Fitted Rather Than Read:

Bureaucracy and Universality in the Grid System

Unit 2 Written

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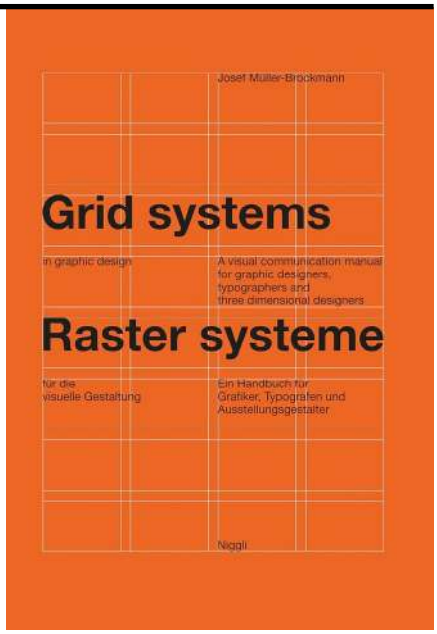
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1. Introduction

This submission follows one question through two studio projects and three close readings: which elements in the design language of the **grid system** itself embody bureaucracy, and which leave room for the designer's discretion?

The grid is the most ordinary tool in graphic design. By the grid I mean, specifically, the modular grid of postwar Swiss typography that Josef **Müller-Brockmann** [1] codified, which has come to stand in for the grid in general.
It is drawn before a single word is placed, it is taught as a foundation, and it now comes built into the software designers use every day.
Because it is planned before anything is filled in, it usually disappears from view once the page is finished: readers never see it, and designers rarely question it.
Yet if a grid decides in advance what a page can hold, a question about the grid is also a question about who decides in graphic design, and on whose behalf.

[1] Müller-Brockmann, J. (1981) Grid Systems in Graphic Design



The question of neutrality first arose in **CONTACT** [2], the project I developed through iterating at the start of Unit 2.
CONTACT was a browser tool that took the condition of touching from one rule in Casey Reas's Element 1, "**Change direction while touching another Element**", and gave it to three detectors on the same footage: pixel difference, brightness threshold and object recognition.
Same rule, same footage; three incompatible accounts of what touched what. The work showed that an apparatus has already decided, before any contact occurs, what counts as contact.

[2] CONTACT (2026)



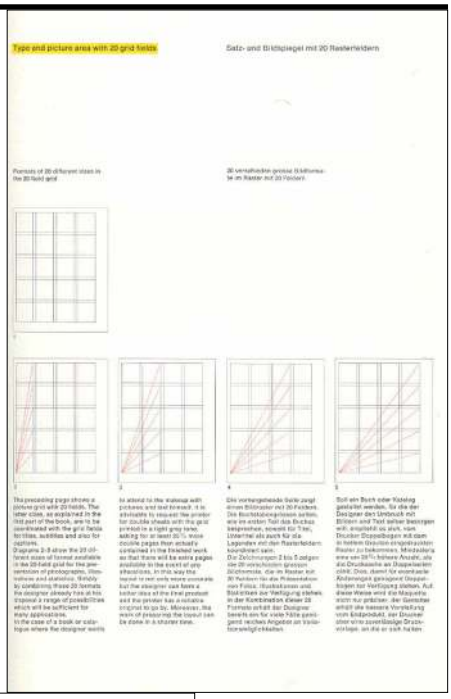
But the question it raised, whether any system can be neutral, was too broad to test, and the apparatus I was examining belonged to machine vision rather than to graphic design.
Timetable, my next exploration and the project from which this writing starts, kept the question and moved it into my own discipline: from what a machine registers to what a reader can read, and from a detector to the most ordinary apparatus of the page, the grid.

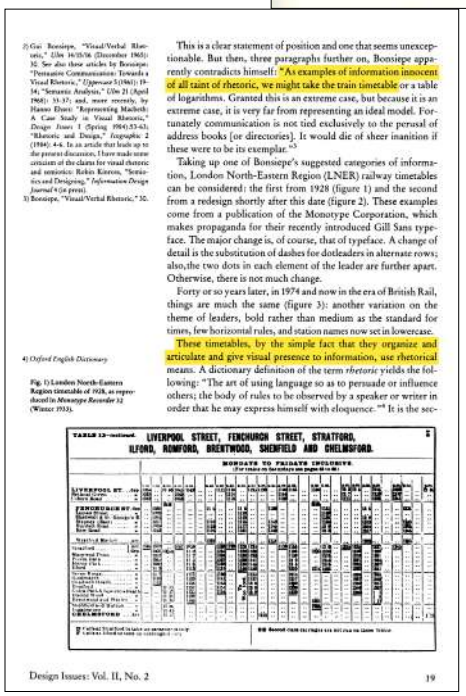
At the start of the project, I set out to explore whether design can be **neutral**.
Müller-Brockmann presents the grid as a neutral aid, yet writes that using it means "**submitting** to laws of universal validity" (Müller-Brockmann, 1981, p. 10) [3]. I read that submission as a choice and tested it. I fixed the 1928 railway timetable that Kinross analyses, set it in Müller-Brockmann's 8, 20 and 32 field [4] grids, changed nothing else, and compared legibility. But testing neutrality was a false problem: Kinross had already answered that **"nothing is free of rhetoric"** (Kinross, 1985, p. 29) [5].

[3] Müller-Brockmann, J. 1981, p. 10



[4] Müller-Brockmann, J. 1981, pp. 75, 79, 90





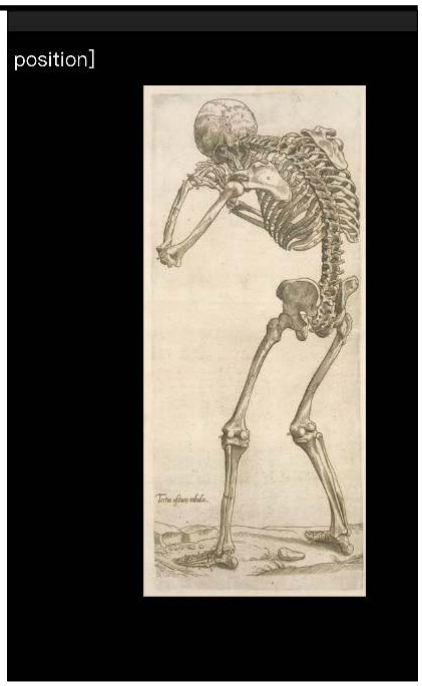
[5] Kinross, 1985, p. 19

What the experiment really drew my attention to was that the same information changes when its **arrangement** changes.

Paul Bailey read this work as information design; Cyan, a Berlin studio, read it as composition. Both readings pointed back to what the timetable had shown me, that arrangement shapes what information becomes, and following arrangement I turned in Δ1 to Thomas Geminus's 1545 rearrangement of Andreas Vesalius's anatomical images [6].
Each method in this work answered a question that the previous step had left open. If the grid claims to be neutral, I wanted to know whether that neutrality changes when the timetable is held still and only the grid changes. When I changed the format, the question moved from the grid to the reader: what exactly does the same timetable lose in legibility on an A4 sheet, an A3 sheet and a newspaper page?

