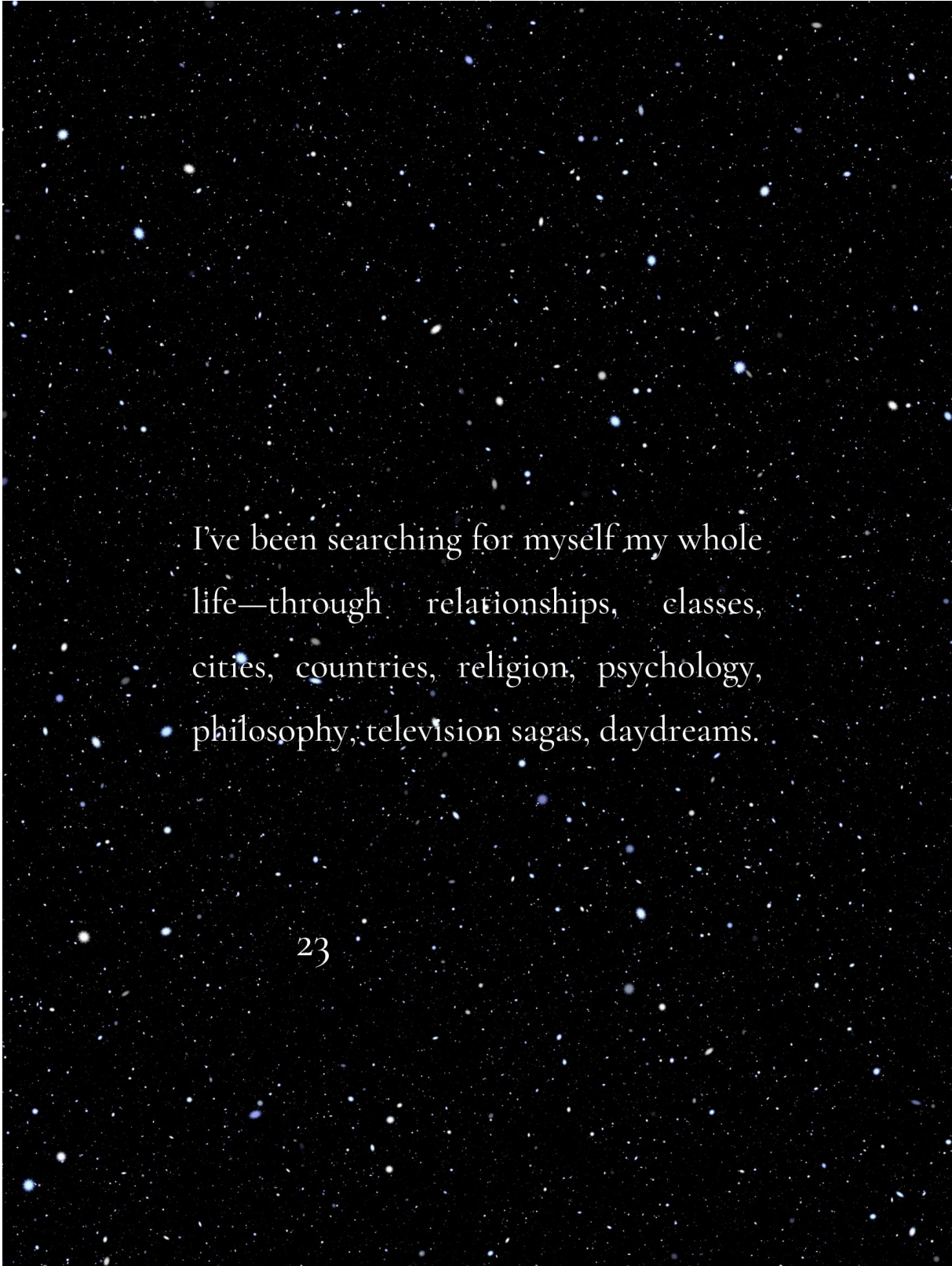
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I can't know, of course, when the first human—or Neanderthal, or other sapien—made the first conscious observation of the moon's synchronization with something. I don't even know what that something might have been.

Years later, in adulthood, my first time dropping shrooms, I saw the Devil in the pattern of the Persian rug in my living room and promptly put myself to bed.

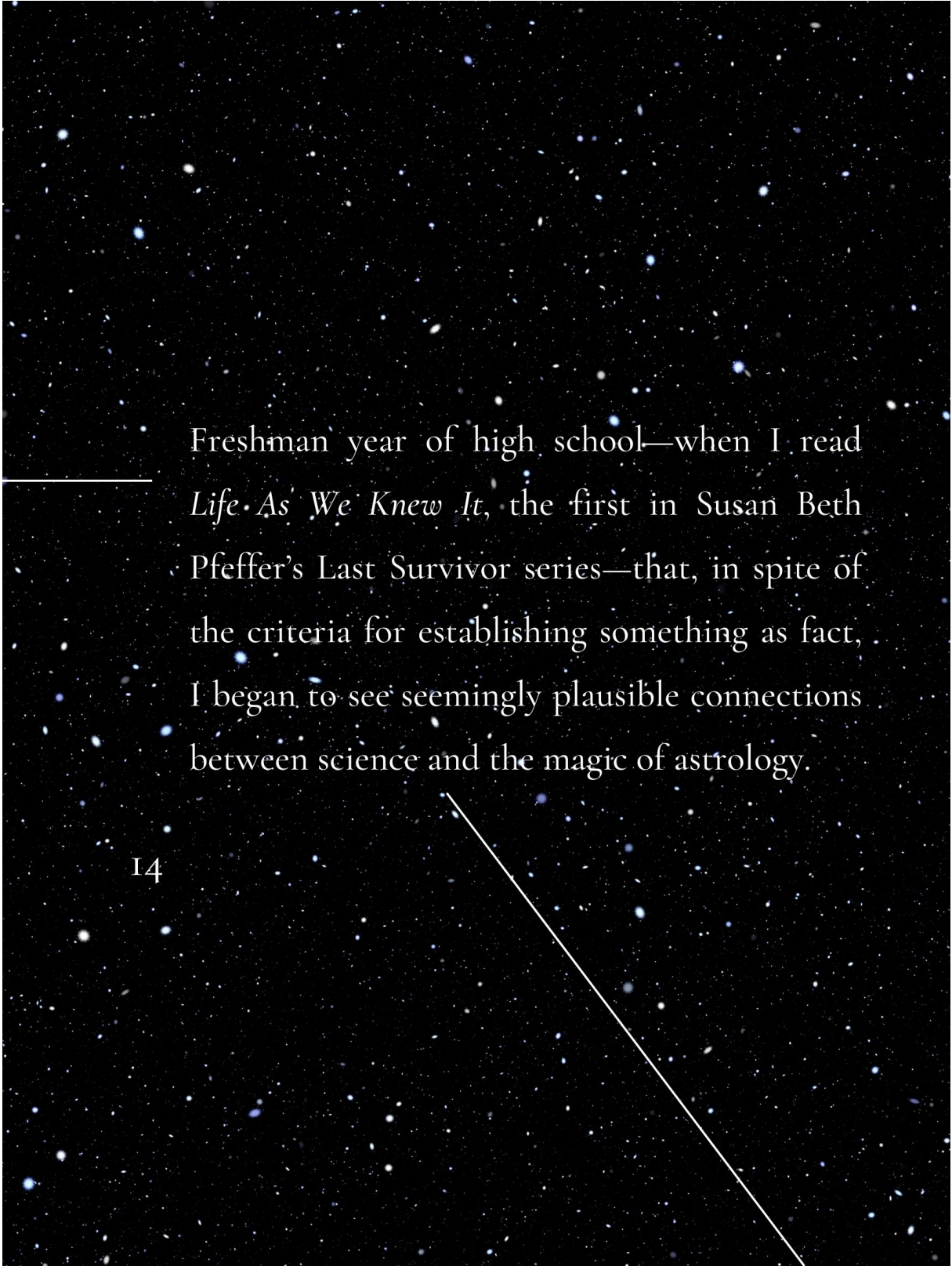


As kids, my sister, cousins, and I would draw on ourselves and each other, connecting the dots of our freckles into arbitrary constellations, into monsters, faces, words; I could do the same thing with textures in the walls, carpet patterns, not unlike clouds in the sky. Pareidolia, one more name I couldn't know then.



I've been searching for myself my whole  
life—through relationships, classes,  
cities, countries, religion, psychology,  
philosophy, television sagas, daydreams.





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Freshman year of high school—when I read *Life As We Knew It*, the first in Susan Beth Pfeffer's Last Survivor series—that, in spite of the criteria for establishing something as fact, I began to see seemingly plausible connections between science and the magic of astrology.

14

Pffeffer's saga envisions a meteor striking the moon not hard enough to destroy it, but to knock it closer to earth—an event which catastrophically impacts weather patterns, tides, and other natural phenomena, including volcanic activity. Subways inundated. Tsunamis trash shorelines. Loss of electricity. Collapse of food delivery. Parents we only ever meet by name, trapped at work never to return. A descent into chaos, thievery, violence. The world, as we know it, quite literally over.



A background image of a starry night sky with a white diagonal line running from the top right towards the center. The number 26 is positioned near the end of this line.

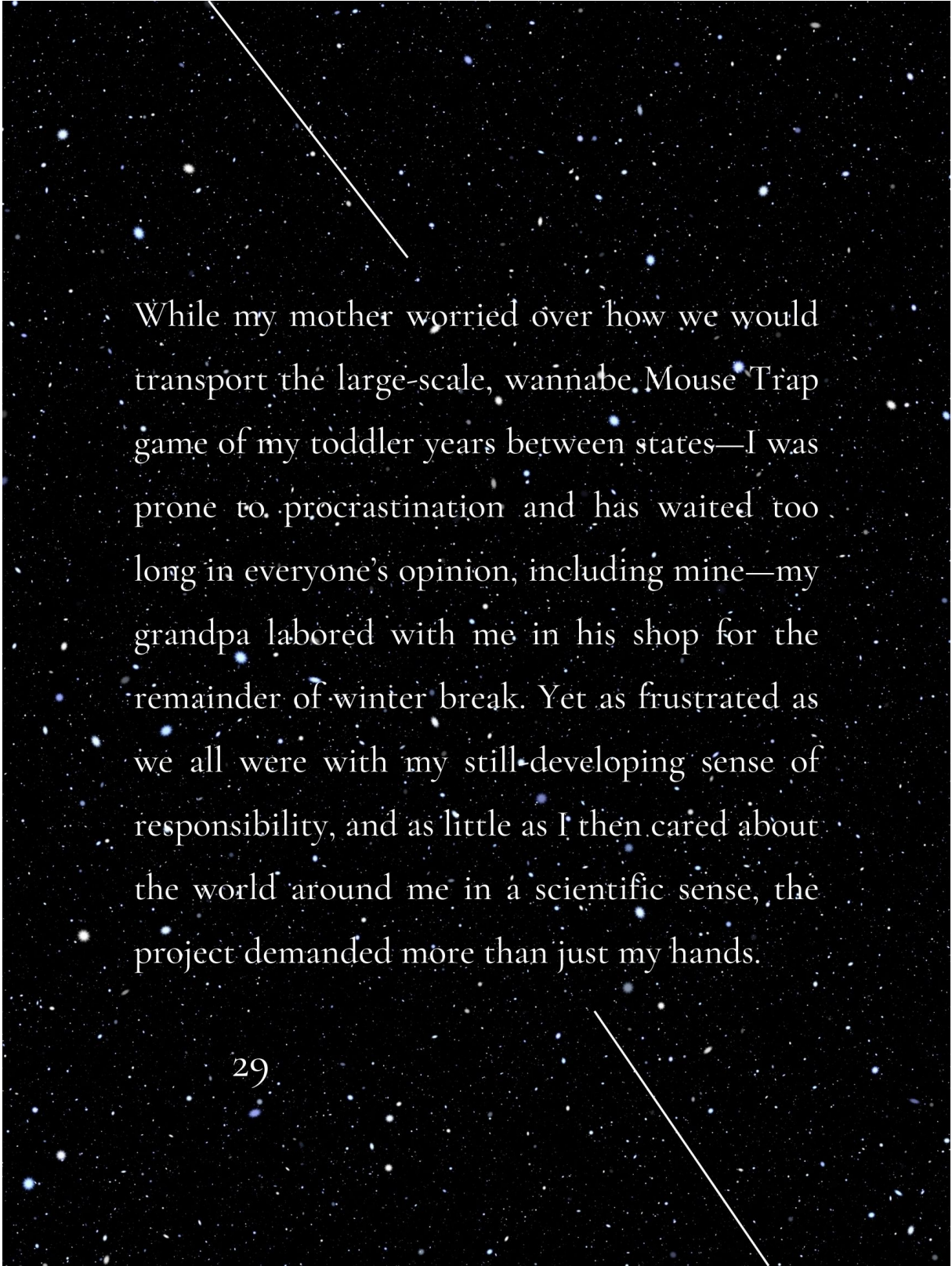
26

The series thrilled me not only for my grim fascination with apocalypse and post-apocalypse narratives, but also because it made something scientific feel urgent, tangible even—more so than knowing things fall because of gravity, or that earth’s seemingly stable surface slide on plates in a motion that, while capable of building mountains, we cannot usually feel.

During one winter break, visiting my grandparents at the lake—when the water was frozen over, a sculpture of wind in the last moment before freezing—I remembered my upcoming science project, a Rube Goldberg machine.



We learned and whether it was because of my upbringing or the way in which I was taught or some other variable, I could not then hold it all together in my mind, could not see the ways in which these concepts, delivered in contained units, might actually constitute a web, tenuous strings vibrating at the slightest new breeze, such as the one which may have blown the apple, gravity pulling it down on Newton's head with an undeniable whomp —



While my mother worried over how we would transport the large-scale, wannabe Mouse Trap game of my toddler years between states—I was prone to procrastination and has waited too long in everyone’s opinion, including mine—my grandpa labored with me in his shop for the remainder of winter break. Yet as frustrated as we all were with my still-developing sense of responsibility, and as little as I then cared about the world around me in a scientific sense, the project demanded more than just my hands.






30

I circled the accumulating machine, step after step, captivated by how complex it was to build something, that with a certain number of steps, needed to produce a desired effect. Orchestrating a series of triggers, of cause-and-effect reactions, became less like science and more like a game: marbles rolling down toxic traffic cone orange race car tracks, flipping cups and spinning gears. And by the time it's all over, the path from A to Z is visible but nearly unintelligible, a jumble of trigger reactions with an accumulation of potential causes.



### 3I

The gravimetric cycle refers to the cyclical difference of the moon's pull on the earth as it orbits around our planet. Since the moon's orbit is elliptical, sometimes it is more distant from the earth, and sometimes closer. Its cycle from perigee (when it is closest) to apogee (when it is farthest) lasts 27.5 days. Depending on where it is in its orbit, the moon exerts a different gravitational pull on different parts of the earth.

A deep space photograph showing a vast field of stars and galaxies against a black background. A prominent, bright, diagonal streak of light, possibly a comet or a distant galaxy, runs from the upper right towards the center. The text is overlaid on the lower left portion of the image.

32 If I believe in any god,  
isn't of the Deist variety.



God in the Deist belief is not only the grand designer, the great creator, but also a mechanic, or perhaps a mad scientist—he sets up the world like a 200,000 domino chain reaction, or an elaborate Rube Goldberg machine, and either steps back to watch or leaves the room entirely, perhaps uninterested in the end result.

In middle school science classes, I began to learn about the scientific method, about the difference between a hypothesis and a theory, between evidence and suspicion, or proof and speculation.



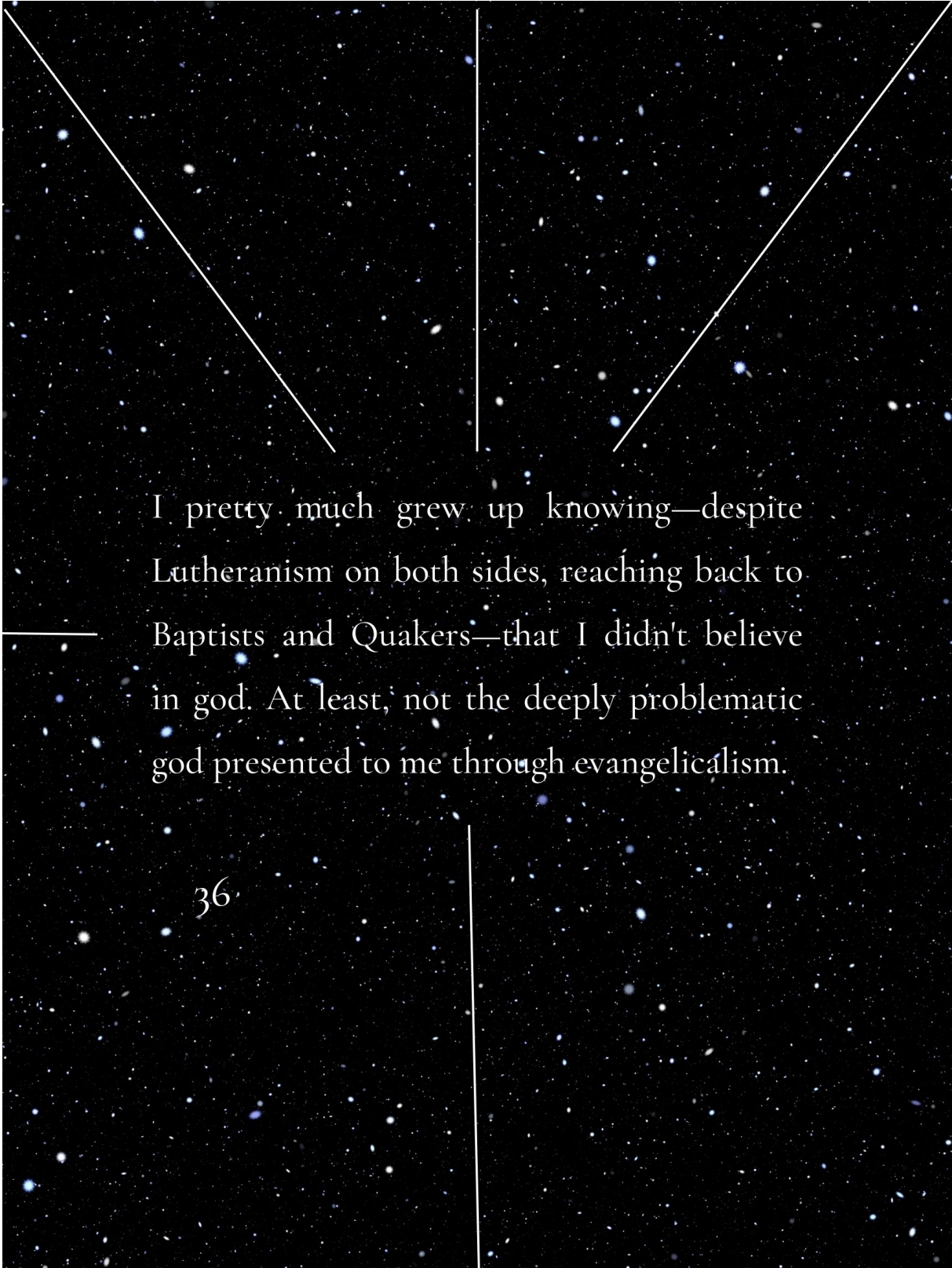
A deep space photograph showing a vast field of stars and galaxies against a black background. A thin, bright diagonal line, possibly a comet or a light trail, stretches from the bottom left towards the center. The text is overlaid on this image.

35

We learned about Newton's laws, genetics,  
the hidden chaos beneath the earth's crust,  
the illusion of peace in the stars.

I was raised to believe that in the beginning there was only darkness—which was not unlike the swirling massless bruise-thirsty Chaos of Greek myth. Except I was raised to believe that there was a light switch somewhere that god one day decided to flip.





I pretty much grew up knowing—despite  
Lutheranism on both sides, reaching back to  
Baptists and Quakers—that I didn't believe  
in god. At least, not the deeply problematic  
god presented to me through evangelicalism.

36



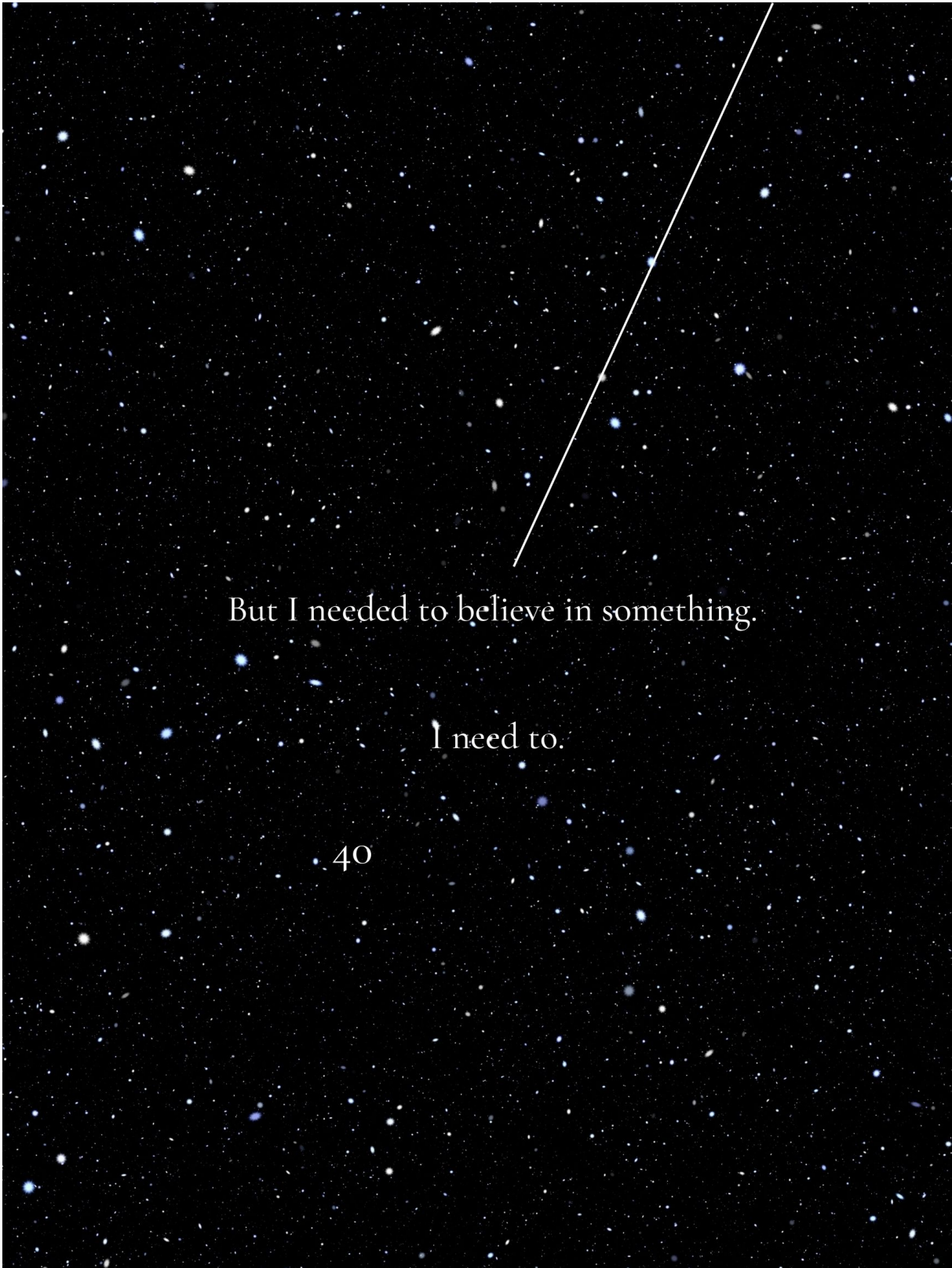
37

I had wanted to believe in religion; I  
had wanted to believe in a story where  
I was loved by a god who would let me  
live forever with my family and friends.

