

UNIT 2

POSITIONS THROUGH CONTEXTUALISING
ANNOTATED BIBLIOGRAPHY

1. **Kawara, O. (1966–2014) *Date Paintings* [Painting series]. Available at: <https://www.davidzwirner.com/artists/on-kawara#biography> (Accessed: 15 April 2026).**

This work was the first reference that drew me toward time as a subject, specifically the way accumulated time creates weight, mood, and a sense of a life passing. Each painting records the date of its creation, a single gesture repeated over nearly fifty years. While individually unremarkable, the accumulation of these dates shifts the experience of time from a fleeting flow into a tangible and heavy archive. My interest then shifted from the atmosphere of time toward time as a physical trace, a mark that can be manipulated and made visible through the tools of graphic reproduction. Typography functions here as a timekeeping mechanism, reframing my letter T as both material and subject, type and time held in one form. The work offered accumulation as a method: repeating a single variable, the T, across different scanning movements until meaning emerged from the mass of iterations.

2. **Dexter Sinister (2013) *Notes on the Type, Letter & Spirit, and Time*. Kadist Art Foundation. Available at: https://kadist.org/wp-content/uploads/2016/04/dexter-kadist_0_0.pdf (Accessed: 19 April 2026).**

The Kadist identity initiated my investigation by introducing me to time as an active design parameter, expanding upon my existing interest in On Kawara's ritualistic timekeeping. This typographic logo evolves slowly over a decade. I am interested in how, although it looks simple on the website's interface, the project hides a complex conceptual and technical system supported by a rich research background. Built on MetaFont's parametric logic, with time introduced as a fourth dimension, it functions as a digital clock system where a weekly cron job drives the continuous evolution of typographic form. This generative framework prompted my initial inquiry: how might I translate this computational process into an analogue, physical methodology, and how can a physical medium capture time? Reflecting on my experiments, I realised that my studio work could act as a counterpoint to the Kadist system. Because its decade-long transformation occurs too slowly to be perceived in real time, I designed my books to operate in the opposite direction, actively compressing, stretching, and expanding time into a tangible range that the human hand can directly feel.

3. Reinfurt, D. (2019) 'I-N-T-E-R-F-A-C-E', in A *New* Program for Graphic Design. Inventory Press, pp. 170-252

This text defines the interface as “whatever lies between,” reframing my scanner and printer from simple reproduction devices into an active threshold where I negotiate the friction between physical and digital dimensions. Reinfurt notes that an interface is a “collection of choices” that forms a specific point of view. Synthesised with the assertion in *Are We Human?* that artefacts offer an unexpected excess or resistance that opens up new modes of design (Colomina and Wigley, 2019), this perspective prompted me to consider how building an interactive medium can foster a deeper understanding of multidimensionality. Furthermore, Reinfurt’s exploration of Bruno Munari’s Tetracono demonstrates that making is itself a form of thinking. Before engaging with this text, I was stuck trying to form complex concepts before touching any material. Observing his iterative methodology, moving from historical research to physical models and then to software, encouraged me to begin creating without a fixed proposal. Additionally, the overprinting of the Tetracono’s cycle onto a single screenprint showed that a still surface can act as a container for time. This offers a method for my studio practice, inspiring me to capture the continuous animation of the Kadist digital font using my flatbed scanner.

4. Jespersen, J. and Fitz-Randolph, J. (1999) *From Sundials to Atomic Clocks: Understanding Time and Frequency*. National Institute of Standards and Technology.

This book emphasised a key paradox that deepened my understanding of time. While we intuitively know what it is, it remains difficult to define or visualise. It traces humanity’s efforts to make time visible, from reading shadows on sundials to measuring atomic vibrations. A core idea is the distinction between a specific date (a point in time) and a time interval (the duration between two points in time). This inspired me to rethink my flatbed scanner, seeing it not as capturing a single moment but as recording a duration, aligning with the concept of a time interval. As a result, I shifted my focus to what time actually does, specifically, how it leaves a physical trace. Like a mechanical clock that depends on resonator cycles to show the passage of time, my scanner captures cycles of light and manual movement over a period, transforming a fleeting time interval into a visible trace.

5. Benjamin, W. (1969) 'The Work of Art in the Age of Mechanical Reproduction', in *Illuminations*. Schocken Books. pp. 219-253.