In the video essay I followed that question through time, as the same timetable becomes a typographic object, a measured surface, a publication spread and finally a spatial system. If arrangement changes information, I realised, the question no longer belongs to the timetable alone: does arrangement itself shift with its **context**?

[6] NYPL Digital Collections, search result for 'position', screenshot



Thomas S. Mullaney's account of the 2008 Beijing Olympics gives a concrete case. The Parade of Nations was ordered by the stroke count and stroke order of the first character of each country's Chinese name, not by any alphabet; viewers who expected alphabetical order assumed the sequence had been rearranged, when it had simply followed "a different organizational logic" (Mullaney, 2017, pp. 4–8). All of these operations asked the same thing: how far arrangement decides what information becomes, and where I, as the one who arranges, **stand**.

What follows places the enquiry in its contexts, reads three references closely, Kinross, Müller-Brockmann and Gitelman, and then returns to the opening question to set out where it now leads.

2. Context and positioning

2.1 The modernist grid and the claim to neutrality

The grid I tested belongs to a specific history. Swiss typography after the Second World War presented the grid as a rational basis for communication, and Müller-Brockmann's manual codified that belief into a method that could be taught and reproduced (Section 3.2).

Kinross shows how the United States and Western Europe of the 1950s and 1960s imagined an ideologically neutral world, made possible by technological advance, material abundance, the spread of representative **democracy** and mass education, and how modernism in design spread in that context. Neutrality became a style, visible in Swiss typography and in the work of the Hochschule für Gestaltung Ulm (Kinross, 1985, pp. 27–29) [7].

Neutrality, in other words, was itself a form of rhetoric.

[7] Kinross, 1985, pp. 27



inherited from heroic modernism, but in transmuted form, over a gap of years in which World War II figured as an enormous convulsion. The after effects of this convulsion are described below, without a pretense of understanding precise causes.

Information design in the postwar world

In the immediate postwar situation, the ideals of modernism seemed to find a role again. In Britain, one thinks of the programs of the new Labour government in housing, health, and education and of the surrounding discussion and presentation. But with the economic recovery of the 1950s, ideals changed. The dream then envisioned an ideology-free or ideologically neutral world made possible by advances in technology, by an abundance of material goods, by the spread of representative democracy and the eclipse of rival political systems, and by mass education.[1] It was this dreamworld of the 1950s and the 1960s in the United States and Western Europe that provided the context for the spread of modernism in design. To return to the timetables, this was the context in which Univers – the universal, sans serif, sans-ideology typeface – could be designed and be so widely adopted. This was the context of the flourishing of Swiss typography: the style of technical advance, precision, and neutrality.[2]

If the word *information* can be used as a point of focus for some between-the-wars modernists, it also has specific connotations that date from after World War II in the United States. This is its use in the terms *information theory* and *information technology*.[3] The science of information is then laid onto the pattern of modernism: partly fitting with and confirming it, partly modifying it. The notable feature of the post-World War II concern with information is the way in which concepts developed in electrical engineering and computing have been generalized and dispersed, so that notions such as "message," "feedback," "redundancy," for example, could become part of anyone's mental baggage – in particular any designer's. This seepage from the laboratory into the wider world happened because such concepts could be of service. The idea was put forth that human transactions might have the same order and essential simplicity as an electrical circuit. One may suspect here a desire for the human world to be as amenable to understanding and control and as free from unpredictability as an electrical machine.

If information design can in many of its aspects be traced back to between-the-wars modernism, then the other large component in its formation would be this more recent matter of what has been called the information revolution. The clearest instance of the conjunction of these two strands – or overlaying of patterns – is in the work of the Hochschule für Gestaltung Ulm (HfG Ulm), the institution that fostered the work of Bonsiepe, which provided the starting point for this investigation.

(1) The term *ideology*, though bedevilled by slippage in its meanings, seems impossible to avoid. In this context of the 1950s in the West, one thinks particularly of Daniel Bell's thesis of the "end of ideology," elaborated in his book of that title (Glencoe, IL: Free Press, 1962). In a letter to me (11 October 1985), Bonsiepe explained that he was, then as now, interested in "the possibility of introducing arguments into the design discourse. And arguments are anything else than neutral." It was wrong to seek a solution in information theory (with its negation of the receiver or user), the problem remains a real one, unilluminated by details of design methodology.

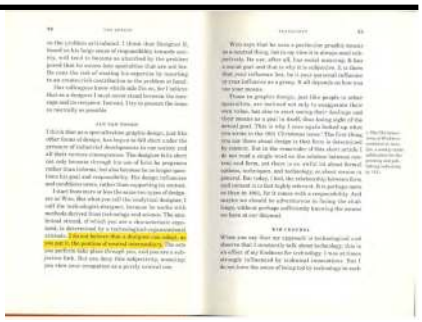
(2) For more detailed discussion, see Robin Kinross, "Emil Ruder's Typographie and 'Swiss Typography'," *Information Design Journal* 4 (1984): 167–75.

(3) The founding text of information theory is C. E. Shannon and W. Weaver, *The Mathematical Theory of Communication* (Urbana: University of Illinois Press, 1949); for a popular account of the "information revolution," see, Jeremy Campbell, *Grammatical Man* (London: Allen Lane, 1983).

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The claim did not go unchallenged within the discipline. In their 1972 debate, Wim Crouwel defended design as ordering for clarity, while Jan van Toorn denied that a designer could take the **position** of a neutral intermediary (Crouwel and van Toorn, 2015, p. 22) [8].
Van Toorn granted that grids convey messages effectively, but called that "merely a starting point" (Crouwel and van Toorn, 2015, p. 33).
That phrase is where my enquiry picks up: if the grid is only a starting point, what has that starting point already decided?
My timetable experiments therefore did not set out to prove that one grid is correct. They used the 8, 20 and 32 field grids as conditions through which the same source could be tested, to see what each starting point decides in advance.

[8] Crouwel and van Toorn, 2015, p. 22



The question also has a form in the present.

Layout software now offers the grid as a setting before any content exists: columns and margins, baseline grids and layout grids appear as ready made settings in tools such as InDesign and Figma.

The debate of 1972 argued about whether the designer can stand neutrally between a message and its recipient. It asked less often who **plans** the grid and who must work **inside** it. This is the question my enquiry sets out to follow.

2.2 Information as something produced

Another strand of this enquiry explores how information is produced in the course of being displayed.
Johanna Drucker gave me a direction here. She argues that when an object is shown through multiple views that are palimpsestic or parallax, reading becomes harder to imagine as the recovery of a truth, and such views "render the interpretative act itself more visible" (Drucker, 2014, p. 191).

This led me to give up looking for a "best version" in the timetable experiments, that is, a grid with the highest legibility that could restore the timetable's information most clearly.
Instead I kept the versions produced under different grids side by side, comparing which aspects of legibility the same timetable kept in

each grid and which it lost.
Δ1, Out of the Picture [9], continued this exploration, attending to the relationship between **rearrangement** and the recomposition and reorganisation of information.

