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Blind maps and blue dots: the blurring of the producer-user divide in the production of visual information

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6 Conclusion: A Post-Representational Approach to Graphic Design

In this concluding chapter I will reflect on the outcomes of my research, and formulate an answer to the research question: 'What can a post-representational reading of contemporary mapmaking practices reveal about the blurring of the producer-user divide in graphic design?' First, I will propose a new approach to graphic design. By focusing on tools, the understanding of the field can be expanded with a variety of practices of production and use. I will then present a new conceptual model, a timeline of technological thresholds, to better understand the transformation of the field of graphic design. Using the insights gained from this new approach, I will connect the design field and cartography and explain why mapmaking is a relevant field to study the transformation of graphic design. From case studies of three contemporary mapmaking practices I have developed two important visual concepts, the Blind Map and the Blue Dot, that, together with the various ways they interact with each other, constitute a post-representational approach to graphic design. I will present the ambiguous strategies I developed in my graphic design practice as a response to this post-representational approach. I will conclude by addressing the need for alternative and additional languages in multidisciplinary discourse, in research in general, and in artistic research in particular.

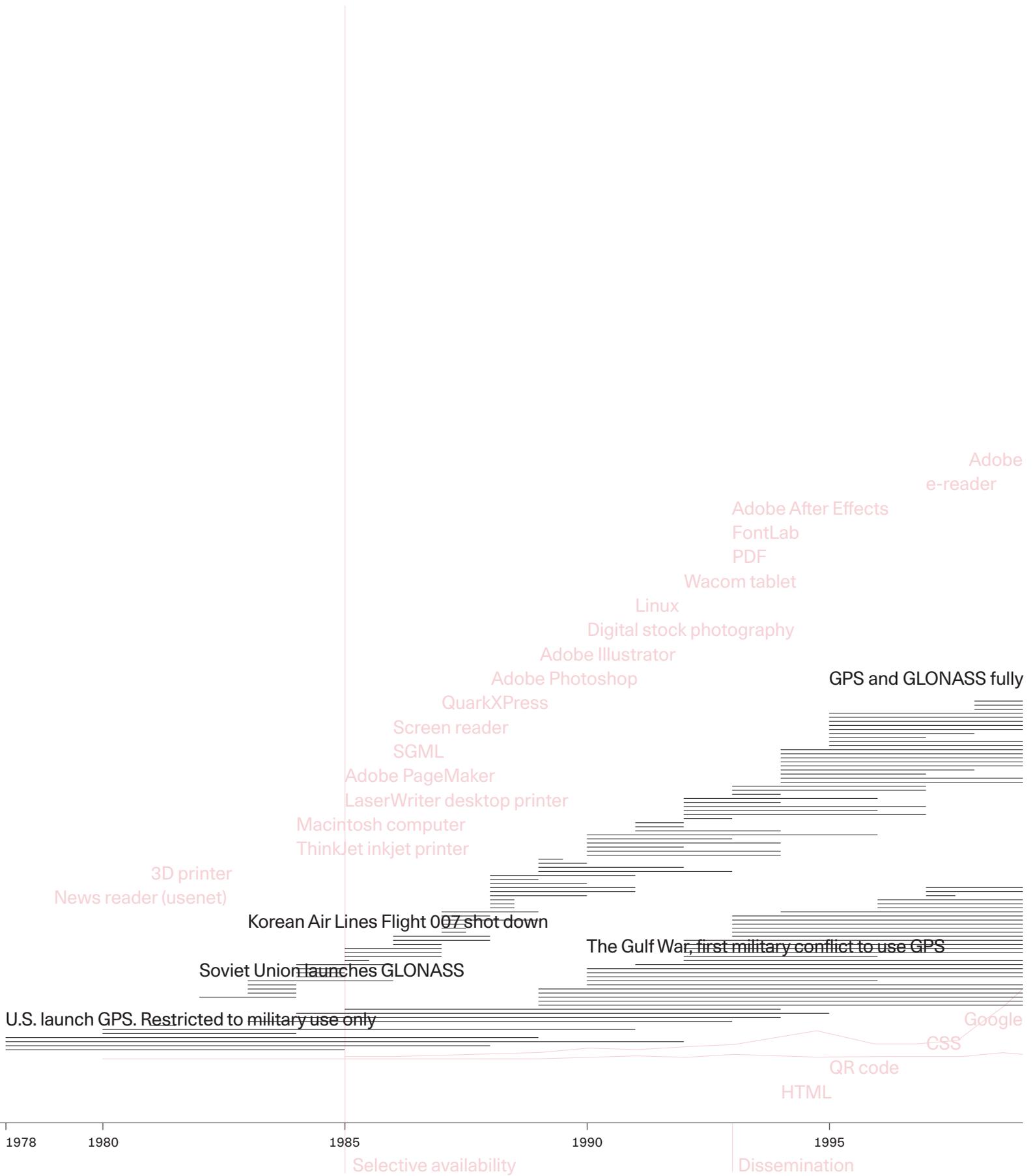
Transformation of Graphic Design

As stated earlier, ever since its inception in the late nineteenth century, graphic design has been closely tied to industrial production. The field originated as a specialized activity concerned with creating, editing and reproducing visual information. The shift towards digital modes of production has transformed graphic design in a fundamental way. The desktop publishing revolution of the 1980s combined several specialist activities of the industrial production of visual information into a single machine that is accessible to all: the computer and its software. This universal tool, the interactive possibilities of digital media, and the easy exchange of visual information through networks like the Internet, led to a different relation between the creators, editors, producers and users of visual information. In my view, this has happened to the extent that a clear distinction between the various parties in the information chain no longer exists.