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Partially, when my childhood church split from the Evangelical Lutheran Church of America (ELCA) over homosexuality in the church, it had been spelt out, explicitly, that I was not welcome. It would be another few years before I'd understand how I had trusted the church's narrative of me for too long.



But I needed to believe in something.

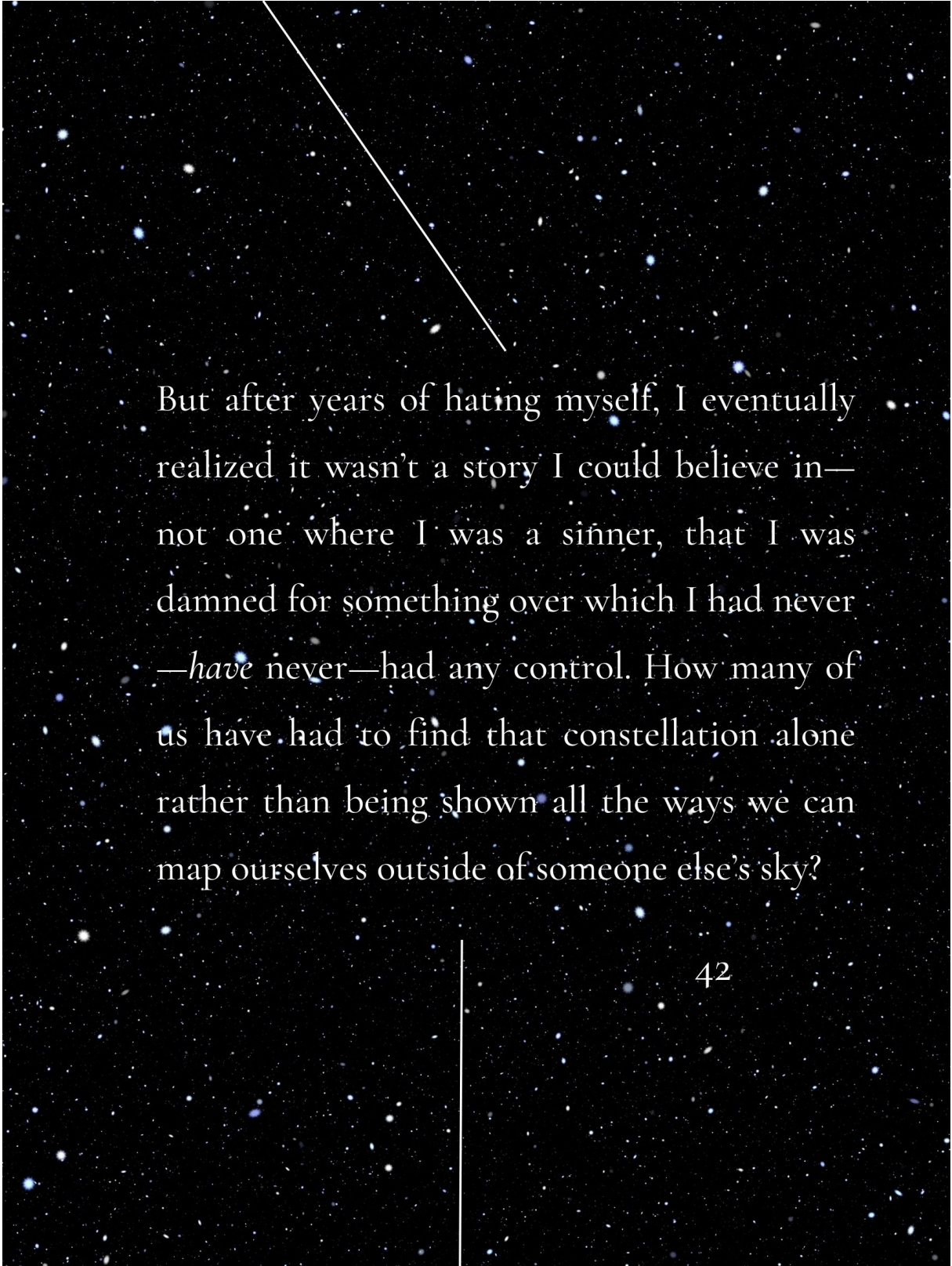
I need to.

40

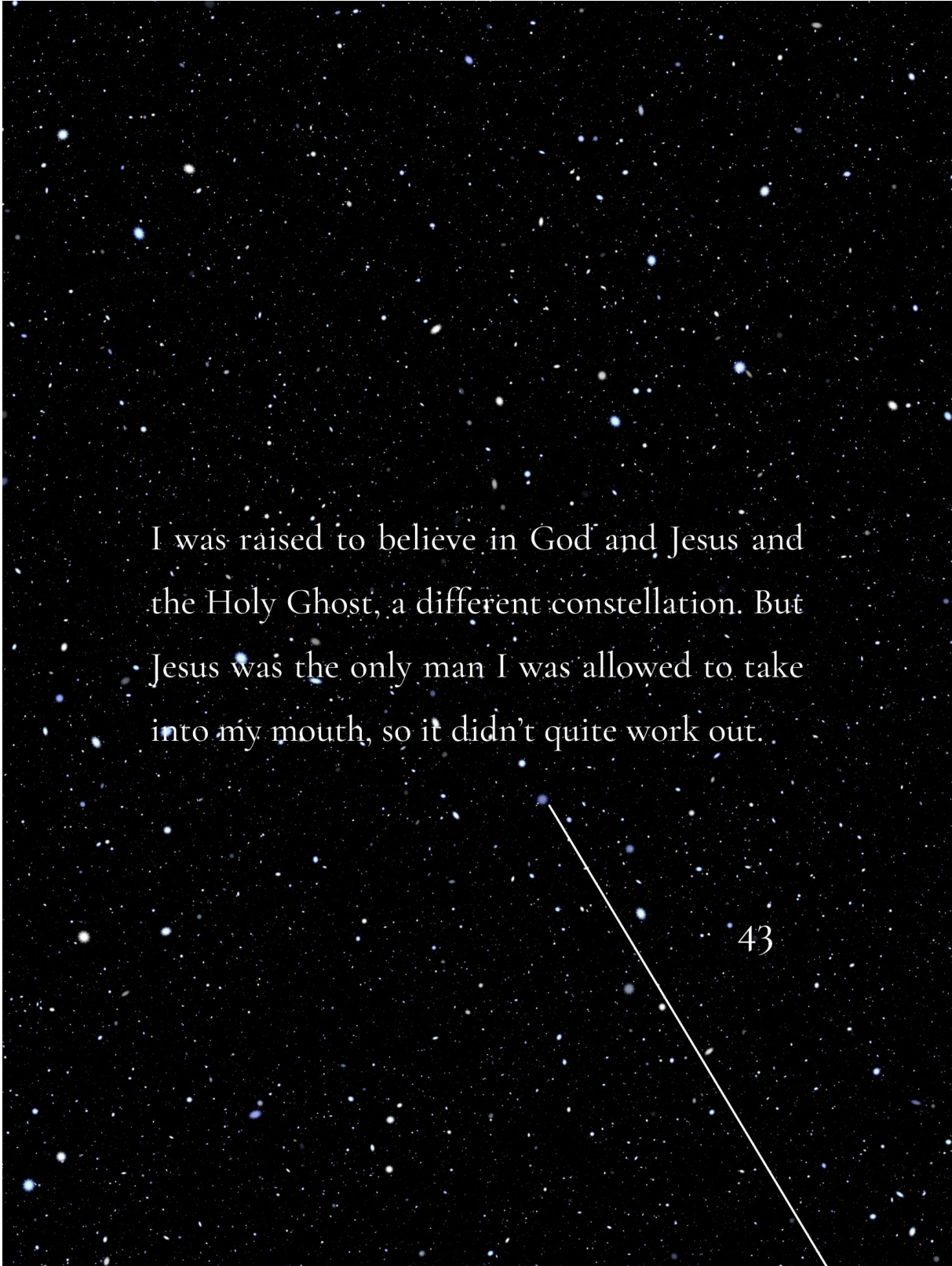


I could not reconcile god's omniscience and omnipotence with the concept of free will—making us prove our love for him and then setting up a booby-trapped mine field with punishments worse than actual explosions. What kind of father would be so narcissistic, so sadistic, selfish, cruel, angry?






But after years of hating myself, I eventually realized it wasn't a story I could believe in—not one where I was a sinner, that I was damned for something over which I had never—*have* never—had any control. How many of us have had to find that constellation alone rather than being shown all the ways we can map ourselves outside of someone else's sky?



I was raised to believe in God and Jesus and the Holy Ghost, a different constellation. But Jesus was the only man I was allowed to take into my mouth, so it didn't quite work out.

43





A close friend from high school  
once joked: “It isn’t Jesus I have a  
problem with—it’s his fan club.”


44



Around middle school, I discovered one of my favorite Greek myths in which Apollo, god of sun, medicine, music, falls in love with the mortal youth, Hyacinth. Their love was not expressly forbidden, but as with most mortal-god pairings, their story, no matter the version, always ends in tragedy, with Apollo cradling the dead or dying youth, who he commemorates by transforming his lover's body or blood into the flower we associate with the tale to day.

The suffix “-nth” indicates a pre-Greek language and culture. Classicist Madeline Miller, backed by the Oxford Classical Dictionary, speculates that “it’s likely that Hyacinth was some sort of older nature deity, who was replaced by the Olympian Apollo. The myth preserves the cultural changing in story form, having the new god “kill” the old one.”





Christianity has similarly shed and accumulated things, such as old gods into saints (there's a patron saint for everything).

47



In *Postcolonial Astrology*, Alice Sparkly Kat reminds us that before the moon was associated with menstruation and biological reproduction, the moon was associated with the market, with merchants, with travelers, sailors, foreigners, and strangers—sometimes all mixed into one body.

Science sheds disproven science for the newest version, the “truer” version—as close to true as we can get it in the moment. It isn’t perfect and it doesn’t pretend to be. As William Deresiewicz reminds us in his 2017 *The Atlantic* article “In Defense of Facts,” a fact is a frozen argument, a held breath.



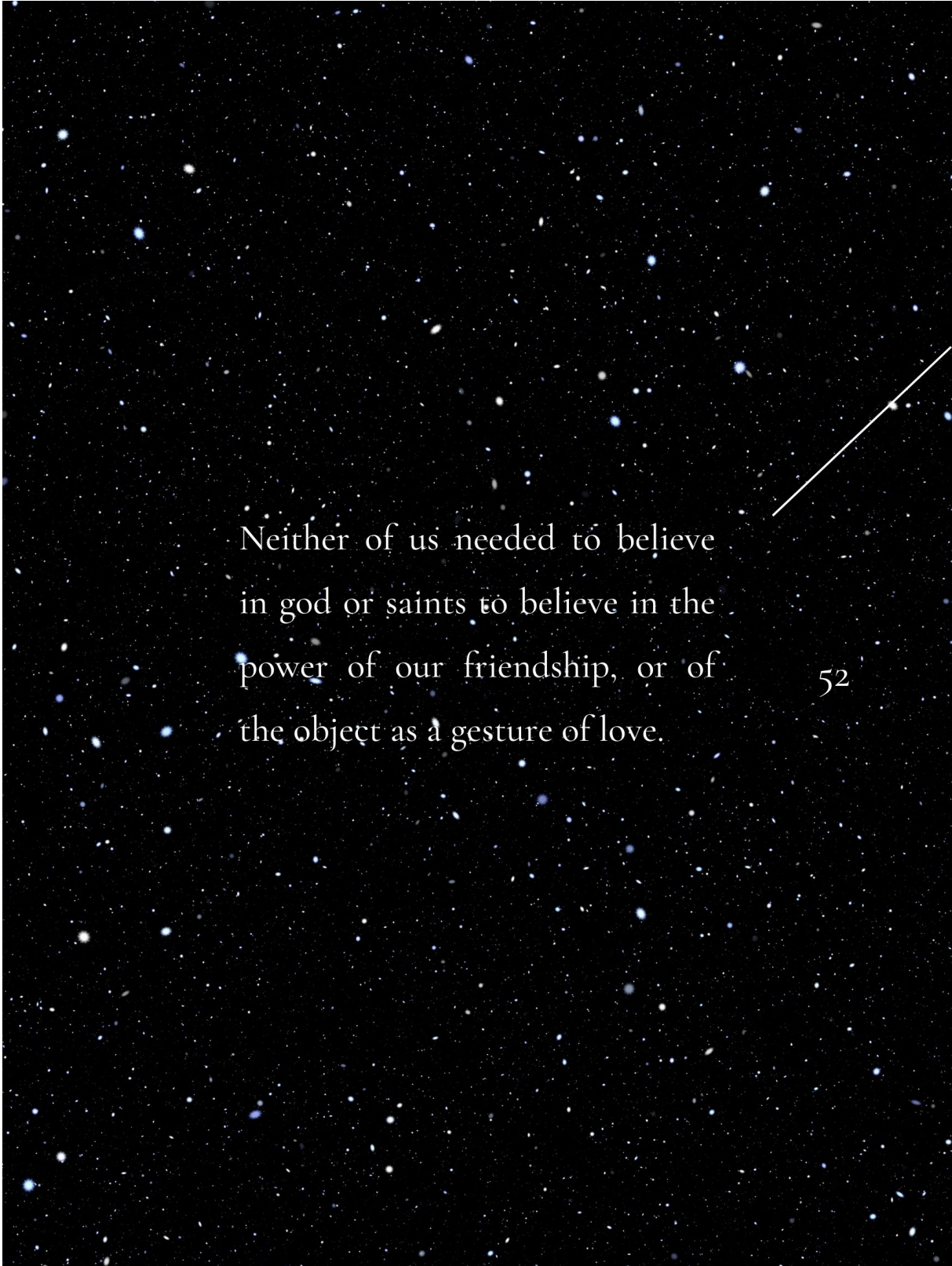


50

I'm not enough of a science  
person to know what happens  
when science contradicts science.



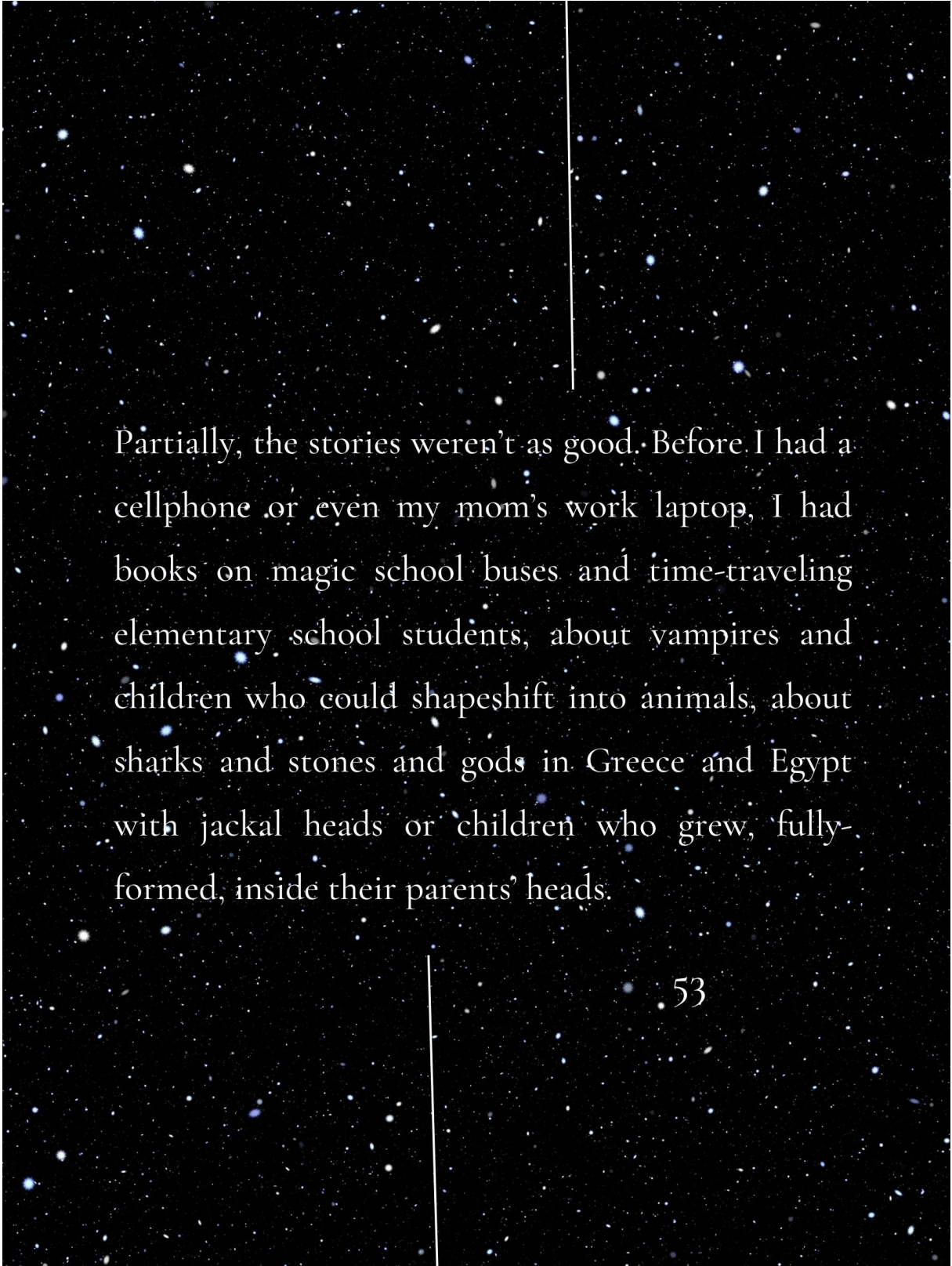
Before I moved to Europe, my best friend gave me a pendant of Saint Christopher, patron saint of children and travelers—doubly fitting as I was traveling abroad to teach English that coming summer. I still wear the pendant not so much because I believe in St. Christopher proper, but because I believe in the power of the symbolism of my friend choosing that gift partly for that very cultural history and association, but also because she chose that object and history with me in mind—as her sincere desire for my safe travels, manifest.



Neither of us needed to believe  
in god or saints to believe in the  
power of our friendship, or of  
the object as a gesture of love.

52

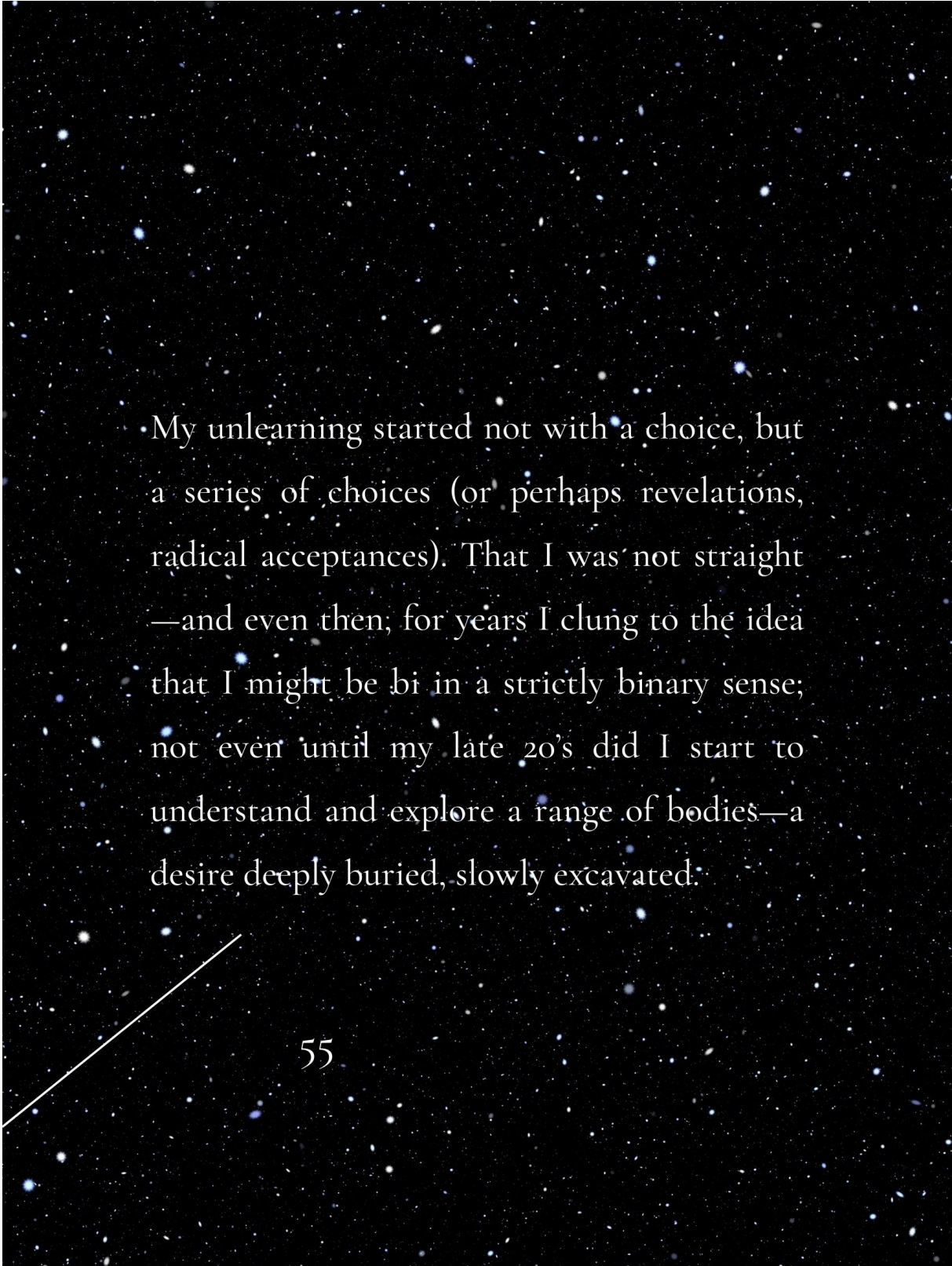




Partially, the stories weren't as good. Before I had a cellphone or even my mom's work laptop, I had books on magic school buses and time-traveling elementary school students, about vampires and children who could shapeshift into animals, about sharks and stones and gods in Greece and Egypt with jackal heads or children who grew, fully-formed, inside their parents' heads.