If reading does not recover a truth, then when existing images are rearranged, what kind of interpretation does this interpretative act, now "more visible", itself make?
Geminus's removal of Vesalius's figures from their original pages and their recombination on new plates is one such interpretation.

What Δ1 set out to ask was how rearrangement reads an image, and how it changes the image's original meaning.

In setting these versions side by side and rearranging them, what most drew me to continue was legibility itself. Whether in the different versions of the timetable or in the recombined anatomical images, how each could be read had largely been decided before any version appeared, by a structure built in advance that could serve every version alike.

This turned my attention from display itself to the plan that precedes the filling.

2.3 Conditions and execution

My methods have drawn on artists and designers who treat a work as the outcome of a condition.

Sol LeWitt held that once a system is set in motion, the process should run its course without interference (LeWitt, 1999); the Conditional Design Workbook asks for rules that produce difference within a defined situation (Maurer et al., 2013); and Yoko Ono's Grapefruit shows the same instruction changing as the conditions of its performance change (Ono, 2000). Fluxus artists of her generation also often used event scores, written as instructions, as the conditions of a performance.

The starting point of Unit 2 came from Casey Reas.
His Process series also writes the work as a condition, but the condition is fixed in a short English text rather than in code: the software is only one interpretation of the text, and the text itself leaves room for many (Reas, 2010).

When CONTACT gave the condition of touching from Element 1 to three detectors, the rule stayed fixed in language, but the code of each model

[9] Δ1, Out of the Picture



understood the same words differently, and the information was reconstructed differently as a result.

In Timetable [10] I followed a **similar** method to explore the relationship between information and legibility: I kept the timetable fixed and changed one grid condition at a time, so that differences could be read as effects of the system rather than as results decided in advance.
Here, however, I also found my own limit.

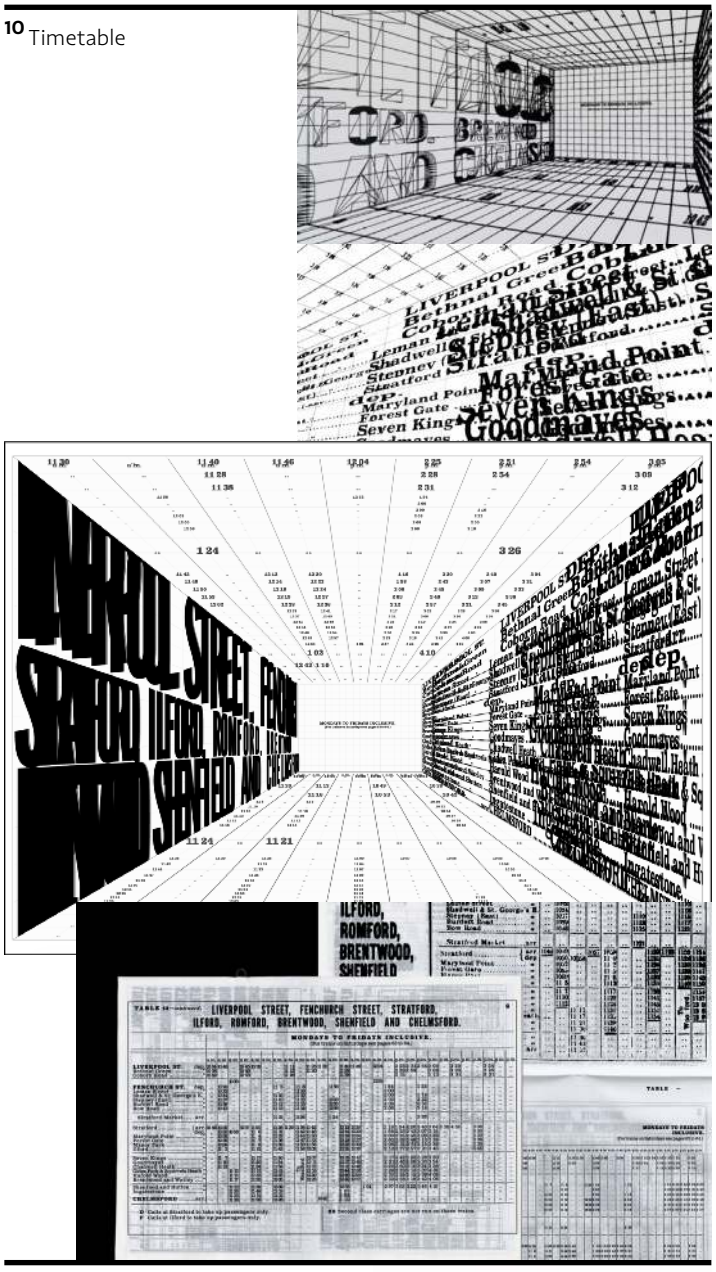
As a graphic designer and book designer, I am so practised with grids that I often anticipate the result before it appears; outcomes that should have been unknown were already shaped by my assumptions as I arranged the page.

In Δ1, Out of the Picture, I therefore chose a field unfamiliar to me and tried unfamiliar media, such as hand collage [11].

I still kept the method of a fixed rule: I took the figures Geminus himself had selected for his reediting, and changed only the scale and medium around them, to explore how the relations and hierarchies of information changed after reediting.

The weakness of this method soon became clear. If I was only exploring a change of operation, would any medium do? And where did I **stand** as a designer? These questions drove the next stage of my exploration.

10 Timetable



11 Hand collage



2.4 Bureaucracy, legibility and recognition

The timetable experiments led me to ask about the social side of legibility: who makes information legible, and for whom.
James C. Scott's work offered a direction for that question. He treats legibility as a central problem in statecraft (Scott, 1998, p. 2).
Modern states, he argues, try to make the societies they govern legible, so that the classic functions of taxation, conscription and the prevention of rebellion become simpler: permanent last names, standard weights and measures and cadastral surveys all served this end (p. 2).

The same word, legibility, is a tool in design and a condition in administration. In typography it

describes how easily a reader can read; in Scott it describes how easily a population can be managed.

Following Scott, I began to see that legibility involves bureaucracy: not as a subject I depict, but as a structure that graphic design itself takes part in.

2.5 Dialogues

Two dialogues helped me focus the enquiry on arrangement itself.

Both started from my Timetable.

In conversation with Paul Bailey, we went on to discuss how a timetable already carries a point of view: its organisation does not simply present routes and times, but sets up relationships between places and gives priority to certain journeys, so that a graphic system can clarify information while also excluding, compressing or misdirecting it (Bailey, 2026).

Jan van Toorn's 'Design and Reflexivity', which Paul recommended, made this clearer: communicative design often presents ideological choices as universal and evident (Van Toorn, 1994).

My enquiry therefore no longer stopped at proving that a grid is not neutral, and turned to asking how designed systems organise the world and shape the reader's possible understanding of it.

In discussion with Cyan, a Berlin studio, we read the same work as an exploration of composition, which pushed me to look for my own position as a designer within the act of arranging (Cyan, 2026).