This essay frames mechanical reproduction as a process that inherently decays the aura of an original artwork, which Benjamin defines as its unique existence at a specific place and time, by substituting plurality for uniqueness. This perspective prompted me to evaluate my flatbed scanner. While traditionally categorised as a tool of reproduction, my experiments suggest it operates instead as a generative tool. A scan is never a faithful copy. It is a graphic record of an unrepeatable movement through space and time. The resulting distortions, blurs, or noise stand as evidence of a unique temporal event. Consequently, these digital scans generate their own distinct aura, capturing a material trace that can never be exactly replicated. This perspective also made me think about the Kadist identity. The evolution of Knuth's *MetaFont* into Dexter Sinister's subsequent iterations forms a lineage of reproduction that accumulates history rather than erasing it. Instead of stripping away the context of the original framework, each version bears the distinct conceptual imprint of its predecessors, transforming mechanical reproduction into a method of historical preservation.

6. Hara, K. (2014) 'EXFORMATION', in *Designing Design*. Lars Muller Publishers. pp. 370-407

The concept of exformation, "making the known unknown to provoke fresh curiosity," reframed how I think about my project's relationship to its viewer. Time and dimension are concepts everyone already knows. We live within three-dimensional space and encounter time daily. But that familiarity often prevents curiosity and stops us from thinking differently. My scanning experiments mirror this idea by running the letter T and a fish pen across a flatbed scanner in unexpected ways. The resulting blurs, glitches, and compressed cross-sections break down the familiar, predictable identity of these objects. I want the viewer to encounter something they thought they understood as if for the first time. This also deepened how I think about graphic design more broadly. I believe a designer should offer new experiences of information that inspire curiosity, not only state facts, which can limit human perception and imagination of what could be to what already is.

7. Steyerl, H. (2012) 'In Defense of the Poor Image', in *The Wretched of the Screen*. Sternberg Press. pp.31-45

Hito Steyerl argues that the poor image, degraded, compressed, and low-resolution, carries a visible trace of its own history and circulation that high-quality images lack. Although her focus is on digital media circulating rapidly across networks, the principles could also inform my translation between digital and physical spaces. Printing, scanning, and capturing back through an iPhone's camera each introduce different noise at each stage. DPI, PPI, HDR processing, and inkjet spray all leave their own mark on the image. What I initially saw as just another visual effect, I now perceive as a record, a trace of process and duration. However, what differs between my work and Steyerl's is velocity. Her poor images travel instantly across digital networks, while my images mostly move slowly through physical processes. This made me think that slowness itself might be a formal quality that makes time more comprehensible and perceptible.

8. Tenen, D. (2017) 'Literature down to a pixel', in *Plain Text: The Poetics of Computation*. Stanford University Press. pp. 165-195

Dennis Tenen challenges my assumptions by redefining digitality not as a technology, but as a systematic logic of imposing discrete structure on continuous matter. This perspective reframed my manual process of dragging objects across a flatbed scanner as a digital act. The scanner does not record continuous movement; instead, it breaks it into samples of light captured at precise intervals. Each pass across the sensor converts the fluid, analogue movement of my hand into a series of static snapshots. Although the resulting image appears continuous, this seems to be an illusion. This text also supports my focus on "transmediation," the movement of information through different physical conduits. My experiments translate the letter T between code, paper, wood, and digital images, treating each transition as a distinct re-encoding through a different medium. Applying this computational lens to typography, Tenen argues that even still text on a screen is a dynamic medium defined by constant refresh rates existing beyond human perception. Every static letter is already moving too fast to see. Conversely, Dexter Sinister's Kadist logo operates at the opposite extreme, changing so slowly over ten years that it appears static.

9. ATypl (2026) *Kaleidoscopic Entanglements Reflect Meaning in Type*. 15 April. Available at: <https://www.youtube.com/watch?v=5jaYrjHknYQ> (Accessed: 11 May 2026).

Flux by Underware, presented at our MAGCD lecture, was reintroduced to me by a classmate after the second week of experimentation, when my scanning experiments were shifting from time toward dimensional investigation. It showed me how the concept of dimension is explored in type design. Their typeface exists across 0.5, 1, 2, 2.5, 3, and higher-dimensional perspectives, aligning with my own investigation into translating a form across dimensional states through various T forms, scanning, folding, and cross-sectioning. The project also introduced me to Abbott's *Flatland*, which led me to Rucker's writing on the fourth dimensions and directly shaped my theoretical framework. And like my own work, Flux uses the fourth dimension not as a literal representation but as a provocation, expanding what we imagine space, form, and dimension could be. Their generative parameter system also made me reconsider my scanner as a generative instrument, setting clear rules for movement and enabling the discovery of unexpected combinations.