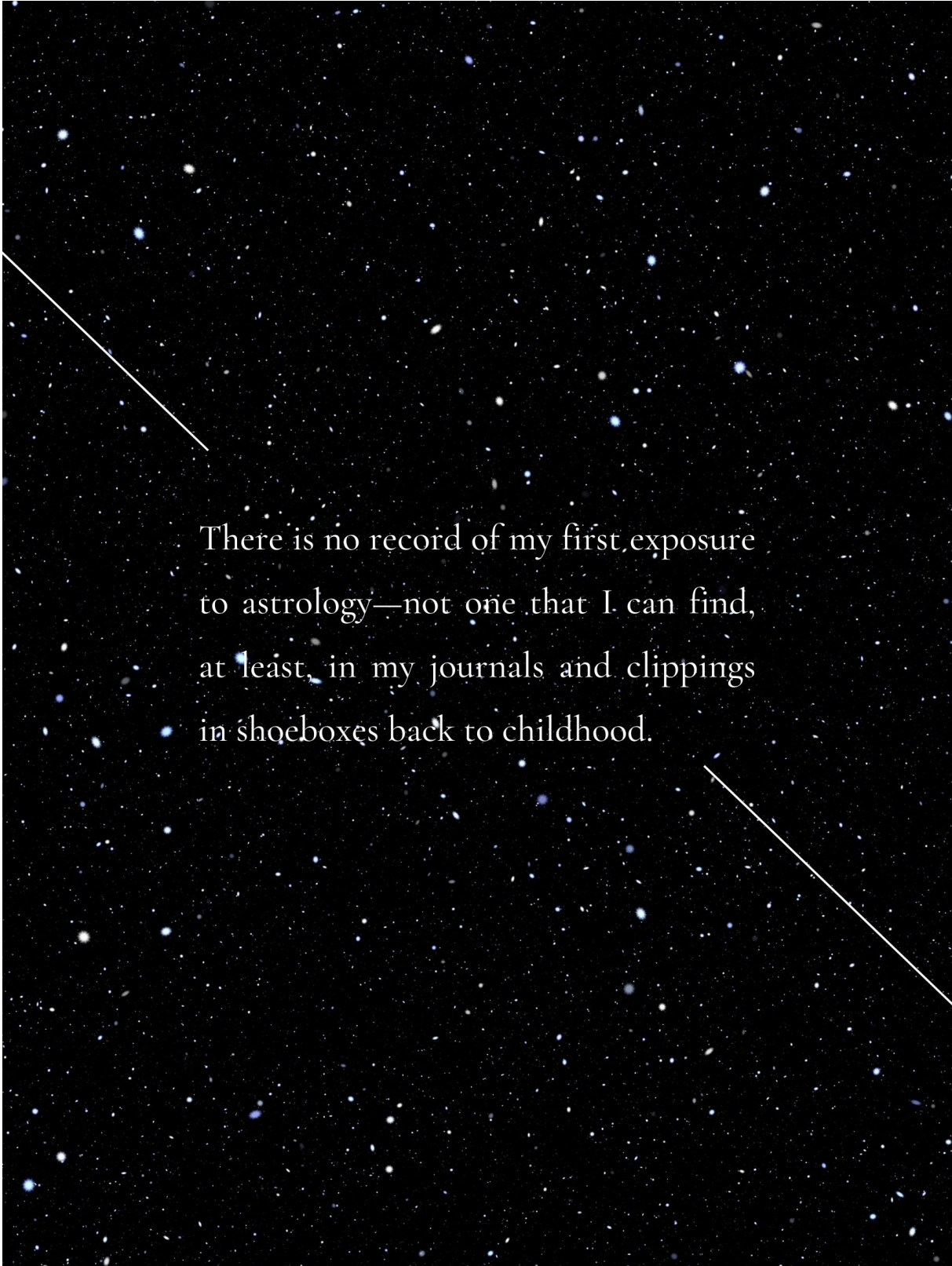


Partially, I knew at a young age that I was different beyond my own understanding—not in those terms, exactly, because I wasn't yet so self-reflective, didn't have the vocabulary or reference points to navigate how I was different.



My unlearning started not with a choice, but a series of choices (or perhaps revelations, radical acceptances). That I was not straight—and even then, for years I clung to the idea that I might be bi in a strictly binary sense; not even until my late 20's did I start to understand and explore a range of bodies—a desire deeply buried, slowly excavated.






There is no record of my first exposure  
to astrology—not one that I can find,  
at least, in my journals and clippings  
in shoeboxes back to childhood.





56

It's not that I think this makes  
my mother any less of my  
mother, but that I wonder, in  
the logic of astrology, is who I  
am who I was meant to be?

A deep space photograph showing a vast field of stars and distant galaxies against a black background. The stars vary in brightness and color, with some appearing as small blue or white dots. The galaxies are faint, elongated structures scattered across the frame. A quote is centered in the middle of the image in a white serif font. The number 57 is positioned to the right of the quote, and a thin white line extends from it towards the bottom right corner of the image.

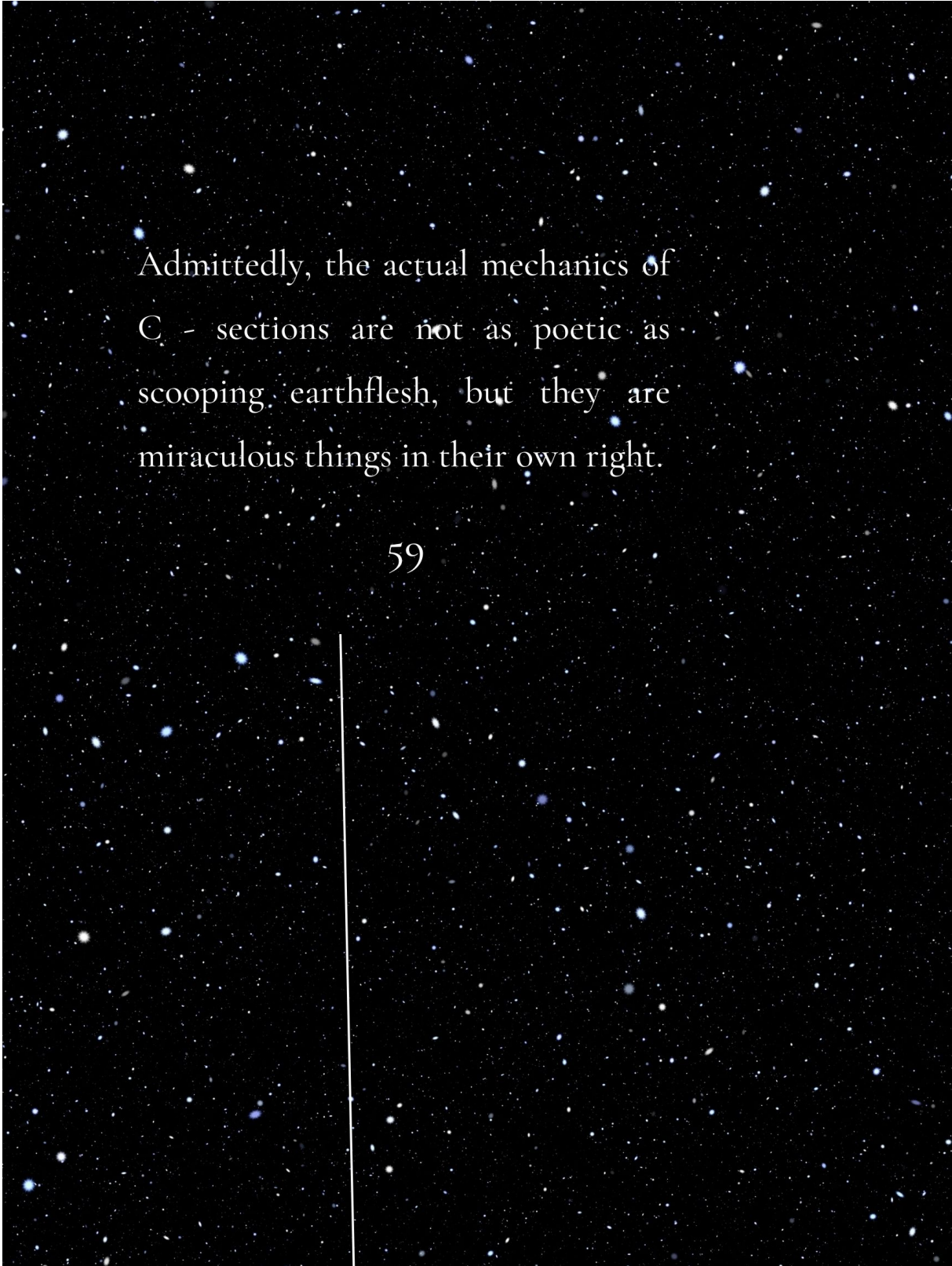
But if I owe anybody thanks in my  
delivery, it is not the Christian god  
nor Zeus, but perhaps the moon.

57



The story of how I almost did not make it into the world began on a Sunday, when my mother was in church, when light shone through the windows of Saint John Lutheran as if God might've said, it's time. Or maybe he'd simply flipped a switch, as when he'd said, *Let there be light*. Light shone through the windows and onto my mother's stomach as the Romantics might've portrayed Zeus: a golden shower over-enveloping Danaë. That the Christian patriarch might have taken a page from Zeus—promiscuous, unfaithful, rapist king—does not surprise me. Neither my conception nor birth were all so violent, but neither was the latter easy.





Admittedly, the actual mechanics of  
C - sections are not as poetic as  
scooping earthflesh, but they are  
miraculous things in their own right.

59



60

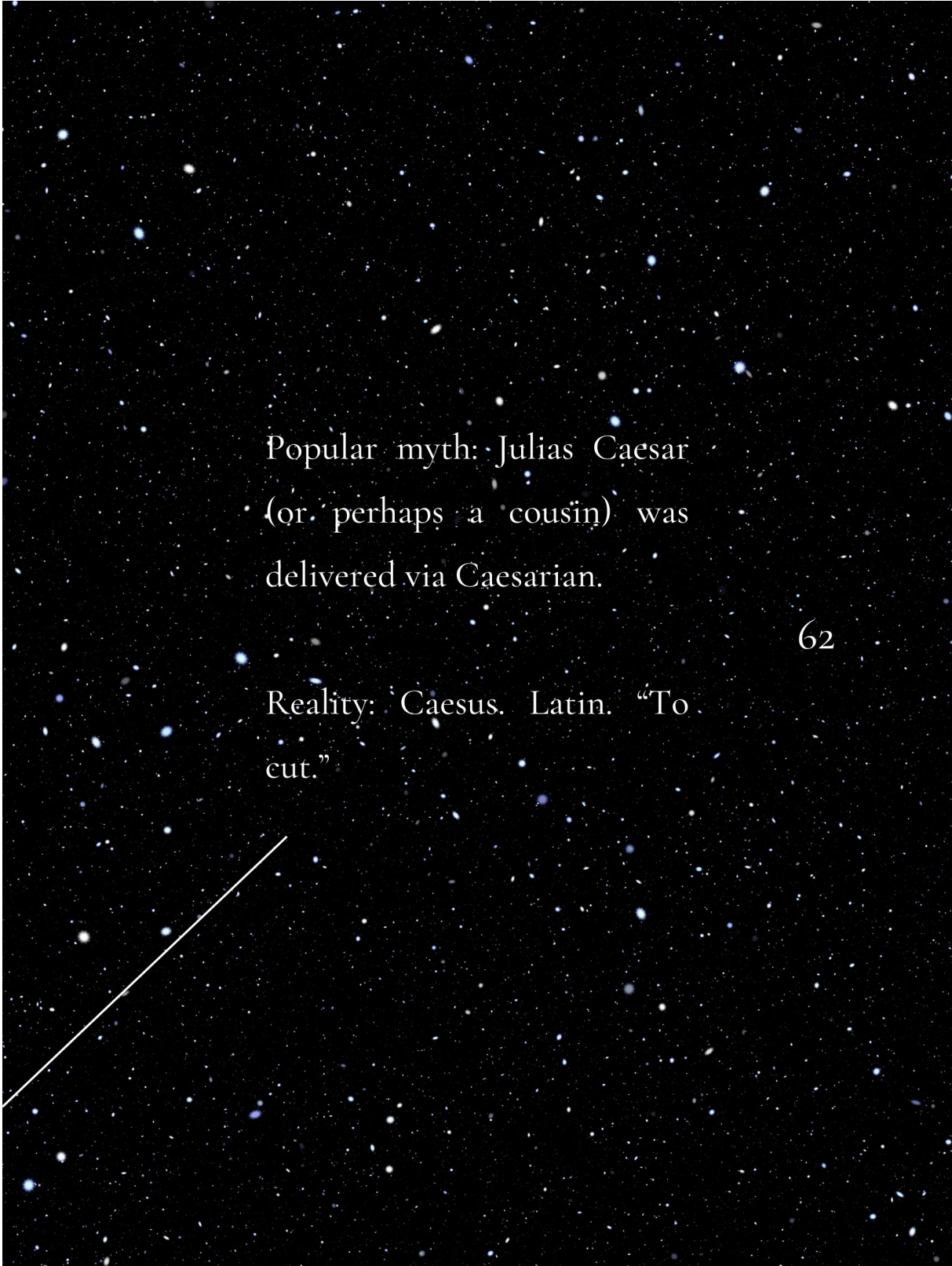
According to Britannica, Roman law forbade the burial of a pregnant woman; cesareans allowed them to comply with religious custom. Only later would the procedure become preemptive, preventative—an effort to save the child, even if it meant losing the mother.



6I

In the early morning of human history, stone to flesh, flesh lilac from oxygen deprivation, no first breaths, many lasts. Until the 1500s, almost always a death sentence. Until quite recently, before germ theory and modern technology, still considered anywhere from dangerous to life-threatening. Below 5% success rate until the mid-1960s, after which rates increased over 400%. Now accounting for every one-in-three births. And even still, discouraged past 10 to 15% of certain populations by the W.H.O. How easily we could have died; how almost certainly we would have just a few generations earlier. For many, we are a miracle—of god, or of science, or both, or of something else entirely.

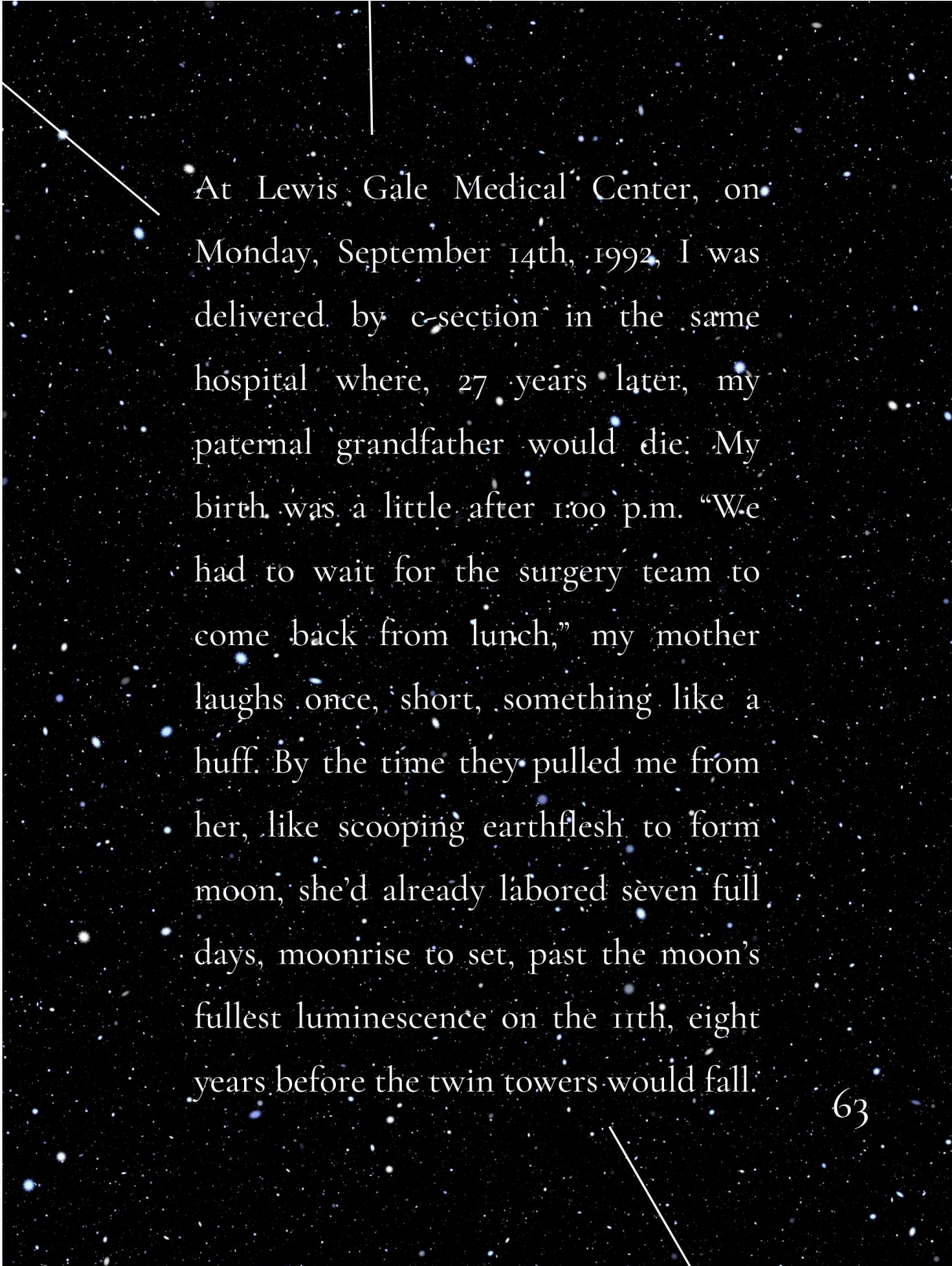




Popular myth: Julius Caesar  
(or perhaps a cousin) was  
delivered via Caesarian.

62

Reality: Caesus. Latin. "To  
cut."



At Lewis Gale Medical Center, on Monday, September 14th, 1992, I was delivered by c-section in the same hospital where, 27 years later, my paternal grandfather would die. My birth was a little after 1:00 p.m. “We had to wait for the surgery team to come back from lunch,” my mother laughs once, short, something like a huff. By the time they pulled me from her, like scooping earthflesh to form moon, she’d already labored seven full days, moonrise to set, past the moon’s fullest luminescence on the 11th, eight years before the twin towers would fall.

63



With your birth date, place, and time, my friend Chelsea can weave your fate together as she sees it mapped in the stars: your quirks, your toxic habits, the lines through the moon that map where your soul came from in its previous life and what path, conversely, your soul is meant to follow in this life. I could do this too, but with less accuracy, more speculation; what I know is mostly collaged bits and pieces of what I've learned from Chelsea, passed down to her from a lesbian couple in Chicago.



It may have been that I saw my first horoscope in the newspaper my grandparents unfolded, dissected, and passed around the kitchen table. Or it may have been I received my first horoscope to the Yahoo! Account I was too young to create, on a computer where I searched images and videos of men I longed to use as mirrors, to see myself reflected in their bodies on bodies on—



66

If I'm being honest, though,  
years before I'd ever met  
Chelsea or her forehead-  
reading astrologer friend, I'd  
already been devouring daily  
horoscopes like cracking and  
discarding the stale horseshoe  
cookie shell, more interested in  
the fortune than its container.





67

It may have helped that, at the time, I was able to immerse myself in stories of the myth, fantasy, and the supernatural as a way of denying the reality I was living—a move to a new school, a changing body, my parents' failing marriage, my budding sexuality.



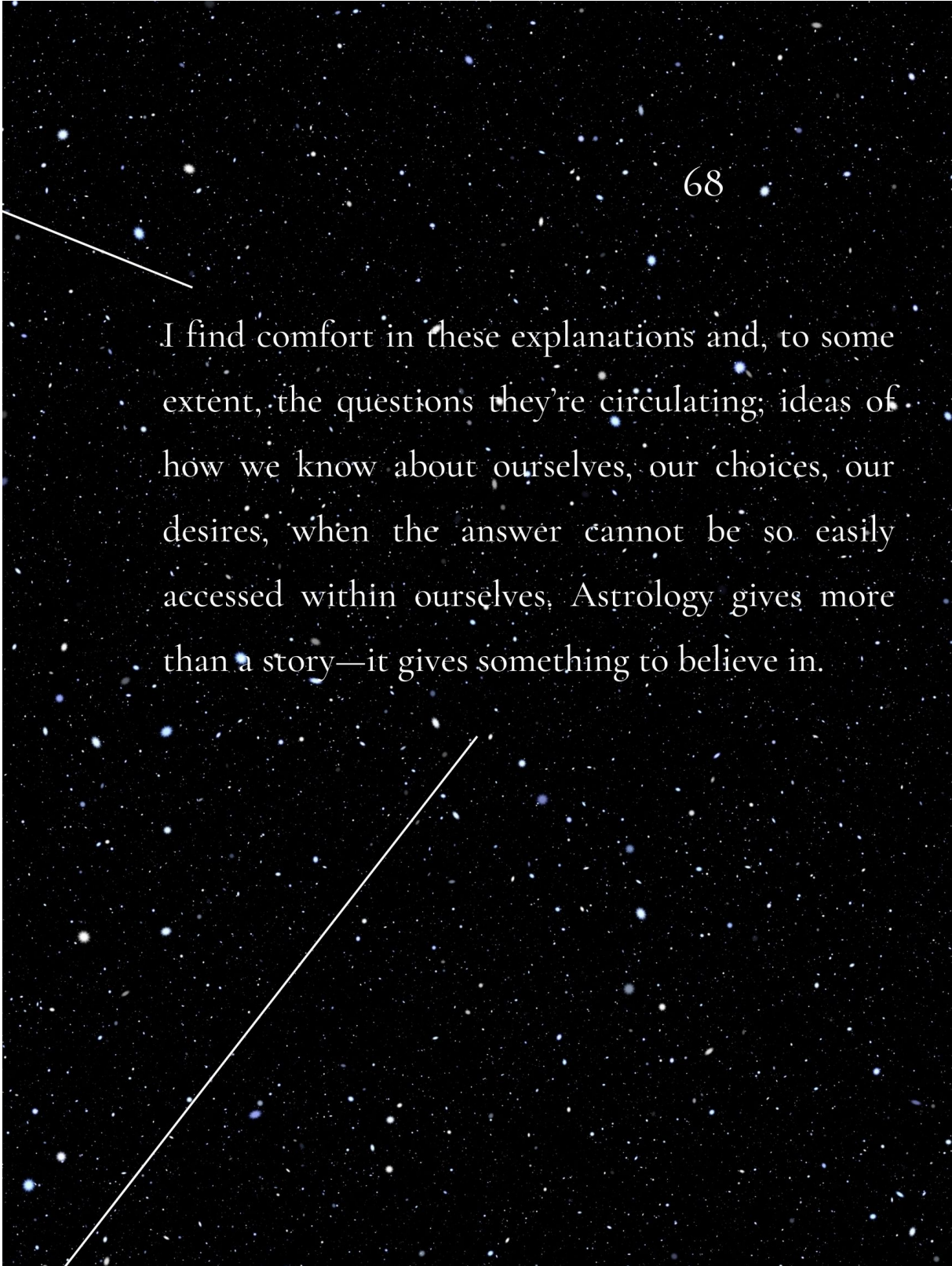


67

And astrology, whatever else it may or may not be, is a story of ourselves we tell ourselves—and/or, perhaps, are told—and, occasionally, to each other; a story whose truth, if it has any truth to be claimed, can be believed but not proven. And so, and still, with an evolving sense of myself as contrary in so many ways—to my parents, to my body, to my evangelical upbringing, the communities in which I found myself immersed, I looked to astrology for clean, definitive answers about who I was.