The two discussions pulled in different directions. Information design asks what a reader can find and understand; composition asks how parts are placed. Holding them together, I began to see that my subject was the point where they meet: the **placement** that decides in advance what can be found, which is the **grid**.

3. Critical case studies

3.1 Kinross, 'The rhetoric of neutrality' (1985)

Robin Kinross's 'The rhetoric of neutrality' is the key textual reference for my enquiry because it moves information design away from the opposition between functional clarity and visual expression.

The essay asks whether information can be neutral (Kinross, 1985, p. 18) [12], but it does not treat this as an abstract problem. Kinross argues through the railway timetable: an everyday, compressed and apparently obvious information object. He takes up Gui Bonsiepe's claim that information becomes rhetorical as soon as it is given concrete shape, and tests it on the very case Bonsiepe had exempted, the train timetable (pp. 18–19).

The timetable may seem purely practical, but its typography, spacing, leaders, rules, colour, hierarchy and typeface already decide how information is organised and, in my reading, how authority is performed and what kind of reader is imagined.

The formal method of the essay is central to this argument. Kinross works through close visual reading rather than broad historical summary. By comparing British and Dutch railway timetables, he locates rhetoric in small material decisions: dot leaders, Gill Sans, horizontal rules, colour, serif and sans serif type. This treats the designed surface as evidence.
When he argues that timetables already use rhetorical means simply by organising information, articulating it and giving it visible presence (p. 19), he makes legibility inseparable from arrangement.

Information does not sit behind design waiting to be communicated; it is produced through the typographic procedures that make it available to a reader.
This challenges the assumption that graphic design can clarify information without altering its meaning. Kinross does not attack functionalism from outside. He takes one of its most ordinary objects and shows that function itself has rhetorical consequences. A timetable can be useful and still carry assumptions about efficiency, standardisation, infrastructure and institutional authority. This sharpened my position: the grid cannot be treated as a neutral support structure.

[12] Kinross, 1985, p. 18



Robin Kinross

The Rhetoric of Neutrality

Introduction

"Information design" has emerged within recent years as a distinct area of practice and investigation, bringing together – among principal participants – graphic and typographic designers, text writers and editors, computer engineers, psychologists, and linguistic scientists. Risking oversimplification, one might say that the information design movement (though *movement* may be too strong a term for it) has been concerned about discovering what is effective graphic and typographic communication. It has been concerned with the needs of users rather than with the expressive possibilities present in design tasks. This is its point of difference with graphic design as usually practiced and taught. The movement is an international one, though centered in Britain and the United States. It has generated a good deal of literature, including, as forums for discussion, two specialist journals: *Visible Language* (from 1971, formerly the *Journal of Typographic Research*, started in 1967) and *Information Design Journal* (started in 1979).

This essay has two broad intentions.[1] First, to discuss, through detailed examination of some of the products with which information designers have been typically concerned, whether information can be neutral. And then to move on from this close criticism of examples to discuss the larger social and political dimensions present, even within the smallest and most mundane designed fragment. Thus, both explicitly and by example of the mode of argument employed, the essay makes some criticism of information design as it is so far developed.

Purity of information: some railway timetables

The starting point for this investigation is a passage in an article by Gui Bonsiepe that has been a principal source for recent work in visual rhetoric: "Informative assertions are interlarded [*durchsetzt*] with rhetoric to a greater or lesser degree. Information without rhetoric is a pipe-dream which ends up in the break-down of communication and total silence. 'Pure' information exists for the designer only in acid abstraction. As soon as he begins to give it concrete shape, to bring it within the range of experience, the process of rhetorical infiltration begins."[2]

18

[1] The essay was originally presented as a paper at the first Information Design Conference, held at Cranfield, England in December 1984. The author is grateful to the editors of *Design Issues* for their criticisms of an earlier draft. In the text now published it seemed appropriate to the aims and contents of the paper to remain as much as possible of its original colloquial manner.

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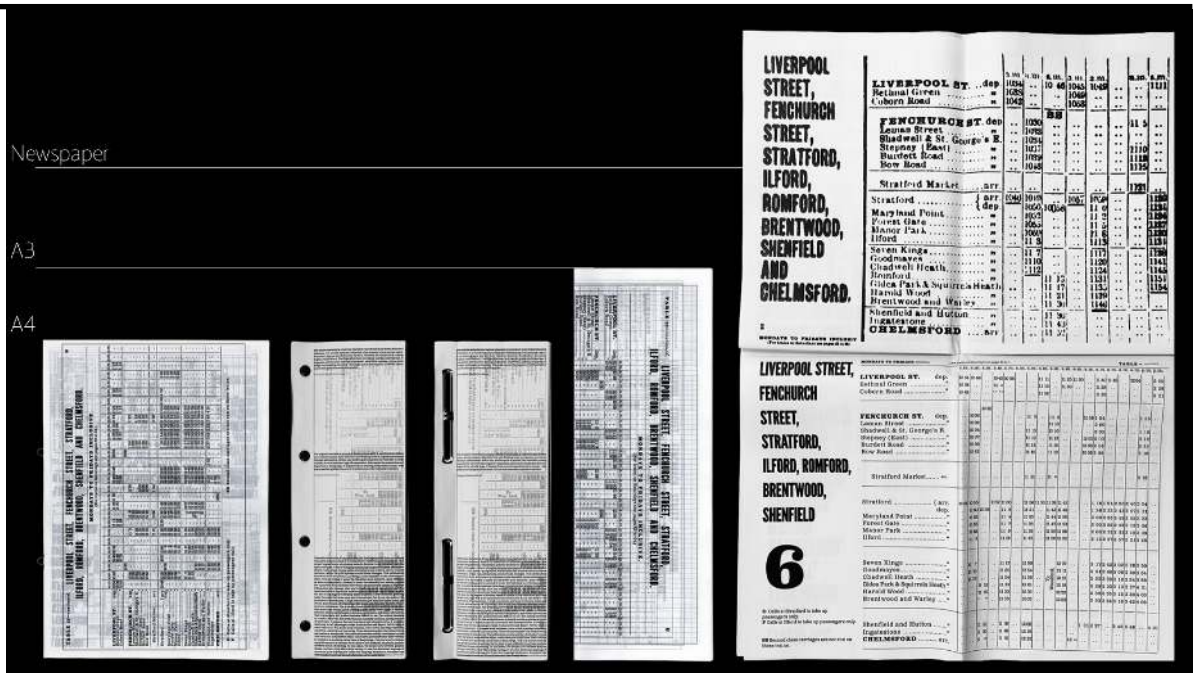
For my studio work, Kinross changed the status of the railway timetable. I did not treat it as raw data to be improved through a more elegant grid, or as nostalgic material to be revived, but as a rhetorical apparatus that existed before any intervention of mine.

At that stage my line of enquiry asked how grid resolution changes the legibility, comparison and information loss of the same timetable. With Kinross, the timetable became a precise object for iteration: a source whose typographic details, density and hierarchy could be tested under different conditions.

My A3, A4 and newspaper format prints and my binding experiments [13]grew out of this understanding. They were physical tests: once the same timetable changed size and binding, I could see how its information was reorganised, which parts became more prominent and which receded, and how a reader would have to read it.