10. Rucker, R.V.B. (1977) *Geometry, Relativity and the Fourth Dimension*. Dover Publications.

"It is possible and useful to view time as a higher dimension, but the reader should not jump to the conclusion that whenever we talk about a higher dimension we are referring to time; many of the ideas about the fourth dimension... are no longer valid if you insist that the fourth dimension is simply time." (Rucker, 1977, pp. 58-59)

"The viewpoint we wish to develop ... is that all 3-D objects are actually trails in 4-D space-time... We can represent a motionless Flatlander by a vertical worm or trail and a moving Flatlander by a curving worm or trail." (Rucker, 1977, pp.

"Everything on Earth lies open to a 4-D spectator, even the inside of your heart...The idea is that since the fourth dimension is perpendicular to all of our normal 3-D space directions, our enclosures have no walls against this direction." (Rucker, 1977, p. 11)

This book enhanced my understanding of the fourth dimension, which I had been applying loosely. Rucker distinguishes between time as a dimension in Einstein's spacetime, where a three-dimensional object's entire history exists simultaneously as a four-dimensional trail, and a fourth spatial dimension that involves entirely new directions of movement beyond the three we perceive. This clarified my T scanning experiments, as they do not simulate a literal fourth spatial dimension but instead capture a two-dimensional record of a three-dimensional object moving through time, which aligns more closely with spacetime theory. Moreover, the explanation of cross-sections, viewing slices of a higher-dimensional object as it passes through lower-dimensional space, gave me a framework for my slicing discovery. When I moved the letter T quickly across the scanner, it produced two-dimensional slices of a three-dimensional object moving through time, which seemed to reflect this idea.

The book also introduced the method of analogy, drawing on Abbott's *Flatland* to use a two-dimensional being's struggle to perceive three dimensions as a way to frame our own relationship to four-dimensional space. This led to my fish pen experiments: can I make the true fourth spatial dimension, seeing through and around an object simultaneously from all directions, perceptible to a three-dimensional viewer? This resulted in a series of cross-sectional books of a fish pen. While my outcomes are not a true representation of 4D, I hope they provoke curiosity about what that might look like.

11. **Fiduccia, J. (2014) 'Tauba Auerbach', in *Parkett*, 94, pp. 80-117. Available at: https://www.taubaauerbach.com/pdf/2014_06_Parkett.pdf (Accessed: 12 May 2026).**

After realising my experimentation had focused on time and dimension rather than typography, I needed references to expand the investigation beyond letterforms. Tauba Auerbach's practice is grounded in the exploration of dimensions across craft and mathematics. For example, *Stab/Ghost* (2013) is a stack of 100 transparent sheets, each printed with precise dots that together create a volumetric representation of the book's own binding stitch. This inspired my thinking about how a book could compress dimensional history into a single viewable object, connecting to Rucker's explanation of cross-sections. *Fold* (2012) paintings, a series of flat canvases bearing the physical trace of their former crumpled state, showed me that a surface could be an index of its own dimensional past. This gave me the method of using folding and flattening to make a three-dimensional trace visible on a flat surface. I also found that her practice challenged the way textbooks limit 4D to the hypercube or tesseract. Her work suggests that dimensional experience can take many other forms, provoked through physical encounter rather than a mathematical diagram. As a graphic designer, I am not used to working with complex maths or science, but I found this speculative approach more accessible and want to explore it further.

12. **Louisiana Channel (2016) *Irma Boom Interview: Passion for Books*. 9 June. Available at: <https://www.youtube.com/watch?v=1Rth2gvdyE> (Accessed: 13 May 2026).**

Following my tutor's suggestion that a book could look like a 2.5-dimensional object, paper being 2D, pages forming a 2.5D structure, I began exploring book design practice. Irma Boom's architectural approach to the book shaped how I think about a container for my project. Boom treats the book as a three-dimensional object, considering structure, form, paper quality, and tactility as a whole. The physical form is itself the meaning; how it opens, how heavy it is, how the pages turn, are all part of the content.

This prompted me to think about how a viewer encounters my experiments, not just what they see, but how their body moves through the object. This resulted in my three T books. The flipbook requires fast movement, representing compression of time. The accordion unfolds continuously, representing the stretching and slowing of time. The A5/A4 expands as it opens, representing the space produced by two-dimensional diagonal movement. Each format requires the body to perform a different relationship with time and dimension. Boom's concept of the book as a frozen container, contrasting with the fluidity of digital media, also reflects my work's aim to pause and materialise time, elements that usually exist as unstoppable and formless.