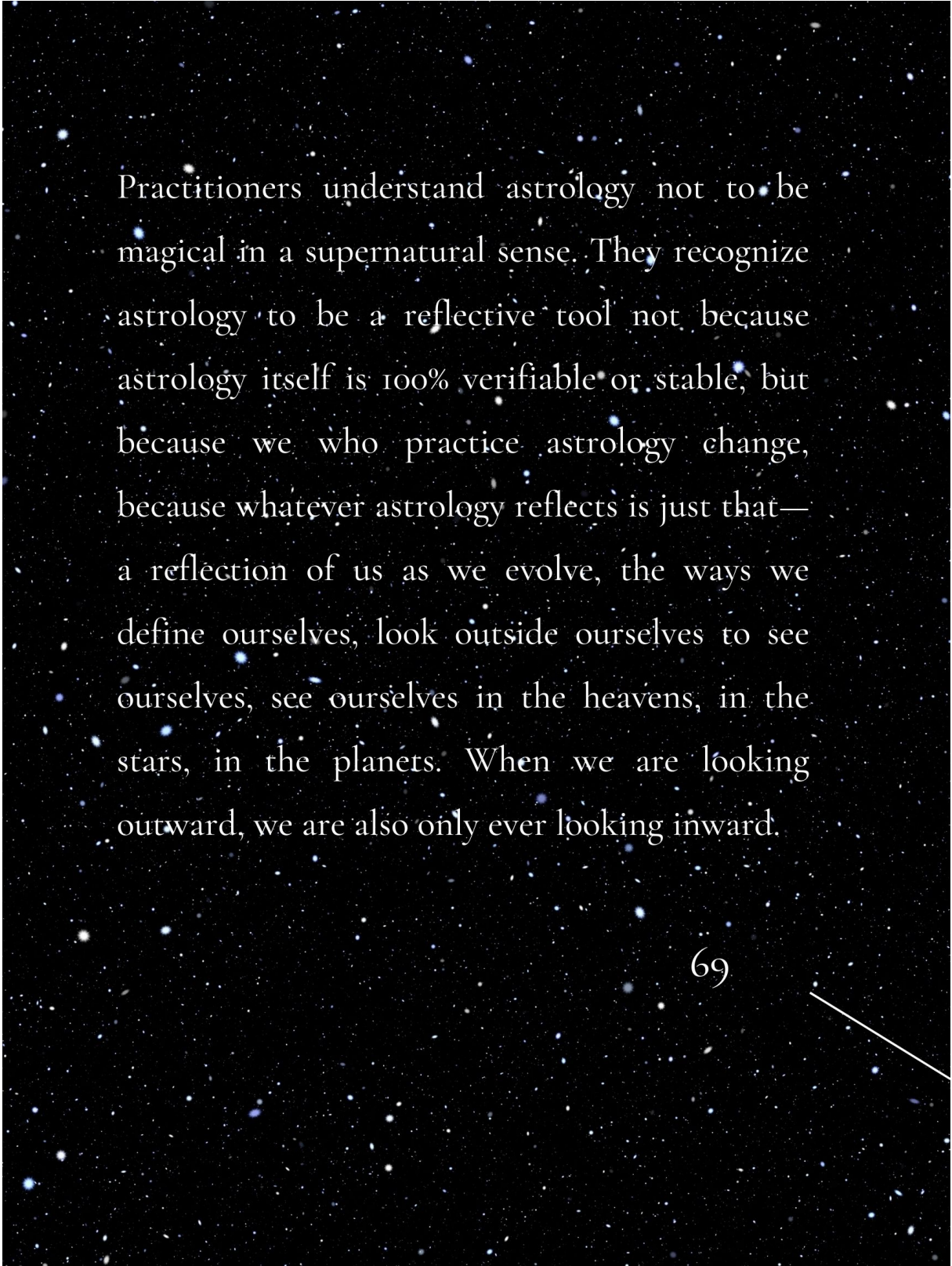
Isn't belief, or lack thereof, a defining characteristic of humanity? The desire to explain who we are, where we came from, where we're going—and, if there is a reason, why? Whether or not that comes from one or more deities, or from the complex theory of evolution, or from the push and pull of the moon, is it not inherently human to ask questions, to search for answers, and to believe in something as a result?



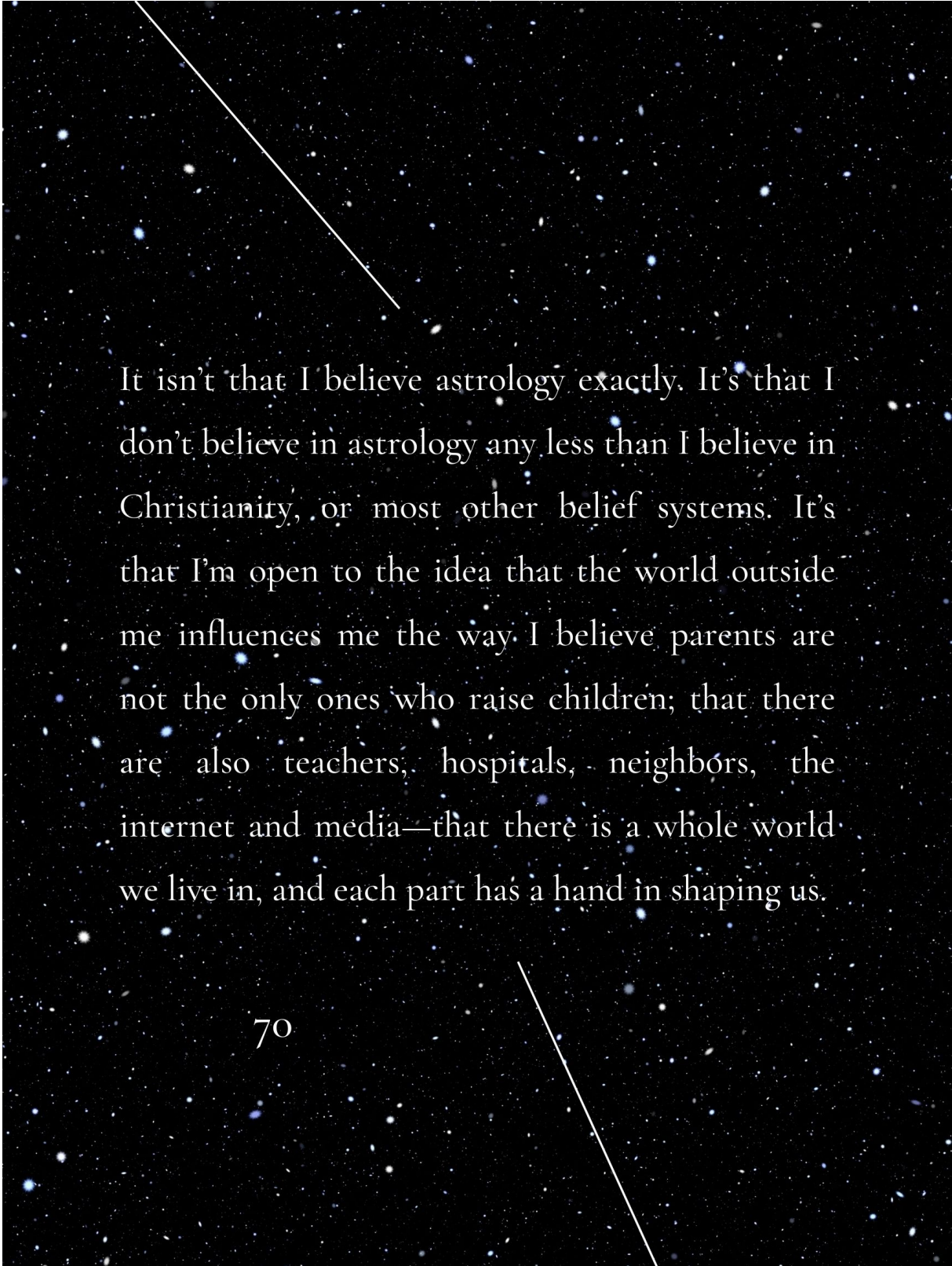


I find comfort in these explanations and, to some extent, the questions they're circulating; ideas of how we know about ourselves, our choices, our desires, when the answer cannot be so easily accessed within ourselves. Astrology gives more than a story—it gives something to believe in.





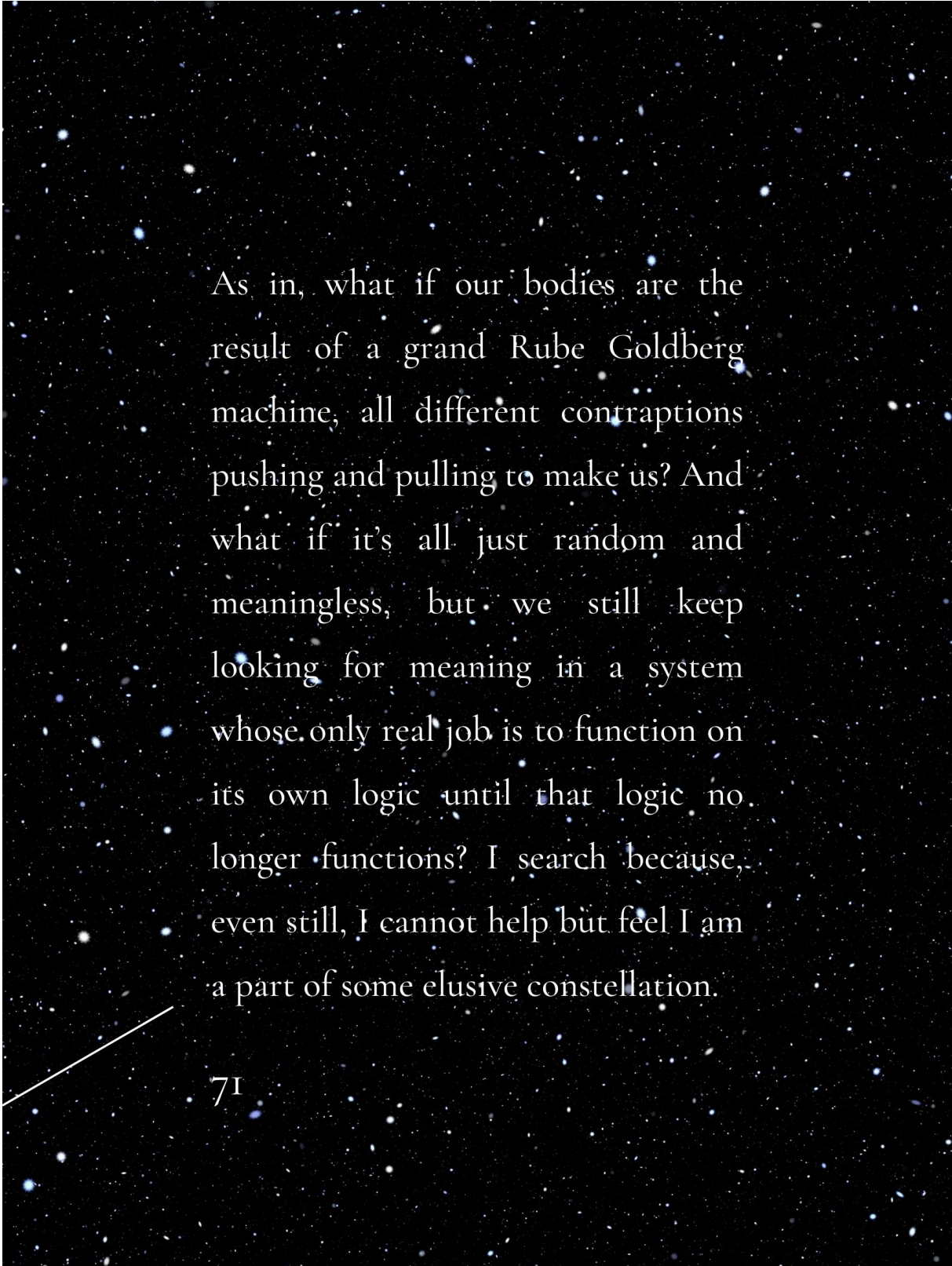
Practitioners understand astrology not to be magical in a supernatural sense. They recognize astrology to be a reflective tool not because astrology itself is 100% verifiable or stable, but because we who practice astrology change, because whatever astrology reflects is just that—a reflection of us as we evolve, the ways we define ourselves, look outside ourselves to see ourselves, see ourselves in the heavens, in the stars, in the planets. When we are looking outward, we are also only ever looking inward.



It isn't that I believe astrology exactly. It's that I don't believe in astrology any less than I believe in Christianity, or most other belief systems. It's that I'm open to the idea that the world outside me influences me the way I believe parents are not the only ones who raise children; that there are also teachers, hospitals, neighbors, the internet and media—that there is a whole world we live in, and each part has a hand in shaping us.

70



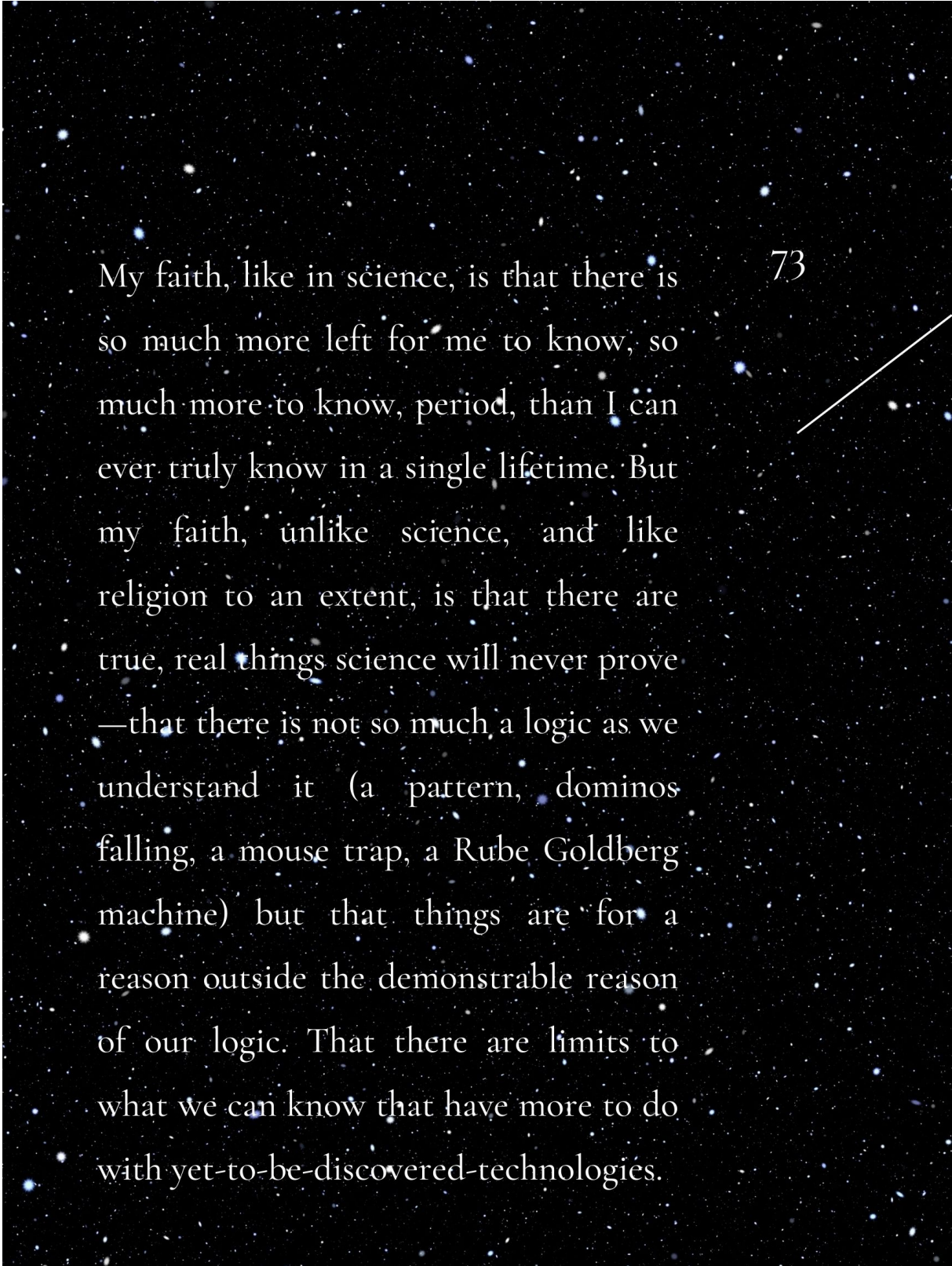


As in, what if our bodies are the result of a grand Rube Goldberg machine, all different contraptions pushing and pulling to make us? And what if it's all just random and meaningless, but we still keep looking for meaning in a system whose only real job is to function on its own logic until that logic no longer functions? I search because, even still, I cannot help but feel I am a part of some elusive constellation.

71



Knowing astrology cannot be what it claims to be, I still look for the constellations, for the way science, religion, and the supernatural might still connect or intersect, for the links which cannot be explained into fact but which cannot necessarily be explained away into fiction. There is this tension between “what if?” and “what if?”



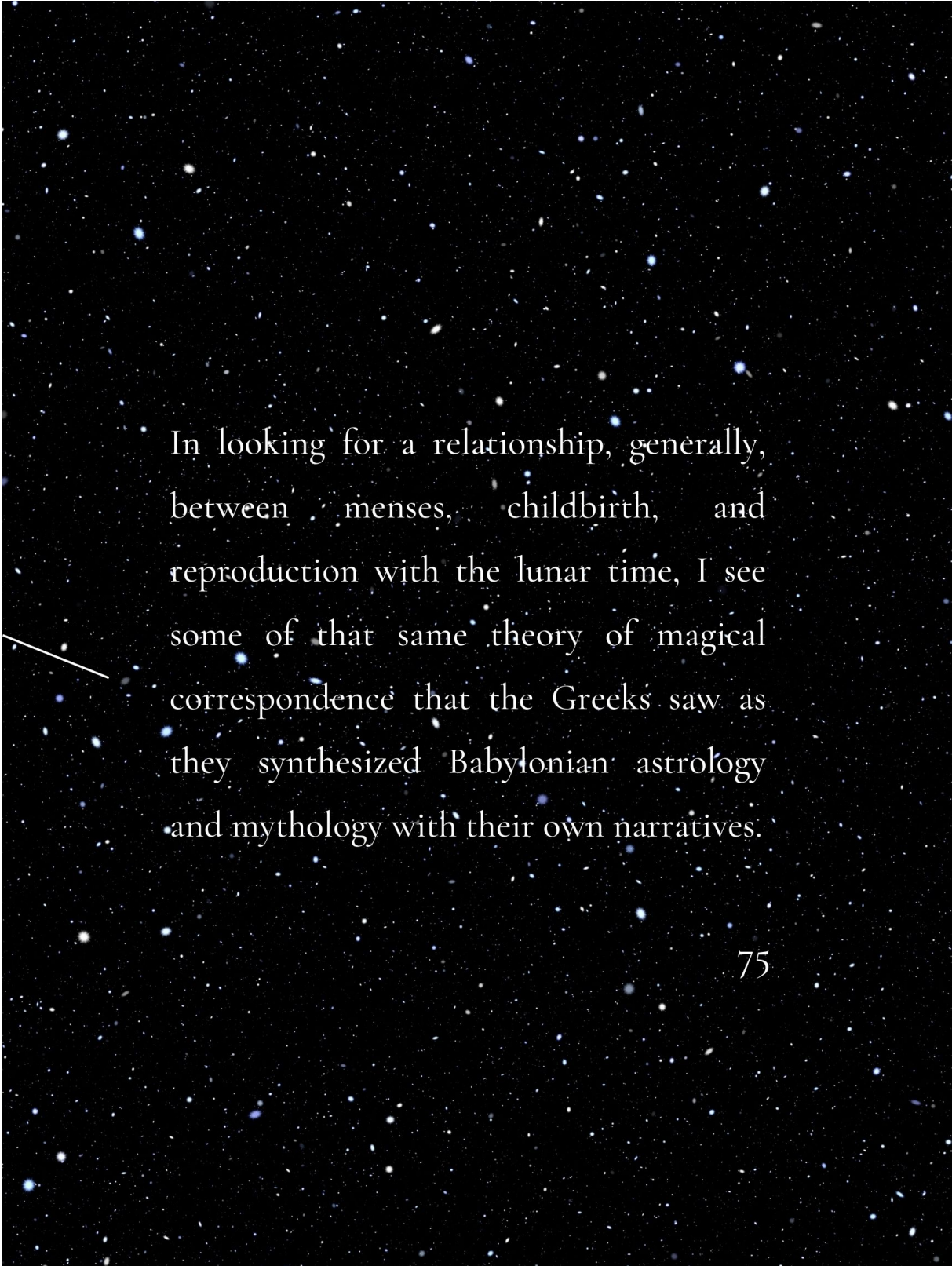
My faith, like in science, is that there is so much more left for me to know, so much more to know, period, than I can ever truly know in a single lifetime. But my faith, unlike science, and like religion to an extent, is that there are true, real things science will never prove—that there is not so much a logic as we understand it (a pattern, dominos falling, a mouse trap, a Rube Goldberg machine) but that things are for a reason outside the demonstrable reason of our logic. That there are limits to what we can know that have more to do with yet-to-be-discovered-technologies.