Read beside Gitelman, Kinross's timetable also raises a question about its reader. A timetable is consulted rather than read from beginning to end, so its reader behaves less like the reader of a book than like what Gitelman calls the user of a form (Gitelman, 2014, p. 31), moving through a

13 Timetable



structure decided elsewhere. The user can search and compare, but has no say in which stations are listed, in what order journeys appear or which services are given prominence.

Power here is not coercion but an asymmetry: one side plans the **structure**, the other can only move within it.

Kinross's conclusion that "nothing is free of rhetoric" (p. 29) also marks the limit of my first question. If nothing is free of rhetoric, asking again whether the grid is neutral can only repeat the answer he has already given.

So I moved the question one step earlier. Kinross analyses what is printed: dot leaders, rules and typefaces, choices that can only be seen once the times are set on the page.

Before any time is set, however, the page already has a structure that decides where each column and row can go.

This is where my enquiry continues: from the rhetoric of the filled page to the planning of the **grid system**.

3.2 Müller-Brockmann, Grid Systems in Graphic Design (1981)

Josef Müller-Brockmann's Grid Systems in Graphic Design is the practice reference that structured my studio work. I use it as evidence of a practice and of a critique: the systematic construction of visual order through modular grids, measured columns, margins, intervals and proportional fields. Its position is that the grid offers a rational basis for organising communication.

Müller-Brockmann states this clearly when he writes that working with the grid system means "**submitting** to laws of universal validity" (Müller-Brockmann, 1981, p. 10).

The statement exposes the authority built into the grid. The designer does not simply use the grid as a neutral aid; the material is submitted to a system that promises clarity, consistency and universal order.

I therefore read Müller-Brockmann not as a neutral authority but as the historical system my experiments test: the generalising order represented by the postwar Swiss modular grid.

It claims **universal** validity and fixes positions before any content arrives; its authority comes from that generality.

The formal qualities of the book are essential to its role. Its grid examples are not only images

of finished layouts; they expose the armature through which layouts are planned: lines, columns, gutters, modules and measured divisions treat every language and script as the same technical material, making them general while overlooking what is particular to each.
The pages I worked from provide 8, 20 and 32 field grids (pp. 75, 79, 90) [14]. These are borrowed constraints from a canonical modernist method. Applying them to Kinross's railway timetable let me test what happens when a modernist structure of order meets an already dense historical information surface.

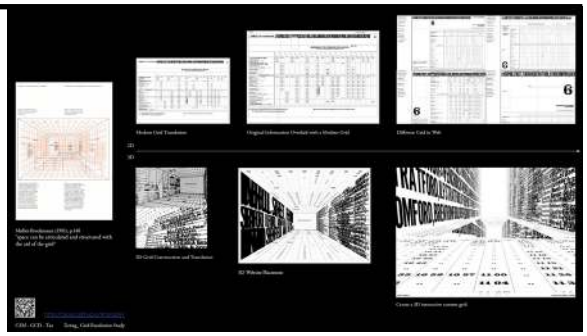
Tellingly, the book's own pages enact its method and its authority. It is printed in German and English, with the two languages set in parallel within the same grid, so that the system demonstrates its claim to order on its own text.

The grid determines where information can sit, how groups are formed and what becomes dominant, and it controls how a reader moves across a page.
A looser grid tended to produce broader fields and a stronger hierarchy, but comparison between individual trains became more fragile; a denser grid could align more information, but it also increased density and reading pressure. The grid does not merely put information into fields. It also decides what a reader sees first and what later, which items are easy to compare and which are easily passed over.

The book also takes the grid off the flat page. In its section on three dimensional design, Müller-Brockmann shows an interior in which flooring, furniture, ceiling lights, typography and images are matched to one spatial grid, and argues that space itself can be articulated and structured with its aid (p. 148).

My three dimensional [15]development of the timetable drew on this, translating it into a spatial structure where density, orientation and reading order could be tested through depth and movement.

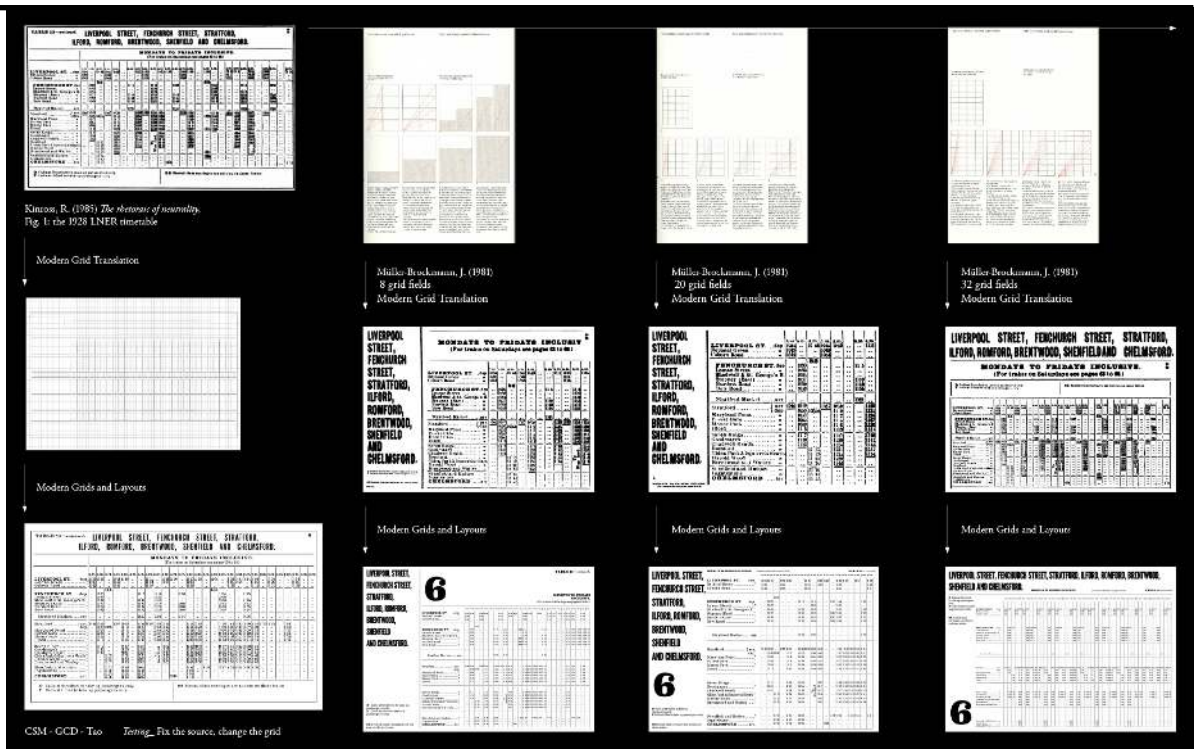
[15] Timetable



At the same time, Müller-Brockmann challenges my project, because his method carries a faith in rational visual order. The grid appears as a solution that can bring coherence to complex material.