UNIT 2

POSITIONS THROUGH CONTEXTUALISING AN EXTENDED ANALYSIS OF A PROJECT

(Project)

Dexter Sinister (2013) *Notes on the Type, Letter & Spirit, and Time.*

Kadist Art Foundation. Available at: https://kadist.org/wp-content/uploads/2016/04/dexter-kadist_0_0.pdf (Accessed: 19 April 2026).

Key Idea(s) and Position(s)

The Kadist identity by Dexter Sinister (2013) challenges the conventional idea of a fixed logo designed for instant recognition. Instead, they developed a programmed typeface for the Kadist website that evolves slowly and continuously over ten years. Because it changes so slowly, it appears static to the human eye at any given moment. The letterform is manipulated by a digital pen that moves randomly within an imaginary three-dimensional space of design parameters: weight (X-axis), slant (Y-axis), and superness (Z-axis). By adding time as a fourth dimension, the system ensures the font morphs each week, rendering a typographic logo that is never the same twice (Dexter Sinister, 2013, pp. 28-29).

The project also takes a position in a historical typographic debate. Dexter Sinister (2013, pp. 15-16) revisits the exchange between Donald Knuth and Douglas Hofstadter regarding whether letterforms can ever be fully mathematically defined. While Knuth approached typography as a system rationalised through fixed equations (the letter of the law), Hofstadter argued that letterforms possess a fluid essence that changes across contexts (the spirit of the law). Dexter Sinister synthesises both perspectives by inverting these terms. In their system, the code remains entirely fixed and consistent (the spirit), while the resulting typographic output is in a continuous state of fluid transformation (the letter). Typography, therefore, is framed as a generative system capable of producing endless differences from the same structure.

Formal Quality and Circulation

Dexter Sinister (2013) frames the Kadist identity as a form of mechanical clock system composed of three components. The power consists of layered software scripts derived from Knuth's *MetaFont* system, which automate the generation and transformation of typographic forms. The resonator is a weekly cron job synchronised through Network Time Protocol (NTP), functioning as the temporal mechanism that triggers the system's ongoing changes. Finally, the display is the logo itself, which becomes the visible interface through which time is perceived.

What makes the project particularly significant is that it operates simultaneously as both a graphic identity and a long-term research practice. The project evolved historically from *MetaFont* into *Meta-the-difference-between-the-two-Font*, and eventually into *Meta-the-difference-between-the-two-Font-4D*, which is the version used for the logo. Even the naming structure reflects its own developmental and conceptual history.

The identity also circulates across multiple formats and contexts, including websites, publications, essays, exhibitions, films, and software systems. Rather than functioning solely as a commercial branding commission, the project blurs the boundary between graphic design, publishing, programming, and research. This expanded mode of circulation demonstrates how graphic design can produce cultural and intellectual value beyond simply delivering a stable visual identity for a client.

Graphic Design Filed

The Kadist identity challenges the assumption that successful branding must remain stable, consistent, and endlessly reproducible. Instead, Dexter Sinister proposes an identity that evolves gradually over time and resists fixed repetition. They also signed a ten-year contract for logo use, representing a mutual institutional commitment. The foundation promises to use the work over a decade. This equal relationship is, in my opinion, uncommon in commercial practice, where clients typically retain the right to alter, rebrand, or discontinue an identity at will.

The project also reinforced how I think about originality and remix within graphic design practice. Dexter Sinister did not simply copy *MetaFont*; they revived, updated, and extended it into a contemporary context (Dexter Sinister, 2013). This relates closely to the concept of *Adhocism* described by Jencks and Silver (2013), which argues that new forms often emerge through the adaptation and recombination of existing systems. Through this approach, the designer operates not simply as a creator of entirely new forms but as a researcher who recontextualises existing tools, technologies, and histories to generate new cultural meanings.