73



Seasons, gravity, electromagnetic fields, lunar time, solar time, sidereal time. What I don't understand is the extent(s) to which these systems are viewed as in opposition or in collaboration—multiple cycles operating in their own contained units, yes, but also, interlocking, interconnecting, systems forming other systems forming a larger contained thing.

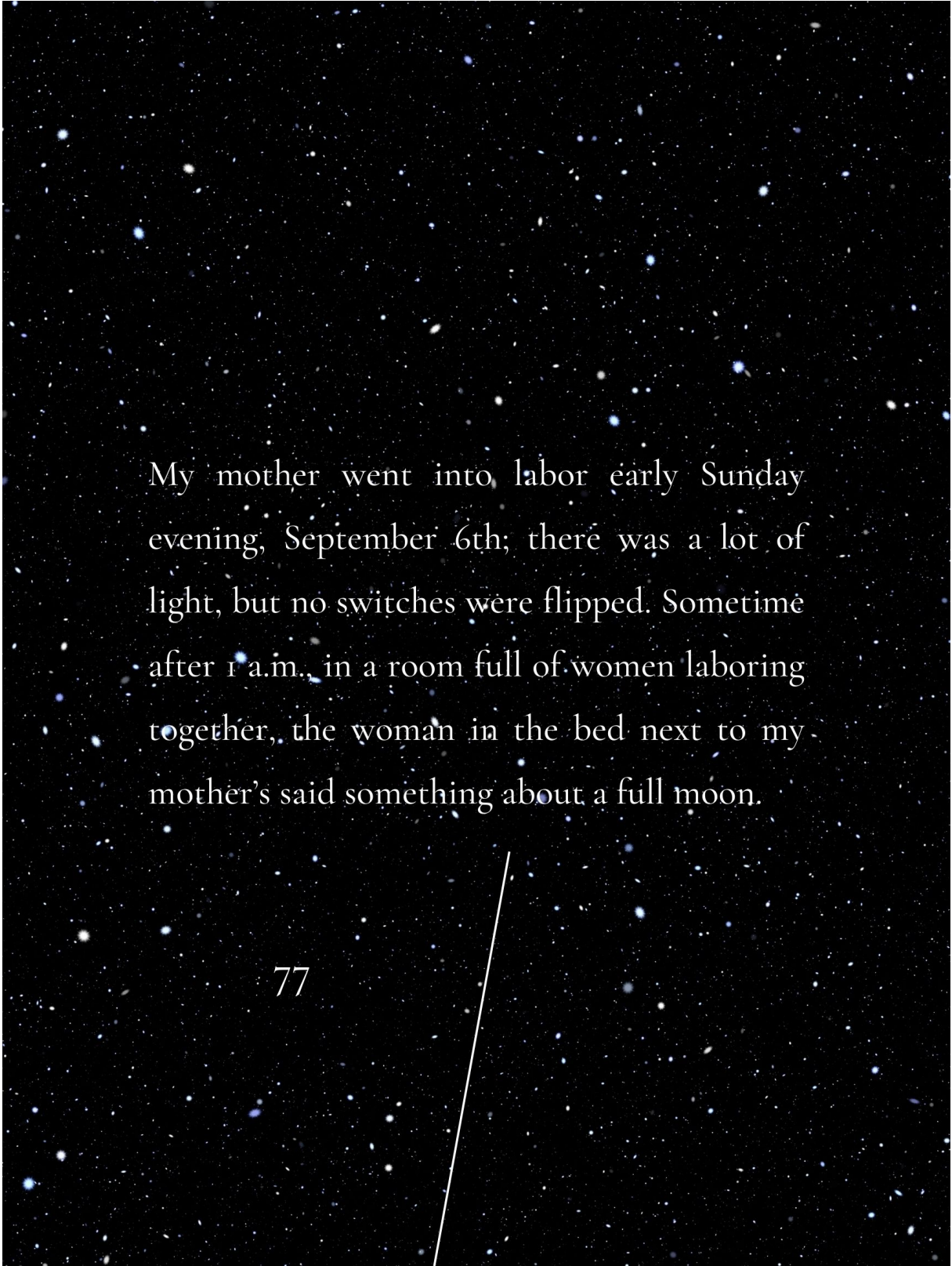




In looking for a relationship, generally, between menses, childbirth, and reproduction with the lunar time, I see some of that same theory of magical correspondence that the Greeks saw as they synthesized Babylonian astrology and mythology with their own narratives.

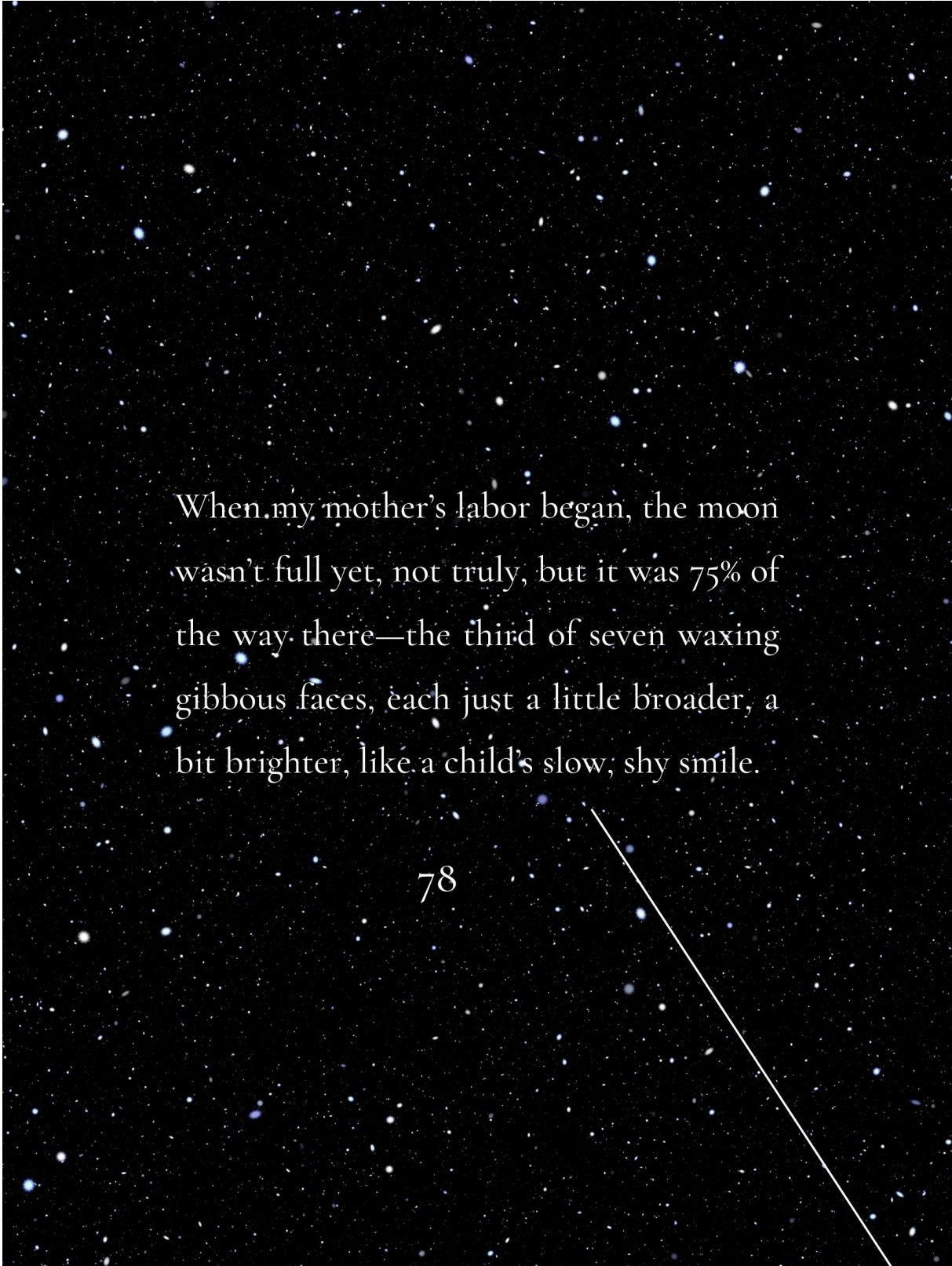
Except, the relationship between childbirth and moon phases is not as magically constellated as the notion of personalities written in the skies. Perhaps here is where, in the initial constellation of astrology, multiple points meet, or constellations overlap: science and magic, or science and religion, or science and belief. Philosophy, behavioral sciences, psychology, all pushed to the side to make room for the fact of our bodies.





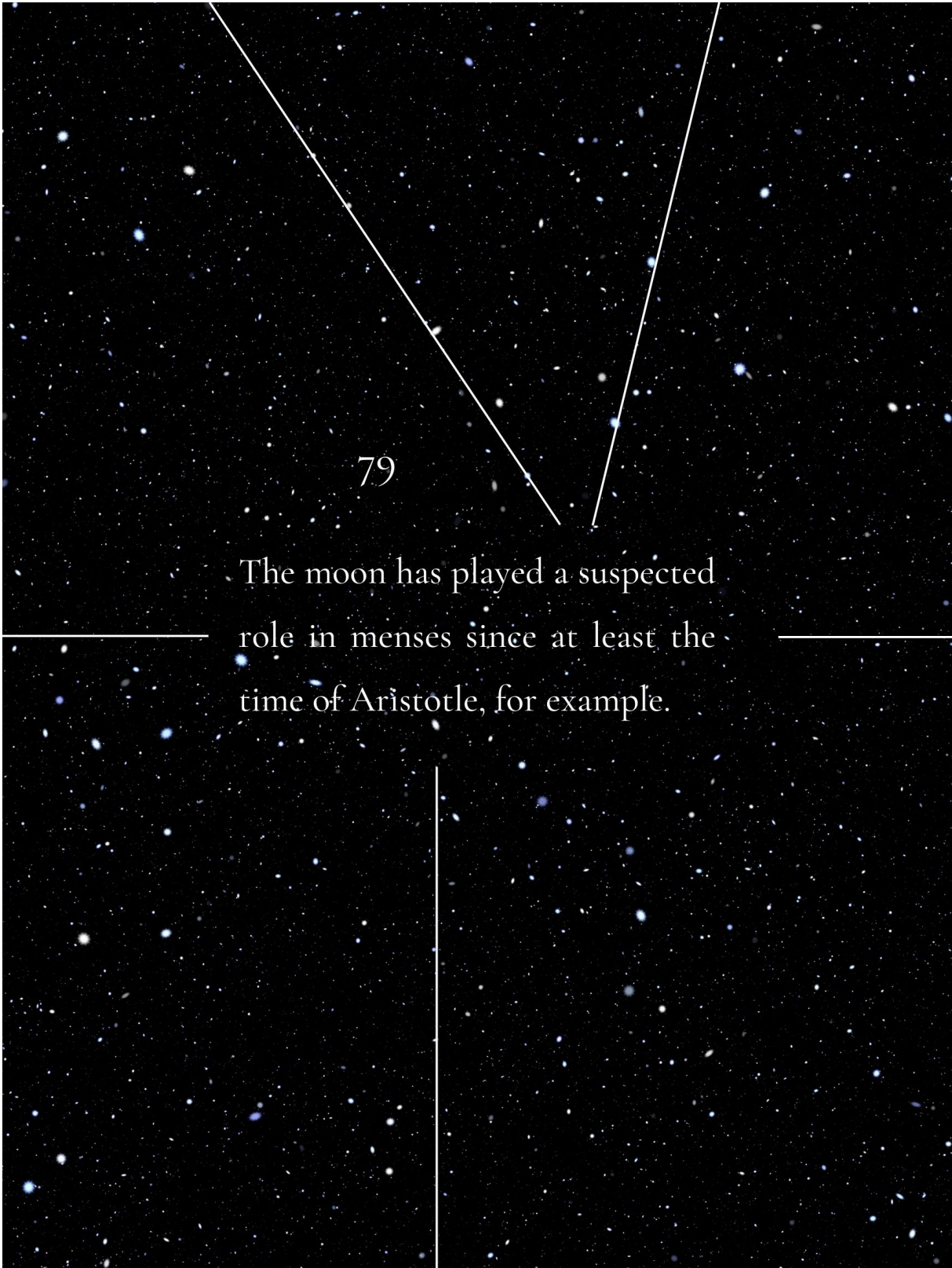
My mother went into labor early Sunday evening, September 6th; there was a lot of light, but no switches were flipped. Sometime after 1 a.m., in a room full of women laboring together, the woman in the bed next to my mother's said something about a full moon.



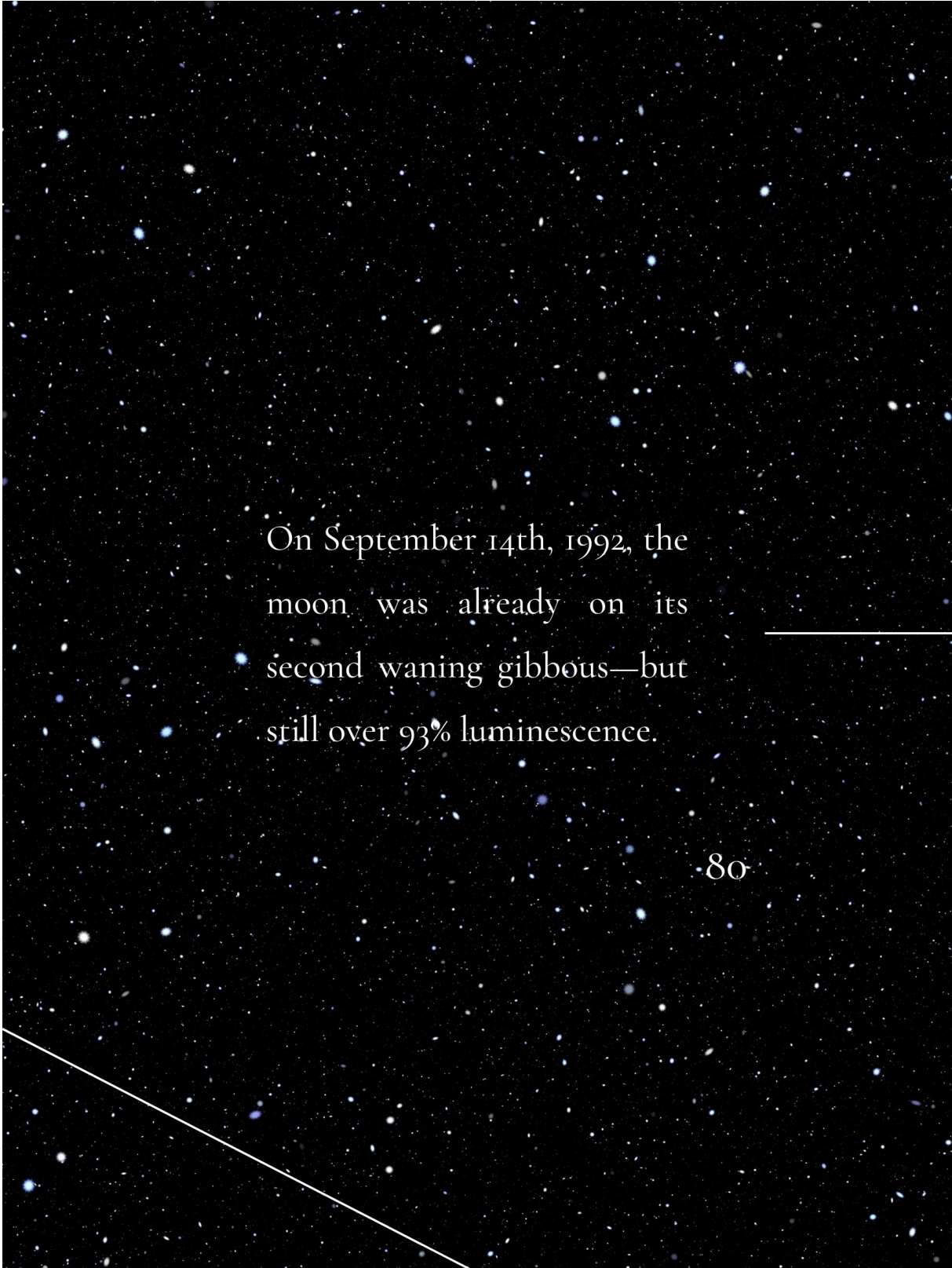


When my mother's labor began, the moon  
wasn't full yet, not truly, but it was 75% of  
the way there—the third of seven waxing  
gibbous faces, each just a little broader, a  
bit brighter, like a child's slow, shy smile.

78





A deep space photograph showing a vast field of stars and galaxies against a black background. The stars vary in brightness and color, with some appearing as distinct points of light and others as faint, diffuse clouds. A thin, white diagonal line runs across the lower-left portion of the image. Centered in the middle of the image is a block of white text.

On September 14th, 1992, the  
moon was already on its  
second waning gibbous—but  
still over 93% luminescence.

80





After ten years of data collection, Professor Charlotte Förster—from the Neurobiology and Genetics Biocenter at the Julius-Maximilian's University of Würzburg, Germany—hypothesizes “that in ancient times, human reproductive behavior was synchronous with the moon but that our modern lifestyle, notably our increasing exposure to artificial light, has changed this relation.”

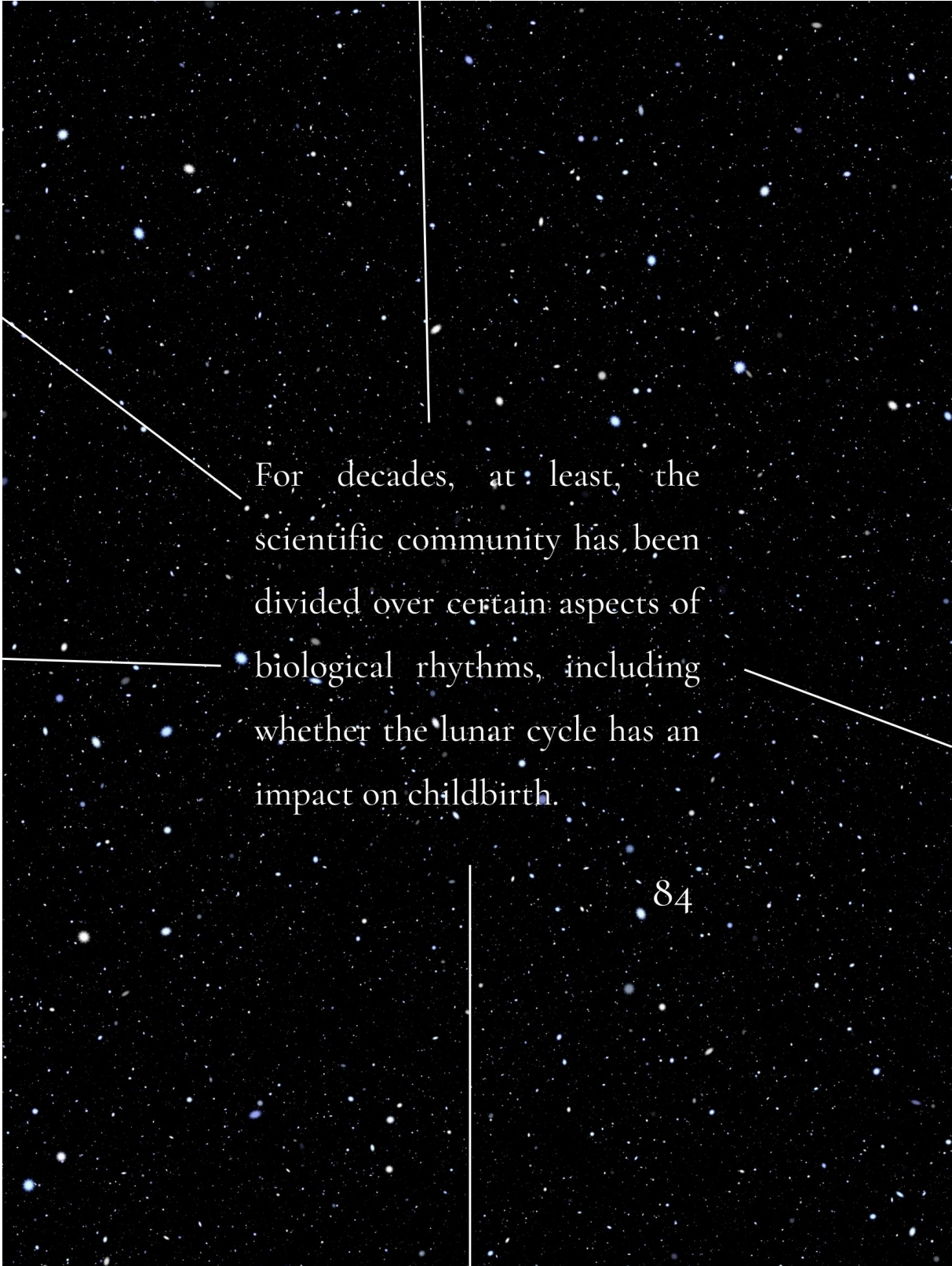
81

The sun was not the only body whose influence determined whether or not life on earth existed and flourished, or collapsed. Well, human life at least. If the moon's mere proximity could unsettle earth's delicate, miraculous balance, then could it be possible that the moon—or other celestial forces—could have some impact on human design or development?



In his article, Bakich addresses the genethliological premise of the heavens' impacts on human personality and development based on their connection with the day, time, and location of birth—the conditions used to determine a birth chart. He gives examples of the various other insivible forces at play during birth: the gravity of the hospital itself, ten times stronger than that of the other eight planets combined; various forms of radiation, including X-rays, radio, and the ever-present but easily forgettable light.



The background of the page is a deep black space filled with numerous small, bright white and blue stars. A grid of thin white lines is overlaid on the image, consisting of a vertical line, a horizontal line, and two diagonal lines that intersect to form a central rectangular area.

For decades, at least, the scientific community has been divided over certain aspects of biological rhythms, including whether the lunar cycle has an impact on childbirth.

84



85

The moon is a giant game of  
Mouse Trap, pushing and  
pulling little bits of earth, of us.