My project came to question that belief.
The railway timetable resists clean modernist absorption: it already contains columns, station rows, dot leaders, time sequences, footnotes and

[14] Timetable



https://taogcd.github.io/timetable/

a dense internal rhythm.

Nor do these structures come from the modernist grid. The timetable was set in 1928; in the foreword to his manual, Müller-Brockmann dates the first printed matter designed with a grid to the second half of the 1940s, and names his own book of 1961 as the first to give an account of the grid system (Müller-Brockmann, 1981).

In other words, the timetable's order was built by other means, before the modular grid became a method. Placing it into the grid imposes a later system on an earlier document organised by a different logic.

Placed into 8, 20 and 32 field grids, it was not simply clarified: information was displaced, new hierarchies appeared and different kinds of loss occurred.

This showed the grid to be a universalising order, one that treats its own logic as the standard any content must follow.
The word "submitting" now reads differently to me. Müller-Brockmann addresses the designer as the one who submits. Yet the designer who submits to the grid is also the one who imposes it on content and, through content, on readers.

Mullaney's history of the typewriter shows what a claim to **universal** validity can **conceal**. Typewriter makers claimed that their machines could handle every language, yet every script was measured against the configuration of the English single shift keyboard, whose features seemed natural only from inside English typewriting; the machine's universality, he concludes, "was anything but" (Mullaney, 2017, pp. 60, 64).

My studio work is therefore neither against the grid nor a homage to Swiss modernism. It treats the grid's universal validity not as a premise but as a claim to be tested: the same timetable is placed into different grids to observe what each makes legible and comparable and what it loses, and to ask whether this universality, too, takes one kind of content as its hidden standard.

In this way, Müller-Brockmann's practice is both the structure of the experiment and the object being tested.

3.3 Planning before filling: Gitelman, Paper Knowledge (2014)

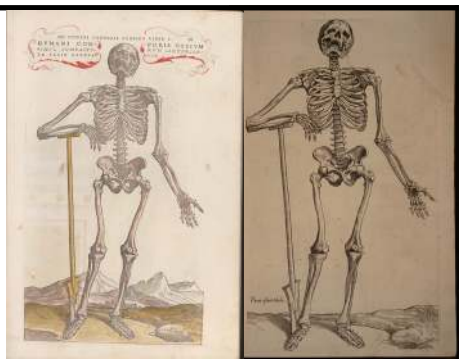
Δ1 continued the question of arrangement that Timetable had left open.
I took the sense of "position" that the Cambridge Dictionary groups under arrangement (Cambridge Dictionary, n.d.) and used it to search the New York Public Library's Digital Collections [16]

[16] Cambridge Dictionary and NYPL collection



The search led me to anatomical figures, and from them to Thomas Geminus's Compendiosa totius anatomie delineatio (1545) and the woodcuts it adapted from Andreas Vesalius's De humani corporis fabrica (1543) [17].

[17] Thomas Geminus(1545) Andreas Vesalius(1543)

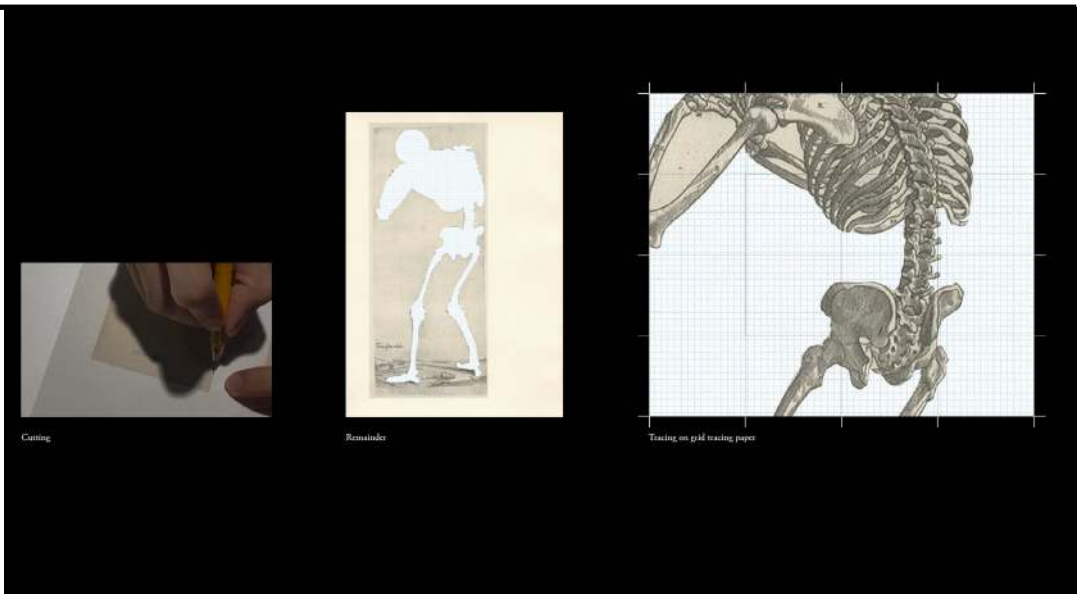


Comparing the two, I noticed that Vesalius's pages were planned as wholes, with figure, landscape and lettering set alongside the text, while Geminus treated them as content for a new layout: he redrew the figures on copper, omitted most of their landscape and text, and gathered elements from separate pages onto single plates.

This made me ask what rearranging does to the original meaning of an image. So I repeated his selection: I printed pages of the Fabrica at original scale, cut along the contours of the bodies that Geminus later combined, and compared the

fragments with the voids they left [18].

[18] Out of the picture



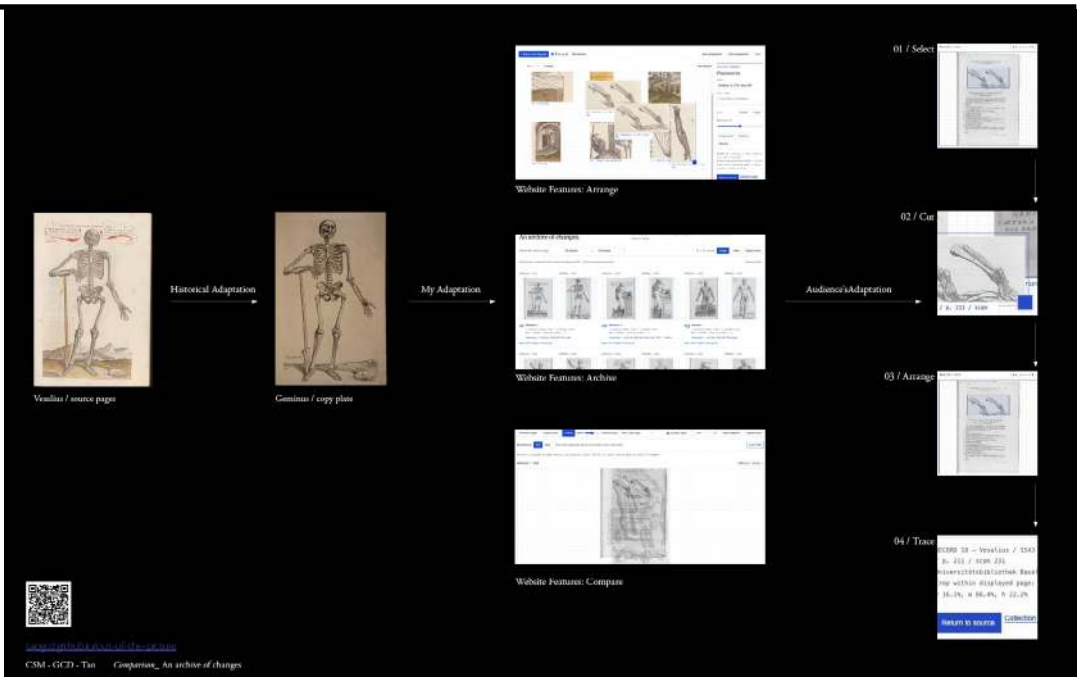
The voids raised another question: what the omitted landscape and text had done on the original page, and what a reader would make of the image once they were gone.