My Project Development

The Kadist identity has influenced my project in two specific ways, which became clear after completing the work. Firstly, it introduced me to the concept of treating time as an active design parameter, time as a form-giver, a variable that manipulates what a shape looks like. This led me to translate their digital, code-based logic into an analogue medium, and I chose the flatbed scanner as my timekeeping tool. Secondly, while reflecting on my final outcomes, I realised that my project operates almost as a counterpoint to the Kadist identity's visual slowness. The decade-long evolution of the Kadist logo remains largely imperceptible in real time, whereas my work attempts to make temporal transformation immediate and physically perceptible. I explored this through three different book formats. The flipbook compresses time into rapid sequential movement, the accordion book stretches time across a continuous surface, and the changing scale between A5 and A4 pages expands duration into physical space. Through these experiments, I became interested in how the printed form can register time not only visually, but materially and spatially.

Ultimately, while the Kadist identity pushes time beyond immediate human perception, my project attempts to bring time back into direct sensory experience by translating duration, accumulation, and transformation into forms that can be physically seen and handled.

UNIT 2

POSITIONS THROUGH CONTEXTUALISING AN EXTENDED ANALYSIS OF A TEXT

(Text)**Rucker, R.V.B. (1977) *Geometry, Relativity and the Fourth Dimension*. Dover Publications.**

Key Idea(s) and Position(s)

The book positions itself as a comprehensive cross-disciplinary bridge. In the preface, Rucker (1977) outlines his aim: to synthesise theory, mathematics, visualisations, and analogies to explain the fourth dimension, bringing an immense variety of knowledge together into a unified narrative that anyone can enjoy. This unique positioning is why I chose to read this book instead of Abbott's *Flatland* (1884), as I preferred a comprehensive book that combined various forms of knowledge to help me grasp such a complex concept. A key idea of the book is clarifying the distinction between time as a dimension in Einstein's spacetime and a true fourth spatial dimension (Rucker, 1977, pp. 57-68). In spacetime, a three-dimensional object's history exists simultaneously as a continuous four-dimensional trail. In contrast, a fourth spatial dimension involves an entirely new direction of movement, completely perpendicular to the three we perceive.

Formal Quality and Rhetoric

Rucker avoids dense academic jargon, opting for an approachable and straightforward tone. The layout explicitly caters to readers at different levels, and casual readers are encouraged to skim mathematical sections while staying engaged with the main argument (Rucker, 1977). Importantly, the content uses a dual visual-verbal narrative, featuring a variety of illustrations, from geometries and diagrams to character depictions from *Flatland* and cartoon-like speech bubbles. These graphics are placed alongside a text that combines relatable, real-life examples with the narrative analogy of *Flatland*, making the layout an active cognitive tool. It encourages readers to form mental visualisations of complex theories instead of passively reading from a distant perspective. Lastly, the traditional serif typeface contrasts with the graphic playfulness, grounding the book with a sense of seriousness and an academic tone.

Graphic Design Filed

The approach of merging completely different disciplines broadens my view on communication design. It shows how narrative can blend diverse elements like geometry, storytelling, and illustration to make highly abstract concepts more accessible. This approach also positions graphic design as a crucial bridge between different technical languages. While pure mathematics relies on a highly specialised notation to demonstrate absolute facts, the casual reader is often entirely unable to read or decipher this code. Design, therefore, functions as a visual translator that bridges this linguistic barrier. This realisation led me to reflect on the tension between a mathematician's expertise and my own role as a designer. While mathematicians or scientists work from absolute truths, I must work through my limited technical understanding of complex dimensions. This reframes my studio work as more speculative. When trying to depict ideas beyond

three-dimensional space, I acknowledge that my visual representations cannot capture scientific facts. Instead, I see my design as a speculative tool to create thought-provoking artefacts that could expand human perception and spark curiosity about the unseen aspects of our world.

My Project Development

Understanding the distinct concepts of the fourth dimension deeply shaped my last week of experimentation and the development of my final containers. The idea of cross-sections, where slices of a higher-dimensional object are seen as it intersects with lower-dimensional space (Rucker, 1977, pp. 4-6), offered me a clear framework for exploring slicing. When I rapidly moved the letter T back and forth across the scanner, it appeared as if I was slicing it. I realised the scanner was capturing a two-dimensional image of a three-dimensional object in motion through time, which aligned with the theory of spacetime. Additionally, the *Flatland* analogy inspired my fish pen experiments (Rucker, 1977, pp. 3-14). Can I make the true fourth spatial dimension, seeing through and around an object simultaneously from all directions, perceptible to a three-dimensional viewer? This led to a series of cross-sectional books of a fish pen, using five distinct perspectives on the object. While these outcomes are not literal representations of 4D space, they serve as speculative, thought-provoking artefacts that translate invisible spatial dimensions into a tangible experience.