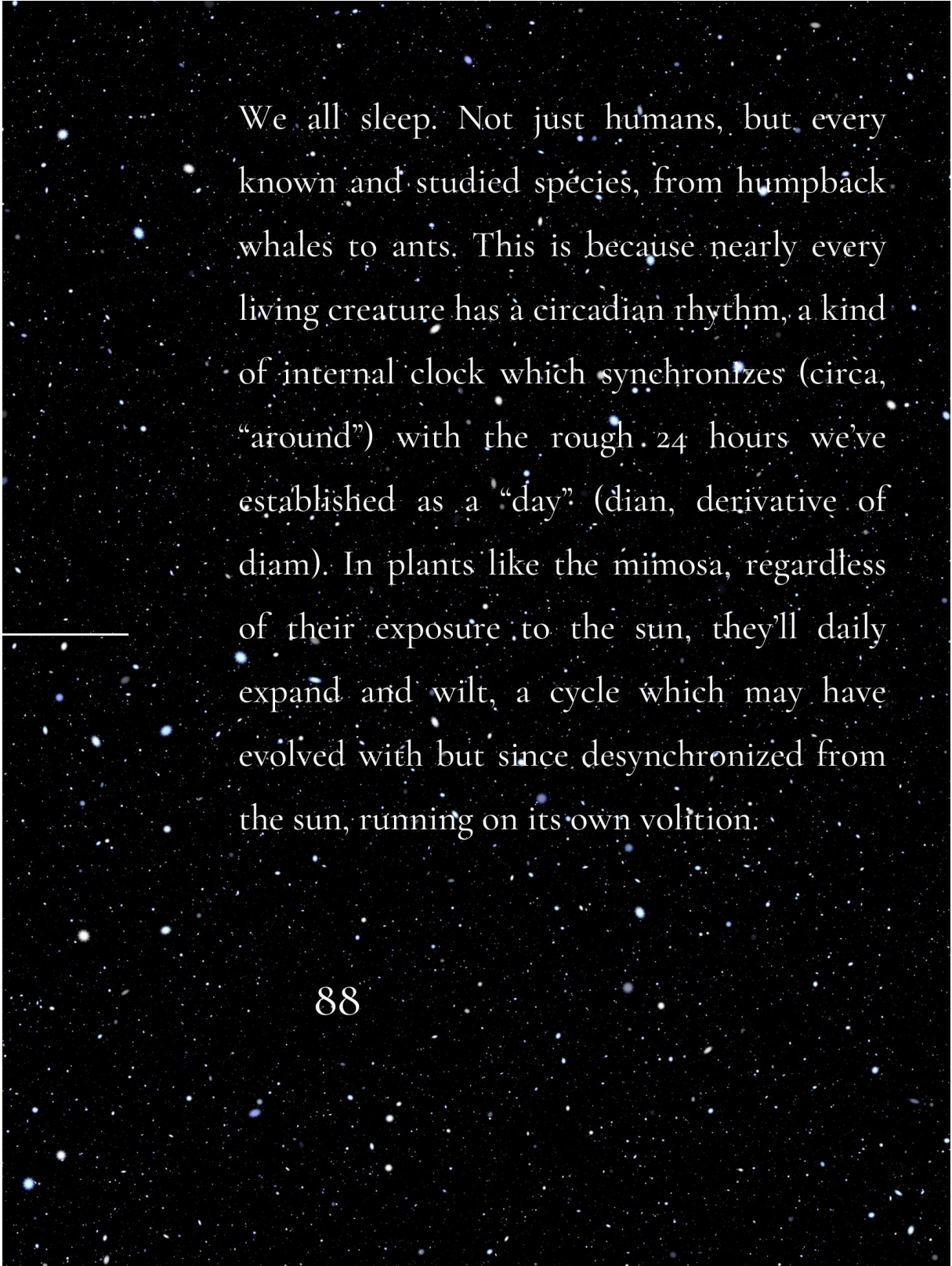


86

The luminance cycle refers to the moon's different light intensity as its position in relation to the sun changes and it passes through its different phases, new to full.



Chronobiology is a field of study on the effects of time on biological systems. The data obtained from chronobiological studies reveal components that influence circadian rhythms. Through these studies, scientists seek to determine the effects of light and melatonin on circadian rhythms.



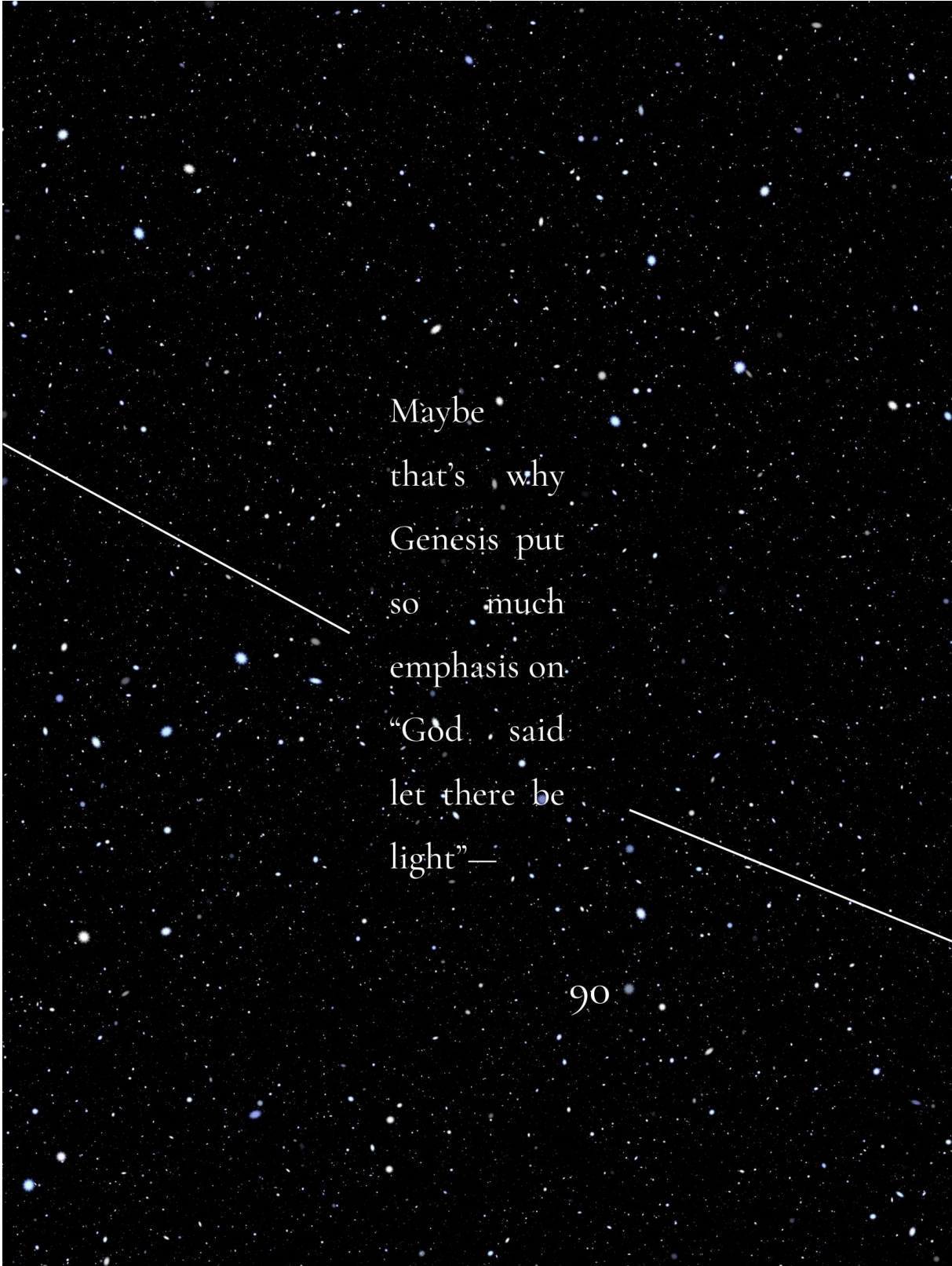
We all sleep. Not just humans, but every known and studied species, from humpback whales to ants. This is because nearly every living creature has a circadian rhythm, a kind of internal clock which synchronizes (circa, “around”) with the rough 24 hours we’ve established as a “day” (dian, derivative of diam). In plants like the mimosa, regardless of their exposure to the sun, they’ll daily expand and wilt, a cycle which may have evolved with but since desynchronized from the sun, running on its own volition.



I open my eyes and before I can close them again  
—quick as a blink—before I expand my body  
just enough for the snap, crackle, pop of my  
back and ankles; before curling and uncurling  
my toes; rubbing my body against the ecstasy of  
the sheets, before pulling myself upright and  
then out of bed, before making coffee and sitting  
down to write or read or watch the squirrels;  
before all the things my mother would refer to  
as “hatching”, slowly pushing out of sleep’s shell  
—before all of this, I open my eyes, the light hits,  
and something in my body says

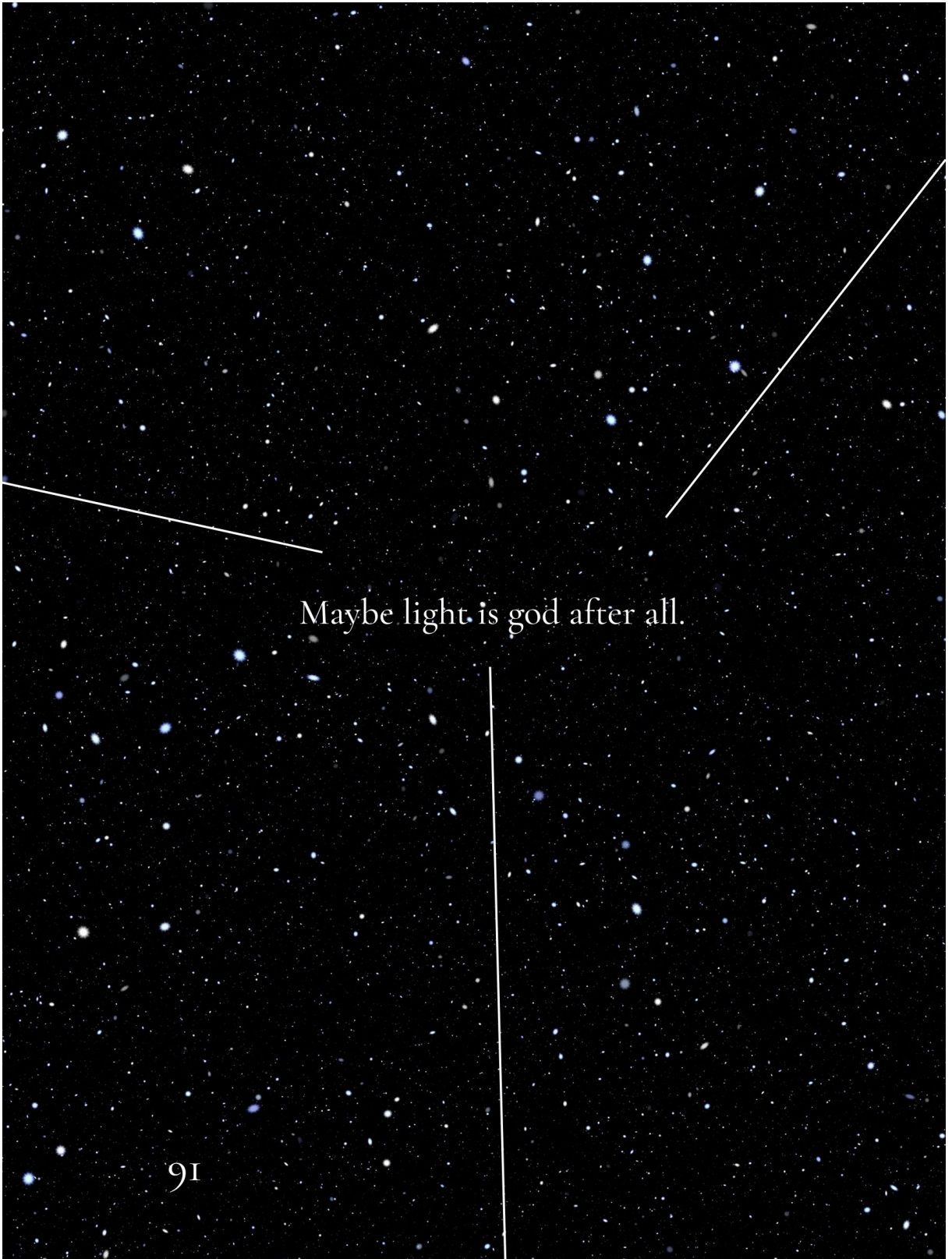
*begin*



A deep space photograph showing a vast field of stars and distant galaxies against a black background. Two thin, white diagonal lines intersect the image, one from the upper left and another from the lower right, framing the central text.

Maybe  
that's why  
Genesis put  
so much  
emphasis on  
"God said  
let there be  
light"—

90



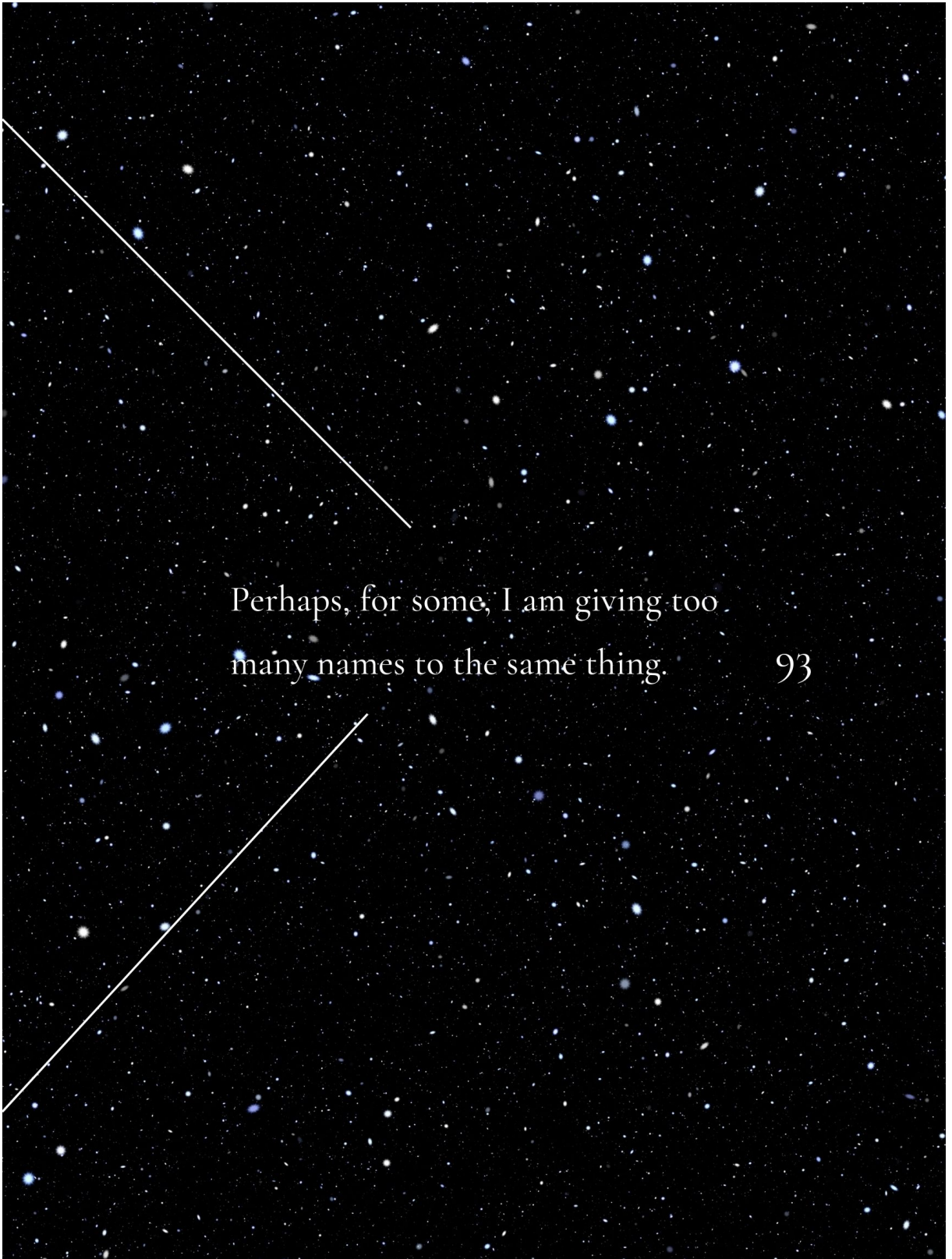


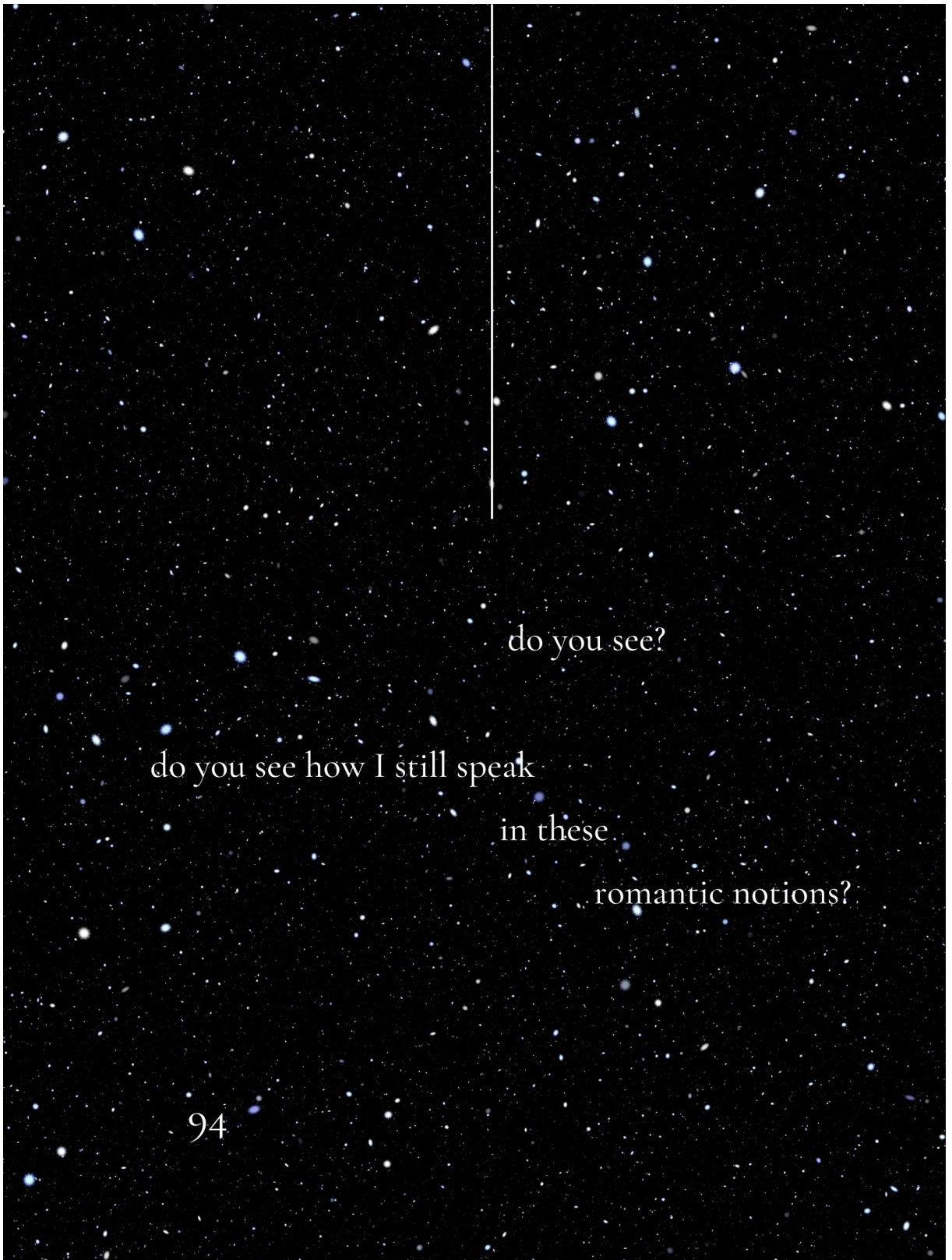
A deep space photograph showing a vast field of stars and distant galaxies against a black background. The stars vary in brightness and color, with some appearing as distinct points of light and others as faint, diffuse clouds. A quote is centered in the lower half of the image, and a thin white diagonal line extends from the right edge towards the text.

Perhaps, I am trying to give a name to  
something which does not have one.

92







do you see?

do you see how I still speak

in these

romantic notions?