Cutting showed what had been taken away and rearranged, but it could not bring the two versions before the eye at once. To make the difference comparable, I overlapped the original, the adaptation and my cuts in a publication, and built an online archive in which users can drag, crop and combine the images themselves.
In this way I tried to make both myself and the reader editors of a third reediting, seeing through comparison what reediting and recombination produce [19].

Once these comparisons were complete, however, I found the **weakness** of the experiment: the same cutting, overlapping and archiving could be applied to almost any other source, and with the material swapped out the method would still work.

This led me to ask what reediting actually

[19] Out of the picture



taogcd.github.io/out-of-the-picture

produces. Each reediting places content into a new layout, and what stays the same from one source to the next is that layout: the frame that decides where things go before they arrive.

In Δ1 this frame was concrete. The size of Geminus's plates limited how many figures they could hold and at what scale; the format and spreads of the publication decided how the original, the adaptation and my cuts were set side by side; and the archive's interface fixed in advance how each comparison was laid out, so that users could drag and combine images only within it. Whatever page or figure I brought in, these sizes, spreads and interfaces stayed the same.

If the material can be replaced, my position lies not in the material but in the arranging, in that frame. Yet I moved images between frames without ever considering my own **position** as a designer.

Looking back, cutting, collage and archiving did not observe this process; they performed it again, so that method replaced the object of study. Thinking about this, I realised that these frames share a property with the grids I had worked with in Timetable: both fix positions and sizes before content arrives.

The difference was that in Timetable I held the timetable still and changed the grid, so the grid itself was what I compared; in Δ1 I kept changing the material while the frame was never touched. This made me reconsider what, as a graphic designer, my work actually touches.

The material comes from others and can always be replaced; the layouts, fields and sizes that decide where it lands are the part of the work that belongs to the designer.

So I returned to exploring the grid system itself, treating it no longer as the starting point of layout but as an object to be examined.
In Δ2, Lisa Gitelman's Paper Knowledge: Toward a Media History of Documents became the reference in tension with my work. Its first chapter studies the blank forms, receipts, tickets and ruled books that American job printers produced in great numbers in the later nineteenth century, a body of printing that histories of the book have largely passed over (Gitelman, 2014, pp. 11, 25–26).

Gitelman's position is that these modest objects did structural work. Their designers planned ahead for their filling in, so that the work of filling was separated from the work of deciding what filling was for and how it should proceed (p. 24). Her conclusion is compact: "by dividing mental labor, blanks make bureaucracy" (p. 30) [20].
By her distinction between planning and filling, Geminus and I were both filling: he filled a new plate; I filled the graph paper, the spreads of the publication and the interface of the archive, and the plan was never touched. I measured the real size of each fragment and gap on graph paper, which served here as a standardised measure.

[20] Gitelman, 2014, p. 30


My purpose in these pages cannot be to argue on behalf of either the centrifugal or the centripetal vectors of force discerned in recent accounts of American letters. Did print circulation of the nineteenth century work to pull Americans together into a single conceptual realm, an imagined community, or did it work to hold or push them apart along sectional or other lines? My suspicion is that there are better questions to ask, particularly about the postbellum era, both because job printing reveals structures of a much finer and more pedestrian grain and because job printing offers a glimpse of pull and push—of Jürgen Habermas and Niklas Luhmann, one might say—that may more accurately reflect the complexities of nineteenth-century life. Apart from public or counterpublic, nation or region, nineteenth-century job printing served—and thereby entailed and articulated—the functional sites and institutions of daily life, among them settings like the marketplace, workplace, and municipality, as well as organizations like the company, the voluntary and trade association, the church, and the school.[21] Increasingly differentiated and diverse sites and institutions such as these were organized in part by the inter- and intramural circulation of documents, written notes, and printed jobs, and thus by the elements of petty bureaucracy that form a systemic integument of sorts for the associated circulations of things, value, and people with which this chapter suggestively began.

By dividing mental labor, blanks make bureaucracy, directing and delimiting fill-in entries that form the incremental expressions of the modern, bureaucratic self. And it should be clear that, as the instruments of innumerable petty bureaucracies, blank forms and other job printing, like paperwork generally, cannot inspire the sorts of readerly subjectivity that Poe—through Dupin—calls "identification" and "identifying with." Indeed, who ever really reads receipts, bills, tickets, bonds, or certificates? Yes, there is writing printed on them, and filling in blanks requires attention to prompts, but their textual qualities have become "naturalized" through the social processes that have made them useful as the impersonal instruments they are, so that the printing on them "has seemed to disappear."[24] They wouldn't function if they didn't have printing on them, yet few people would describe their functioning in terms of reading, unless in the context of controversy, where a counterfeit is discovered or a lawsuit seems likely; then both reading and forensic analysis enter the picture.[25] Notably, whatever reading is entailed by genres like bills of fading and stock transfers, it is not reading that has very much to do with the sort of readerly subjec-

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But the graph paper is itself the kind of blank Gitelman describes: what makes a sheet blank is precisely the lines printed on it in advance, which are there before anything is written and are prepared for entries they cannot know (p. 23).

Here my work also diverges from hers. Gitelman's history is organised around a division: some plan, others fill, and power lies in the line between them. Her blanks had users rather than readers (p. 31), and those who ruled them did not need to understand how they would be filled. One ruler, giving evidence in a copyright case, conceded that he could probably not fill in the forms he ruled (p. 35).

A designer cannot stand on one side of that line. In Timetable I filled grids that Müller-Brockmann

had planned, while each grid I chose planned in turn what a reader of the timetable could compare.
In the archive I planned the frame in which users rearrange images, while that frame was fitted to formats and software I did not design.

A second difference concerns reading. Gitelman's blanks are filled and used but rarely read. A grid sits inside matter that is meant to be read, such as a timetable, a book or an interface, yet the grid itself is not read. It is fitted. This adds a third party to her division: the **reader**.
The reader meets only the filled page and never sees the plan that decided what it could hold.

Gitelman does notice this layer of the page: she notes that every space within a printed page is in effect printed, the result of deliberate labour (p. 36), and that a document's meaning depends on its format and formatting as well as on what it says.