94



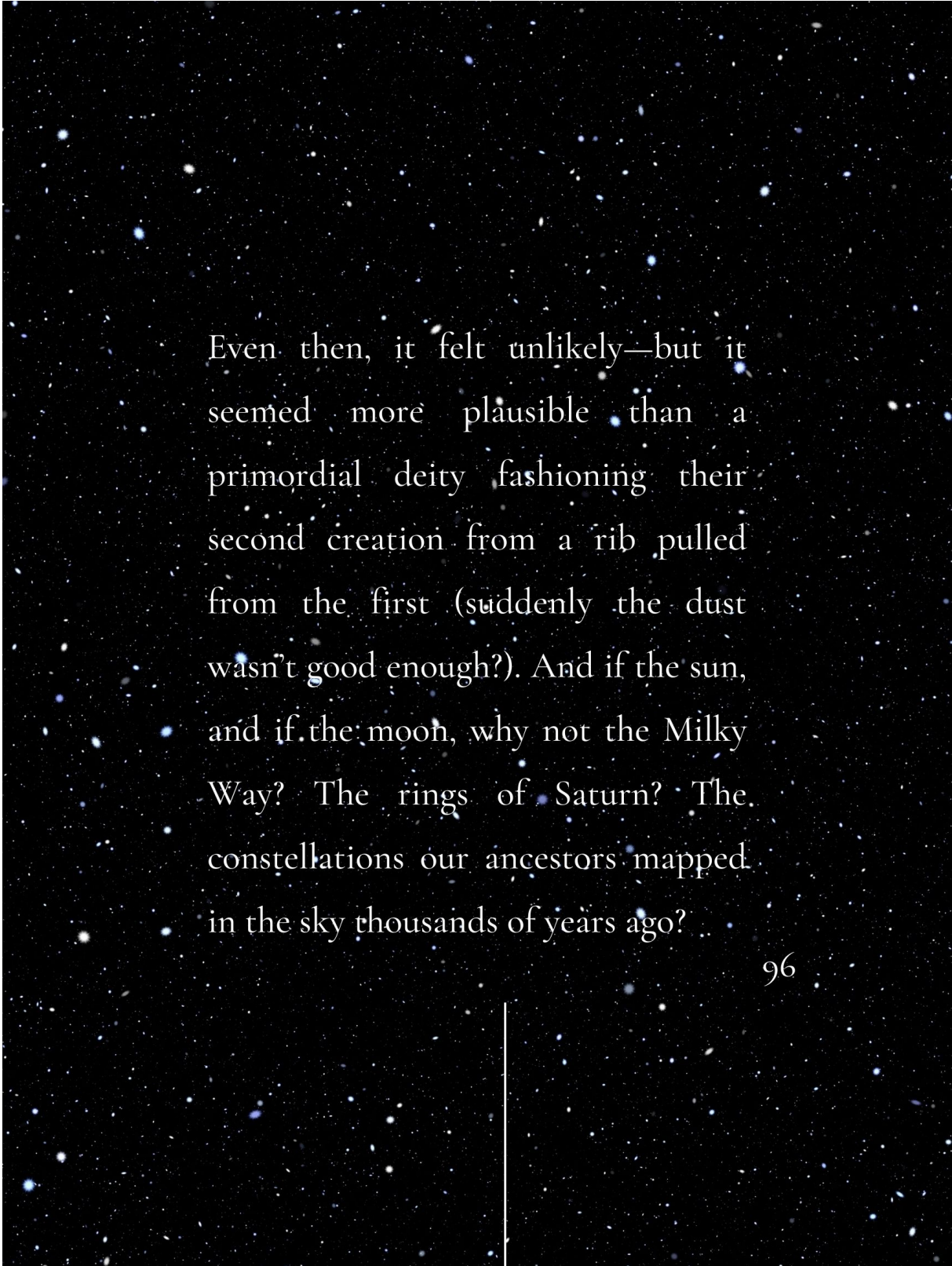


95

I sleep in a curtainless room, preferring to let the natural light wake me up. Lately, I have been having trouble sleeping, waking with the moon, foreshadowing the run rise, the lightening of the sky as it climbs west, west, finally framed by my curtainless window at 2 3 4 am, and when the time changes and we lose an hour, my body never adjusts, instead wakes with the earlier

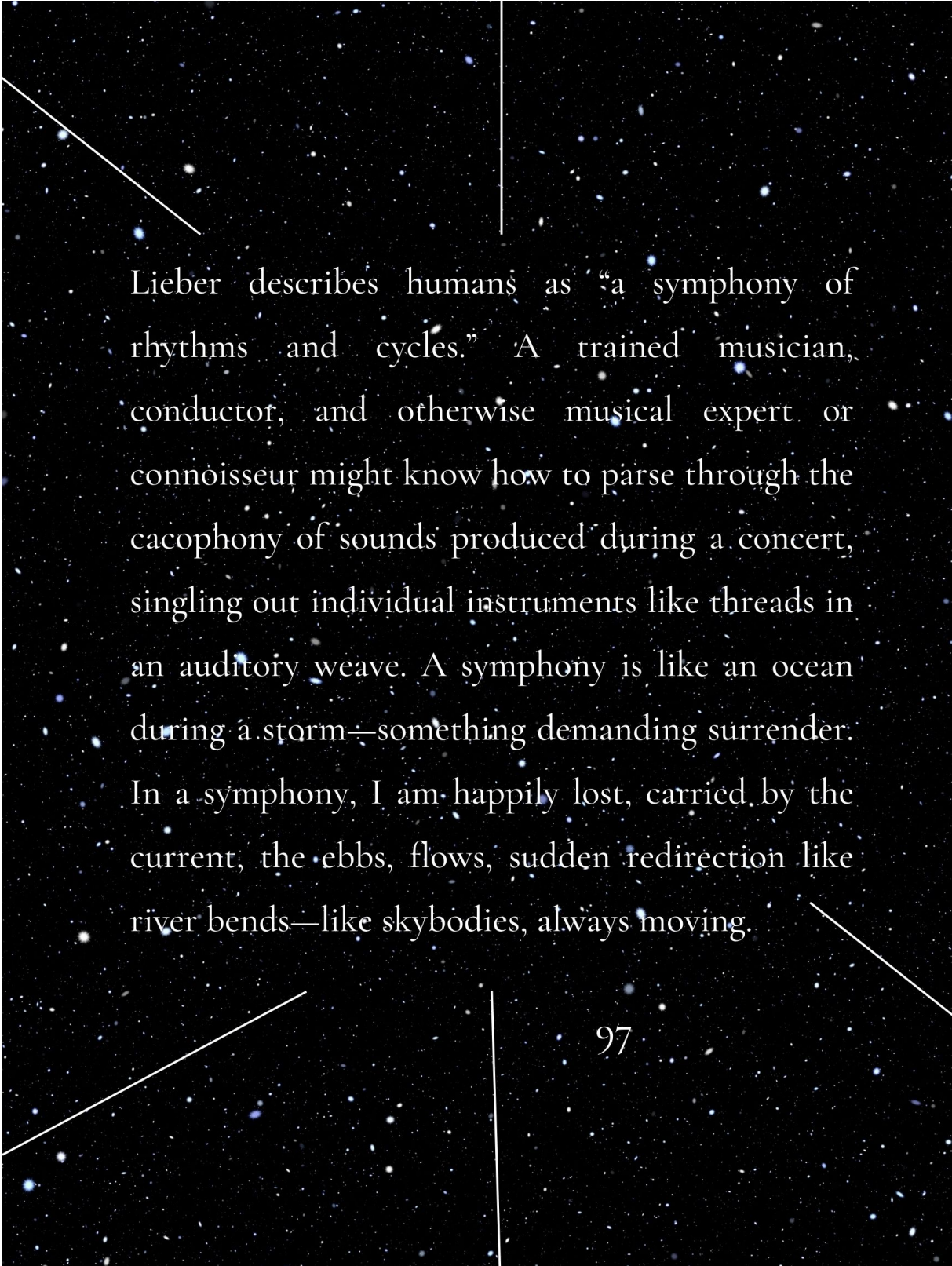
light —



A deep space photograph showing a vast field of stars and distant galaxies against a black background. The stars vary in brightness and color, with some appearing as small white dots and others as larger, more complex structures. The text is centered in the middle of the image.

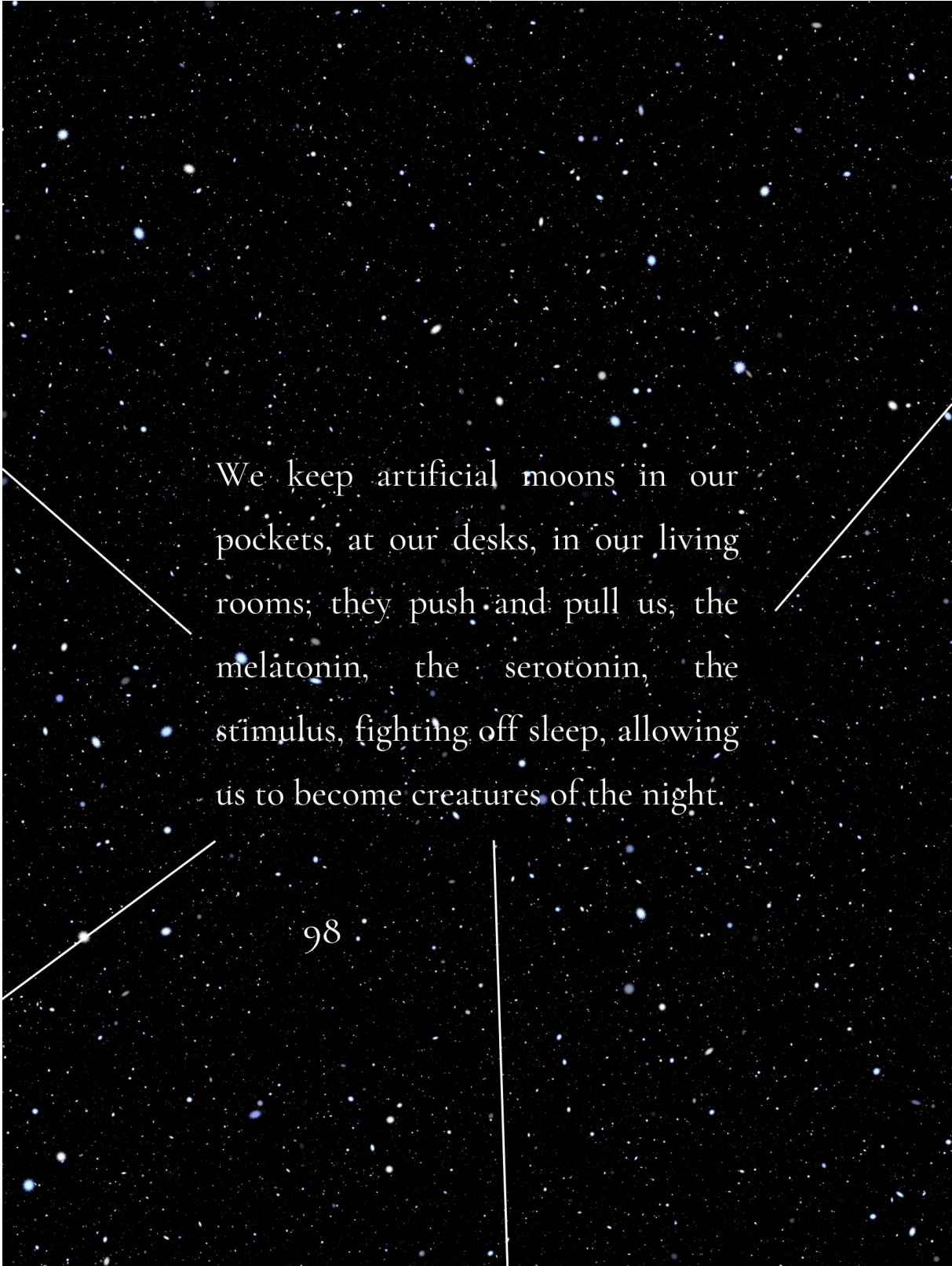
Even then, it felt unlikely—but it seemed more plausible than a primordial deity fashioning their second creation from a rib pulled from the first (suddenly the dust wasn't good enough?). And if the sun, and if the moon, why not the Milky Way? The rings of Saturn? The constellations our ancestors mapped in the sky thousands of years ago?

96

The background is a deep black space filled with numerous small, bright white and blue stars. Overlaid on this are several thin, white lines that intersect to form a grid-like pattern. A vertical line runs down the center, and two diagonal lines cross it, creating a central rectangular area where the text is placed.

Lieber describes humans as “a symphony of rhythms and cycles.” A trained musician, conductor, and otherwise musical expert or connoisseur might know how to parse through the cacophony of sounds produced during a concert, singling out individual instruments like threads in an auditory weave. A symphony is like an ocean during a storm—something demanding surrender. In a symphony, I am happily lost, carried by the current, the ebbs, flows, sudden redirection like river bends—like skybodies, always moving.





We keep artificial moons in our pockets, at our desks, in our living rooms; they push and pull us, the melatonin, the serotonin, the stimulus, fighting off sleep, allowing us to become creatures of the night.

98

On my desk, I have two mimosa plants in a window-facing terrarium like an upside-down lightbulb, round like a fishbowl with a narrower neck. The plants started out the length of my palm. Over the course of one summer, they grew out from the terrarium, up from the desk, and past the height of the window, perhaps roughly the size of my torso, steadily ceilingward. From one set of four palm-like leaves, they now have ten—forty collections of plaited leaves, all sunward-facing. They follow the sun, grow toward the window, pressing their leaves against the glass like pressed palms.





## 100

But when I touch my mimosa plants—  
accidentally while watering them or to  
demonstrate their dramatic response—they bend  
at their stalks as if crushed underfoot; their  
leaves fold oddly, closing into narrow bundles  
like feathers of a roosting bird. Though they'll  
slowly reopen in minutes if left undisturbed,  
they repeat the process on their own when the  
sun sinks behind the Rocky Mountains, folding  
in on themselves. Darwin aptly called them  
“sleeping leaves.” And they are.



## 100

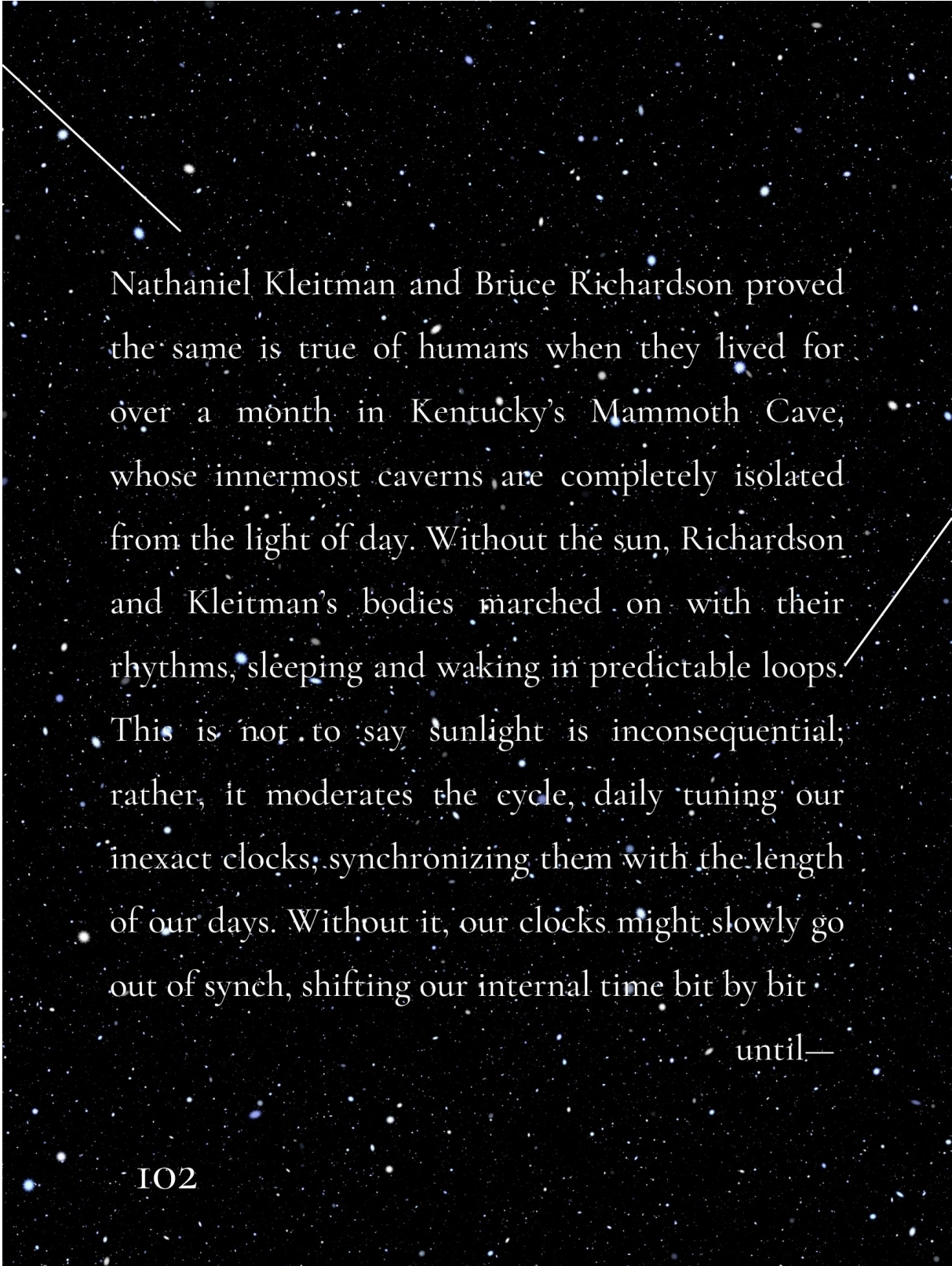
Mimosas are not the only plants which move, seemingly of their own accord. Venus fly traps close around prey when insects tickle the little hairs inside their limegreen mouths for more than a few seconds. Sunflowers, too, turn their faces to the sun, following its arc throughout the day. But when I touch my mimosa plants—accidentally while watering them or to demonstrate their dramatic response—they bend at their stalks as if crushed underfoot; their leaves fold oddly, closing into narrow bundles like feathers of a roosting bird. Though they'll slowly reopen in minutes if left undisturbed, they repeat the process on their own when the sun sinks behind the Rocky Mountains, folding in on themselves. Darwin aptly called them “sleeping leaves.” And they are.





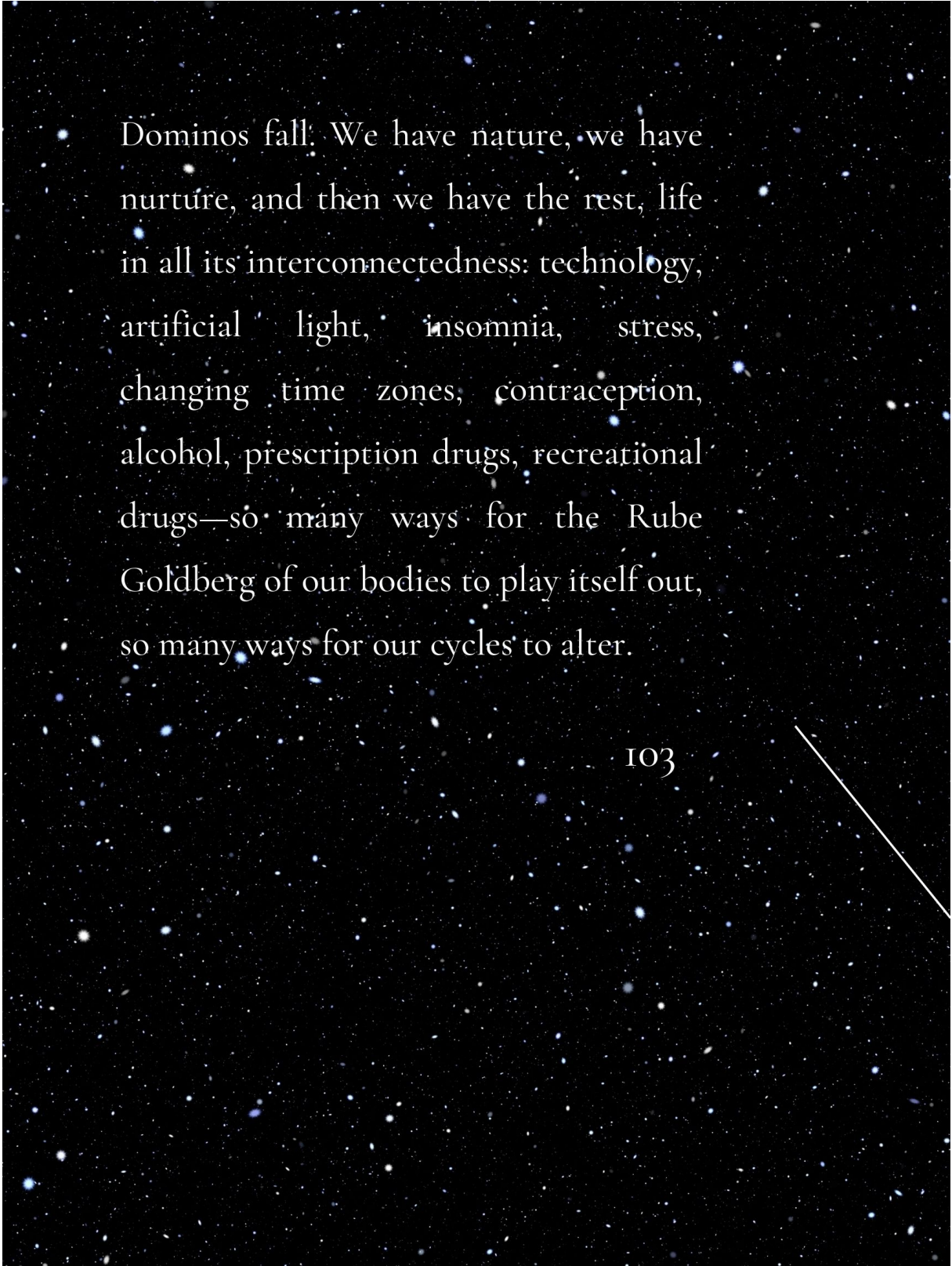
IOI

The earth circles the sun; the moon  
circles earth; the moon imitating the  
earth; the earth imitating the sun; the  
moon imitating the sun, reflecting its  
light back to us even when it is gone.



Nathaniel Kleitman and Bruce Richardson proved the same is true of humans when they lived for over a month in Kentucky's Mammoth Cave, whose innermost caverns are completely isolated from the light of day. Without the sun, Richardson and Kleitman's bodies marched on with their rhythms, sleeping and waking in predictable loops. This is not to say sunlight is inconsequential; rather, it moderates the cycle, daily tuning our inexact clocks, synchronizing them with the length of our days. Without it, our clocks might slowly go out of synch, shifting our internal time bit by bit—until—

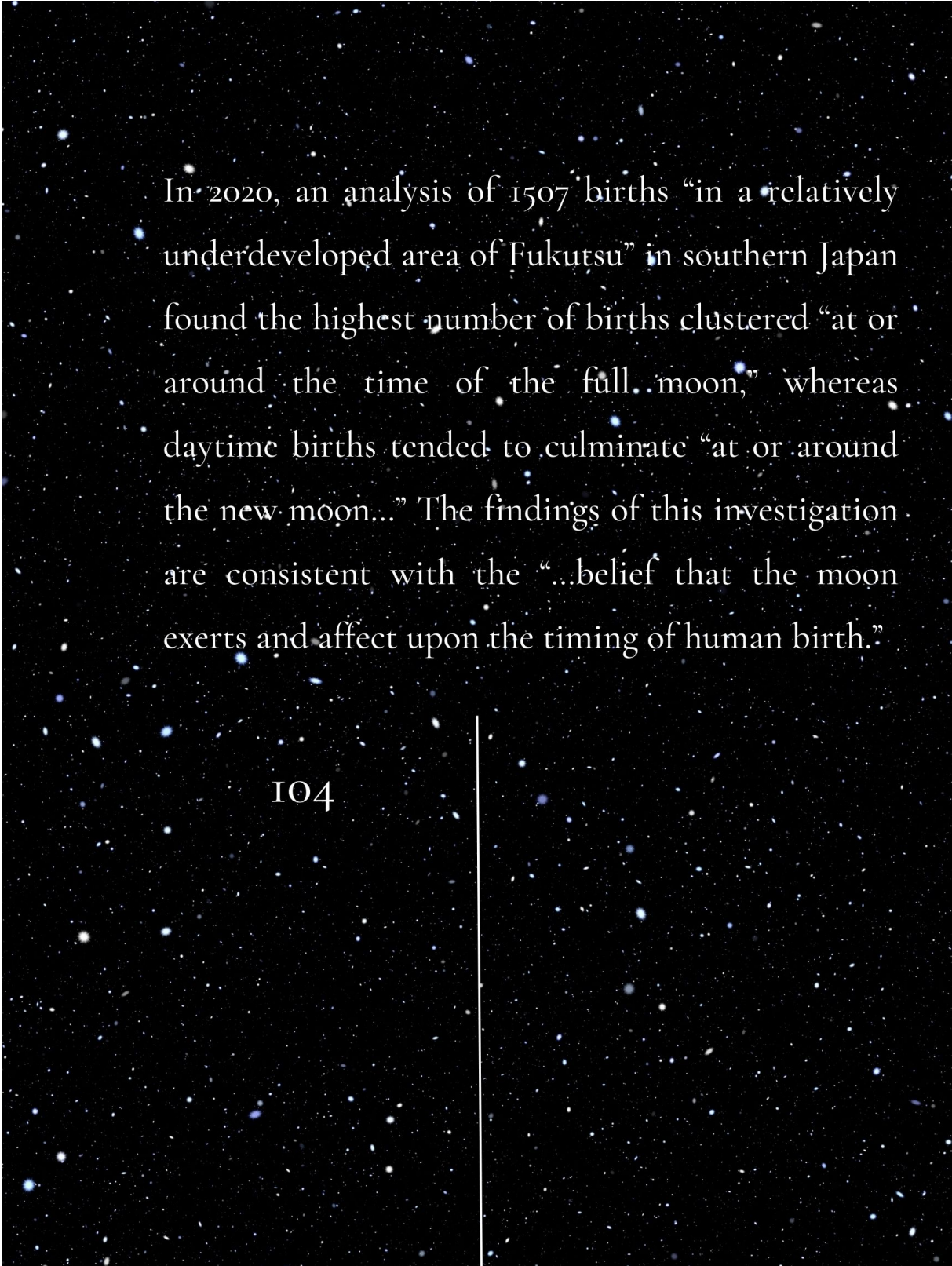




Dominos fall. We have nature, we have  
nurture, and then we have the rest, life  
in all its interconnectedness: technology,  
artificial light, insomnia, stress,  
changing time zones, contraception,  
alcohol, prescription drugs, recreational  
drugs—so many ways for the Rube  
Goldberg of our bodies to play itself out,  
so many ways for our cycles to alter.

103

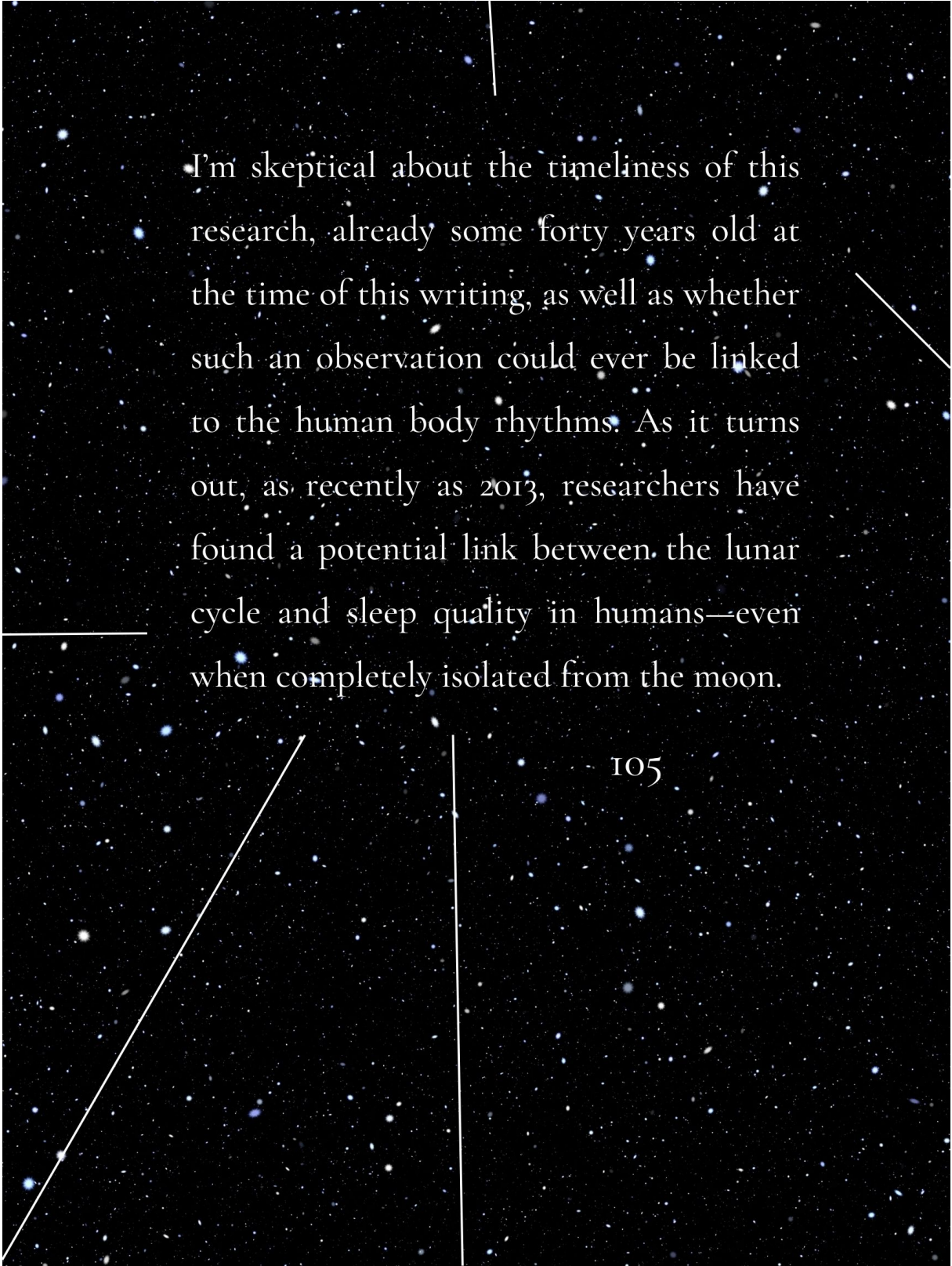




In 2020, an analysis of 1507 births “in a relatively underdeveloped area of Fukutsu” in southern Japan found the highest number of births clustered “at or around the time of the full moon,” whereas daytime births tended to culminate “at or around the new moon...” The findings of this investigation are consistent with the “...belief that the moon exerts and affect upon the timing of human birth.”

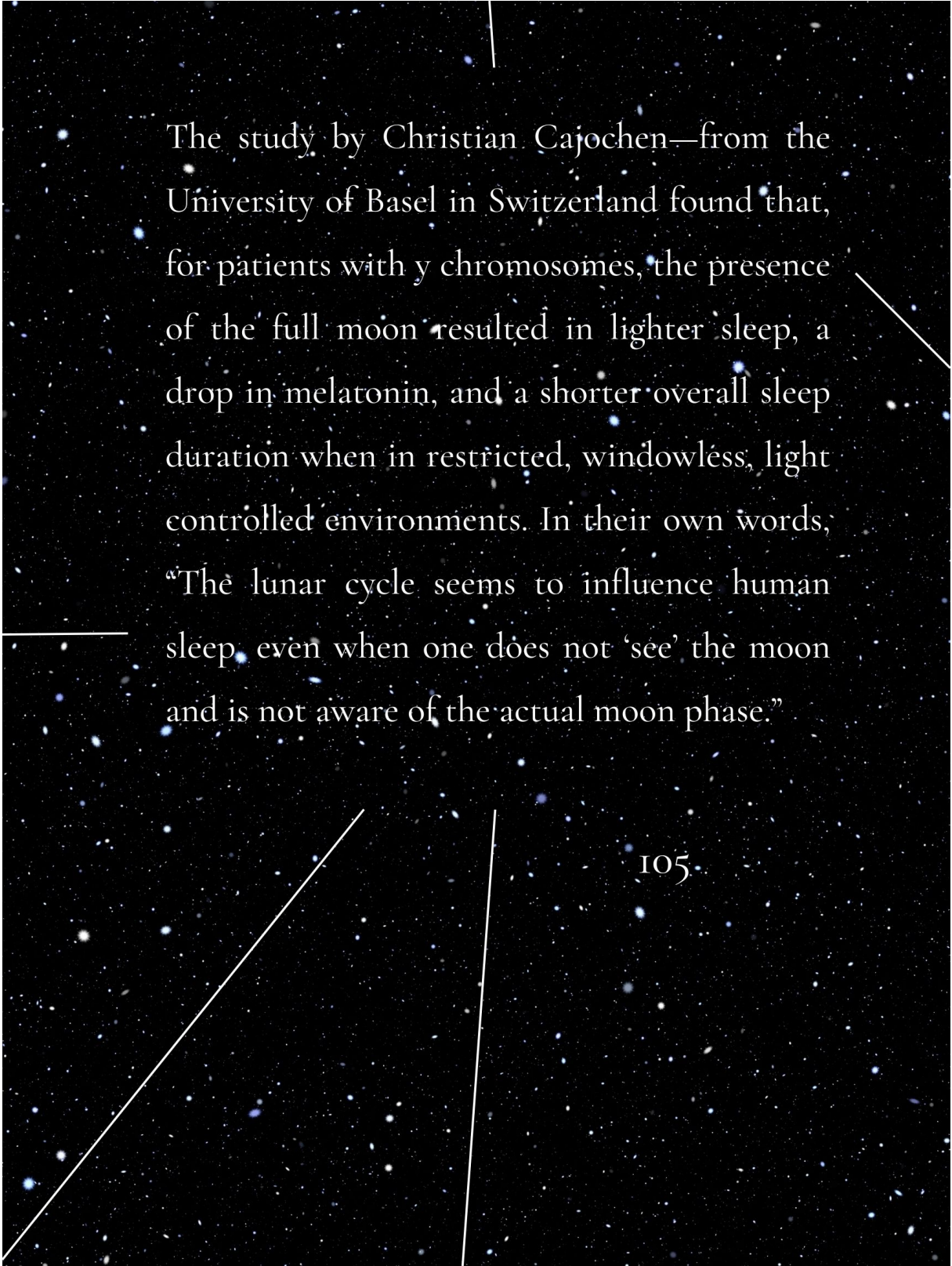
104





I'm skeptical about the timeliness of this research, already some forty years old at the time of this writing, as well as whether such an observation could ever be linked to the human body rhythms. As it turns out, as recently as 2013, researchers have found a potential link between the lunar cycle and sleep quality in humans—even when completely isolated from the moon.

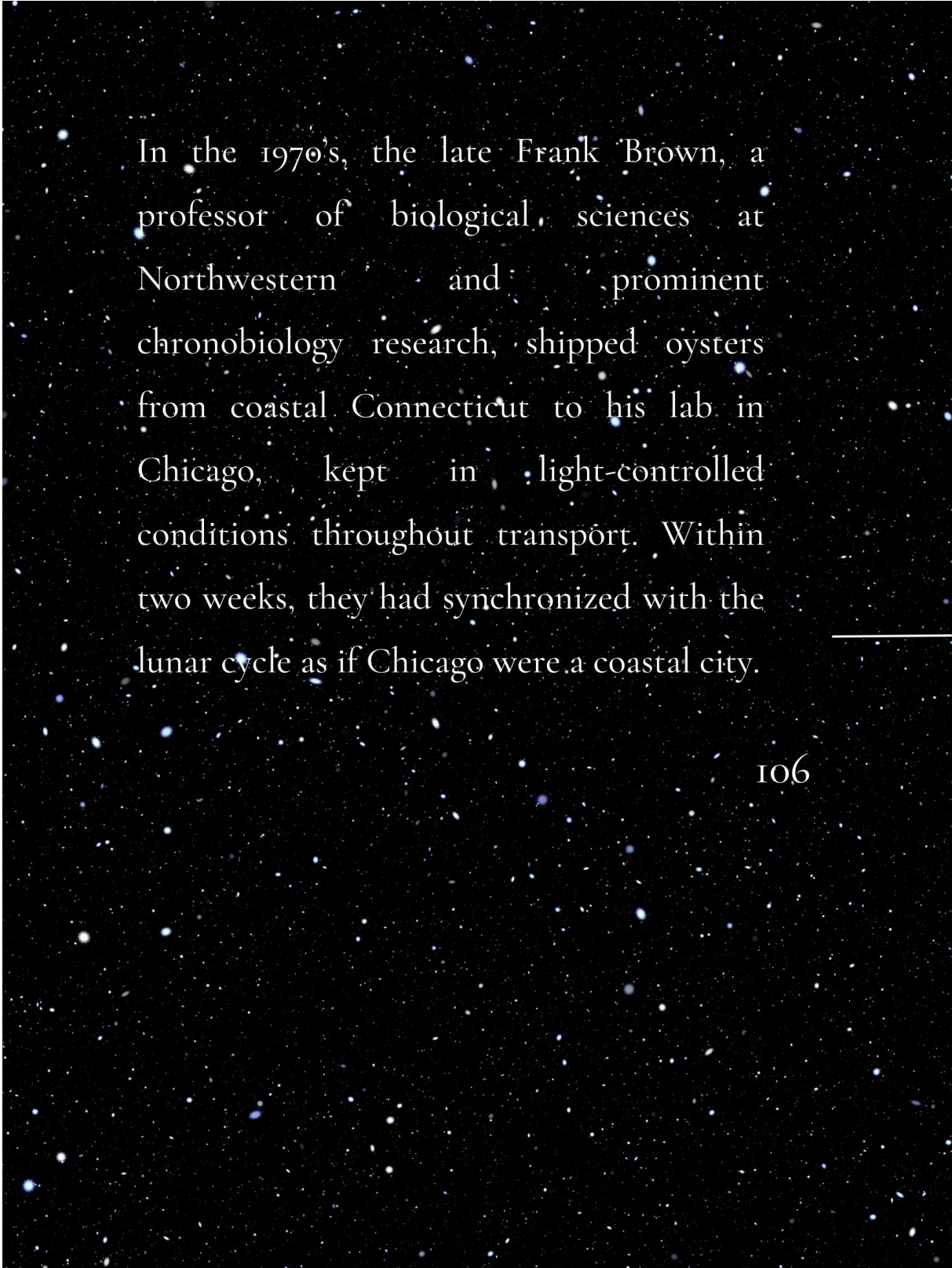
105



The study by Christian Cajochen—from the University of Basel in Switzerland found that, for patients with y chromosomes, the presence of the full moon resulted in lighter sleep, a drop in melatonin, and a shorter overall sleep duration when in restricted, windowless, light controlled environments. In their own words, “The lunar cycle seems to influence human sleep even when one does not ‘see’ the moon and is not aware of the actual moon phase.”

105





In the 1970's, the late Frank Brown, a professor of biological sciences at Northwestern and prominent chronobiology research, shipped oysters from coastal Connecticut to his lab in Chicago, kept in light-controlled conditions throughout transport. Within two weeks, they had synchronized with the lunar cycle as if Chicago were a coastal city.

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106

A deep space photograph showing a vast field of stars of various colors (white, blue, yellow) against a black background. A prominent diagonal line of stars runs from the bottom right towards the top right. The number '107' is printed in a serif font in the center-right area of the image.

107

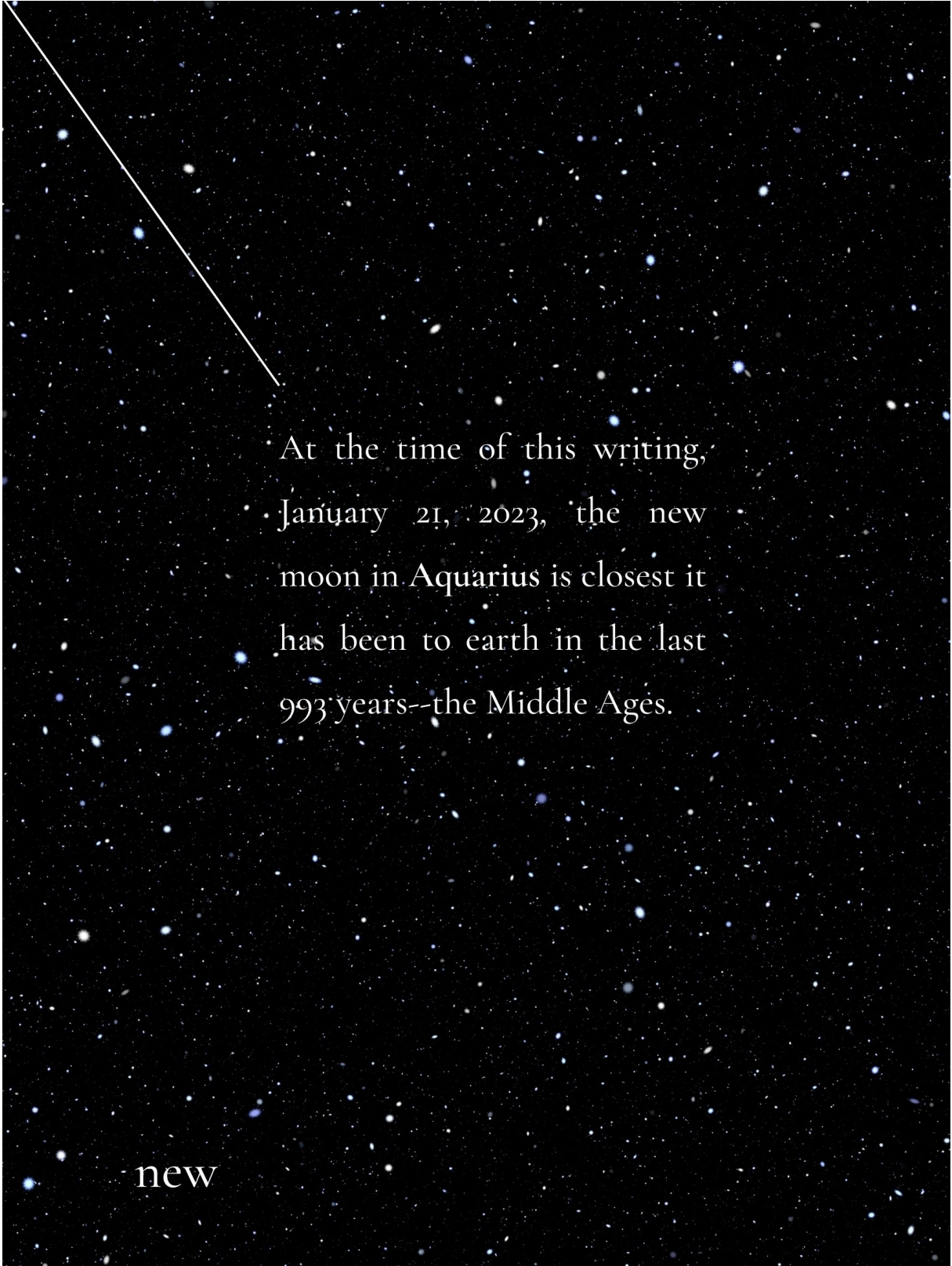
In 2021, a study in *Chronobiology International* inferred that melatonin “is not only controlled by light but could also be controlled by the change of gravitational and/or lunar tide forces.”



A background image of a starry night sky with a vertical white line.

108

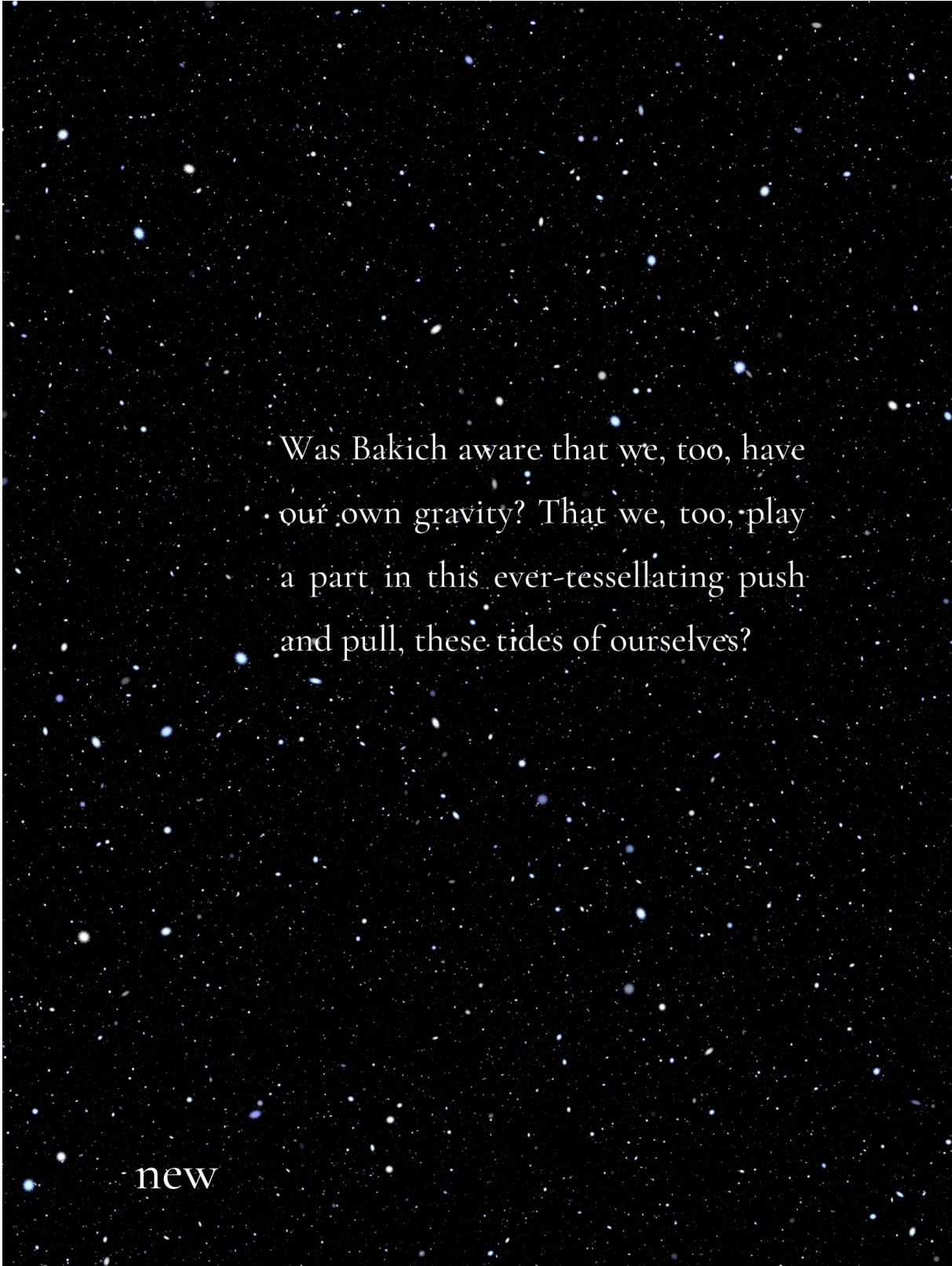
In 2018, Quyang et al. reported  
that melatonin secretion reached  
its peak during the new moon.

A deep space photograph showing a dense field of stars of various colors (white, blue, yellow) against a black background. A thin white line originates from the top left corner and points diagonally towards a specific star in the upper left quadrant of the image.

At the time of this writing,  
January 21, 2023, the new  
moon in Aquarius is closest it  
has been to earth in the last  
993 years--the Middle Ages.

new



A deep space photograph showing a vast field of stars and distant galaxies against a black background. The stars vary in brightness and color, with some appearing as small white dots and others as larger, more complex structures. The text is centered in the middle of the image.

Was Bakich aware that we, too, have  
our own gravity? That we, too, play  
a part in this ever-tessellating push  
and pull, these tides of ourselves?

new