In this chapter, however, she follows planners and fillers rather than readers. My timetable experiments sit at this point: placed into different grids, the same timetable changed what a reader could compare and which hierarchies could be read.
This raises two more focused questions.

First, which parts of a grid's design language belong to the work of the ruler, and which belong to the designer's **discretion**?
In a grid, the equivalent of the ruler's work is the column count, gutter and baseline taken over directly from a manual or a software default; the designer's discretion is the judgement made in response to particular content.

Second, if online text is always already a filled blank, shaped by metadata before any content is poured in, then when grids arrive as software settings, does the plan **disappear** even from the designer's view?

Both questions point to power within **bureaucracy**. Gitelman sees the routinising of work by blank forms as one small part of the way bureaucracy assumes an objective character (p. 31).
The grid may work in the same way: once a plan is written into manuals, templates and software and used again and again, it no longer looks like anyone's decision but like the way a page simply is.

Power in the grid, then, lies not only in the asymmetry between planner and reader, but also in the way a routinised decision stops being seen as a decision, even by those who make it.

4. Synthesis

The previous section ended on a question of power: once a decision is routinised, even those who make it stop seeing it as a decision.

In my own practice, Timetable and Δ1 meet at the layer where such decisions are made, the frame that fixes positions before content arrives, which is why I brought the enquiry back to the grid system: the question is what a grid has decided before anyone reads, such as where each title, time and footnote of the timetable can fall. Gitelman sums up the consequence of such planning in one sentence: "by dividing mental labor, blanks make **bureaucracy**" (Gitelman, 2014, p. 30). The grid on a page splits the work in the same way, between those who plan and those who use; and the designer does not stand on only one side, but takes over grids that others have fixed while fixing grids for others.

What a plan gives its planner is legibility: entries made inside fixed boxes can be read, counted and compared by someone who never met the person who filled them.
Since this decision belongs to whoever sets the grid, it need not stay inside typography.
Scott treats **legibility** as a central problem in statecraft (Scott, 1998, p. 2): the same word is a tool in design and a condition in administration.

As an object, the modernist grid has almost no form of its own, yet it is planned before anyone fills it. The grid is therefore not only a layout technique but a technical device that is fitted rather than read.

My position has moved from asking whether design is neutral to asking who decides, in advance, what can be entered. Arrangement, then, is not neutral: what can be entered is decided before anyone enters it.

So I began to wonder whether the modernist grid inherited this logic from bureaucratic forms, or only works in a similar way. The grid is a tool I set every day, so I stand inside what I study. From inside, the designer is the point where personal discretion enters impersonal rule.

My question is: which elements in the design language of the grid system itself embody bureaucracy, and which leave room for the designer's discretion? If a grid fixes in advance what a page can contain, it also fixes in advance what an institution can recognise.
The question is therefore not tied to one manual or one medium: now that grids come built into the software designers use every day, to what extent do they shape in advance how users work and how they see?

What this work contributes is a change of object rather than a new grid. It moves the grid from the category of layout technique into that of an instrument of advance decision, and it proposes a way of studying such instruments from inside: fix the content, vary the plan, and compare what each plan allows to appear.

For practice, this means treating the grids a designer inherits, from manuals, software and institutional templates, as decisions that can be traced and stated rather than as neutral starting points. This does not ask designers to give up the grid; it asks them to take responsibility for it.

Throughout, the work is concerned with the grid's universality and legibility. The problem lies not in the content designers carry, but in the structures they prepare for others to fill: a structure that claims to suit any content does not suit all content equally.

Information that matches the size of its fields can go in as it is; information that does not has to be split, moved or cut before it fits. The reader reads the adjusted version, and legibility is decided at that step. This is where the grid's politics lie.
The **universality** the grid claims may itself be a claim made from a Western way of seeing.

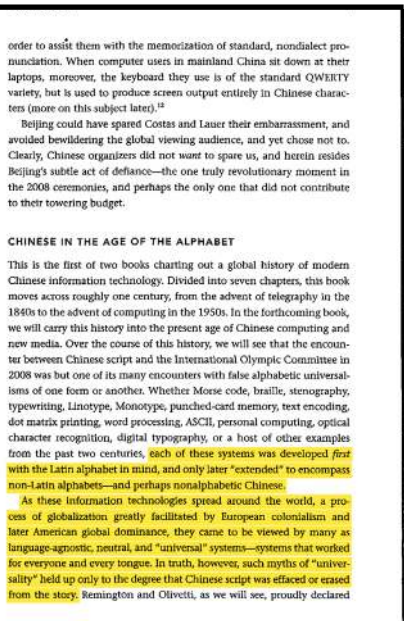
Kinross places Univers and Swiss typography within the 1950s and 1960s dream, in the United States and Western Europe, of an ideologically neutral world (Kinross, 1985, p. 27).

Mullaney shows that information technologies developed first with the Latin alphabet in mind spread through European colonialism and later American dominance, and came to be viewed as "universal" systems "that worked for everyone and every tongue", a universality that held only so

long as Chinese script was erased from the story (Mullaney, 2017, p. 9) [21].

If the grid works in the same way, what it splits, moves or cuts in its fields may be not only the information of a timetable, but the writing structures of other languages, and positions that do not stand at that centre. This is the **direction** in which I want to project the enquiry forward: to ask whose content a grid makes look normal.

[21] Mullaney, 2017, p. 9



order to assist them with the memorization of standard, nondialect pronunciation. When computer users in mainland China sit down at their laptops, moreover, the keyboard they use is of the standard QWERTY variety, but is used to produce screen output entirely in Chinese characters (more on this subject later).[12]

Beijing could have spared Costas and Lauer their embarrassment, and avoided bewildering the global viewing audience, and yet chose not to. Clearly, Chinese organizers did not *want* to spare us, and herein resides Beijing's subtle act of defiance—the one truly revolutionary moment in the 2008 ceremonies, and perhaps the only one that did not contribute to their towering budget.

CHINESE IN THE AGE OF THE ALPHABET

This is the first of two books charting out a global history of modern Chinese information technology. Divided into seven chapters, this book moves across roughly one century, from the advent of telegraphy in the 1840s to the advent of computing in the 1950s. In the forthcoming book, we will carry this history into the present age of Chinese computing and new media. Over the course of this history, we will see that the encounter between Chinese script and the International Olympic Committee in 2008 was but one of its many encounters with false alphabetic universalisms of one form or another. Whether Morse code, braille, stenography, typewriting, Linotype, Monotype, punched-card memory, text encoding, dot matrix printing, word processing, ASCII, personal computing, optical character recognition, digital typography, or a host of other examples from the past two centuries, each of these systems was developed *first* with the Latin alphabet in mind, and only later "extended" to encompass non-Latin alphabets—and perhaps nonalphabetic Chinese.

As these information technologies spread around the world, a process of globalization greatly facilitated by European colonialism and later American global dominance, they came to be viewed by many as language-agnostic, neutral, and "universal" systems—systems that worked for everyone and every tongue. In truth, however, such myths of "universality" held up only to the degree that Chinese script was effaced or erased from the story. Remington and Olivetti, as we will see, proudly declared

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