The situation in the field of graphic design in the early 2000s has been characterized by American author, curator and graphic designer Andrew Blauvelt as suffering from a malaise of disciplinary formlessness.¹ The field had expanded way beyond its roots in print, and while other parties—read: non-designers—were using the tools of graphic design, those with a specific training or specialized professional practice in graphic design on their part were appropriating the roles of authors, archivists, artists, curators, editors, educators, entrepreneurs, programmers, publishers, researchers, storytellers, tool makers, visual journalists and others.

While Blauvelt describes graphic design as a field that lacks coherence and is totally dispersed, I propose to take his assessment one step further, by claiming that the democratization of the means of production and the diversification of its output are signs of the discipline dissolving and becoming part of a larger field. This larger field is focussed on graphic representation. It encompasses many

1 Blauvelt, 'Towards Critical Autonomy or Can Graphic Design Save Itself?', 8.



In this concluding series of visualizations, the most important technologies and tech companies from this dissertation are shown over time, compared with each other and the technological thresholds model.



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distinct practices that are rooted in a variety of disciplines, but that use similar tools to create, record, edit, produce and distribute visual information. Practitioners with academic, creative, journalistic and other backgrounds use the same hardware and software and are dealing with similar concerns: What do I present, how do I show it and in what way do I make it public?

As I see it, Blauvelt's evaluation of graphic design's recent developments is too much focused on what happened to the persona of the graphic designer. In his writings, the designer in the digital age emerges as someone who has been struck by friendly fire.² I use this very term that has the connotation of injustice and fatality because I detect a slight sense of despair, primarily about the role of the designer, in Blauvelt's analysis of the current state of graphic design. The specialist tools that gave the graphic designer increased control and power in the digital age, now threaten to make her obsolete. In my view, when evaluating graphic design, especially as it is morphing into the larger field of graphic representation, we should look beyond the designer.

I propose to reconsider graphic design by looking at the technologies that gave rise to the field and that are now transforming the field into something else. That is not to say that technological developments are the only explanation for the current state of graphic design. For example, revised concepts about authorship and an experimental attitude towards exploring and breaking the rules of the graphic design craft influenced the field in the last decades of the twentieth century. However, these evolving ideas are centred exclusively on the designer, and do not consider the changing position of the user.

I have developed a model for understanding the developments in the field of graphic design. This is a chronological presentation of various graphic technologies that enables the situating of various practices of production and use. My model is a timeline of technological thresholds, that is, an overview of the technologies for creating, recording, editing, producing, distributing and accessing visual information. In this timeline, I have identified three sets of tools related to mechanization, digitization and dissemination. Mechanization refers to the technologies of the industrial production of graphic information that enabled the graphic designer to emerge as a specialist in the production of visual information. Digitization of production tools has impacted the role of the designer, the tasks she performs and her role in the information chain. Dissemination technologies impacted the speed and expanse of the distribution of information, and the interaction, and exchange of that information with others. Although different in nature, the two latter sets of tools reinforce each other in, what I believe to be a significant transformation of the graphic design field.

New questions arise when the transformation of graphic design is researched on the basis of the tools it uses. What, for instance, is the impact on the field of practitioners with roots in other disciplines, but whose practices are virtually the same as graphic design, because they use the same tools? Take cartography, for instance. Graphic design and mapmaking have different origins and concerns, but their contemporary practices have much in common. Both use similar tools and the digitization of those tools has enabled new players to enter the fields. The impact of technological developments on cartography seems greater and clearer than on graphic design. In my view, cartography, both the activity of mapmaking and the theory of maps, has had a head start on graphic design in dealing

with the impact of digital technologies. Therefore I consider it a testing ground to understand the transformations of graphic design. For my research, I selected three mapmaking practices that I regard as Petri dishes to survey, analyse and test the transformation of the field of graphic design.

Post-Representational Cartography

For the investigation of three contemporary mapmaking practices I adopted notions from post-representational cartography. This theoretical approach regards a map as a process rather than a fixed spatial representation. Seen as emergent, a map is never finished; it is in a constant state of becoming. Producing a map is a continuous process, and so is its use. Therefore, the binary divisions between production and use and between producer and user are no longer valid.

What I take from post-representational cartography is the consideration that 'making' and 'using' are not consecutive processes but parallel tracks. Furthermore, post-representational cartography provides ways to critically think about a variety of practices engaged with cartography beyond those of professional specialists. I also appreciate the shift of focus from the end product to how the map works, how it shapes our understanding of the world, and how it codes that world.

I disagree with the theory of post-representational cartography in that I put as much emphasis on the processual nature of the map as on the ever-changing position of the user-producer. For me, both the map and the mapmaker/user have a continuous dynamic status.

Another point where I deviate from post-representational cartography is that I see differences in the extent to which a map can be processual. Certain maps offer the user a bigger role by literally putting her on the map, such as in Google Maps where the Blue Dot highlights the user's position. In the case of digital maps, where movements or locations are recorded, the user can play a greater role as a co-producer than with traditional maps on paper. However, there is also a shadow side to this digital function in which the data generated by the movements of a user increases the power position of the producer.

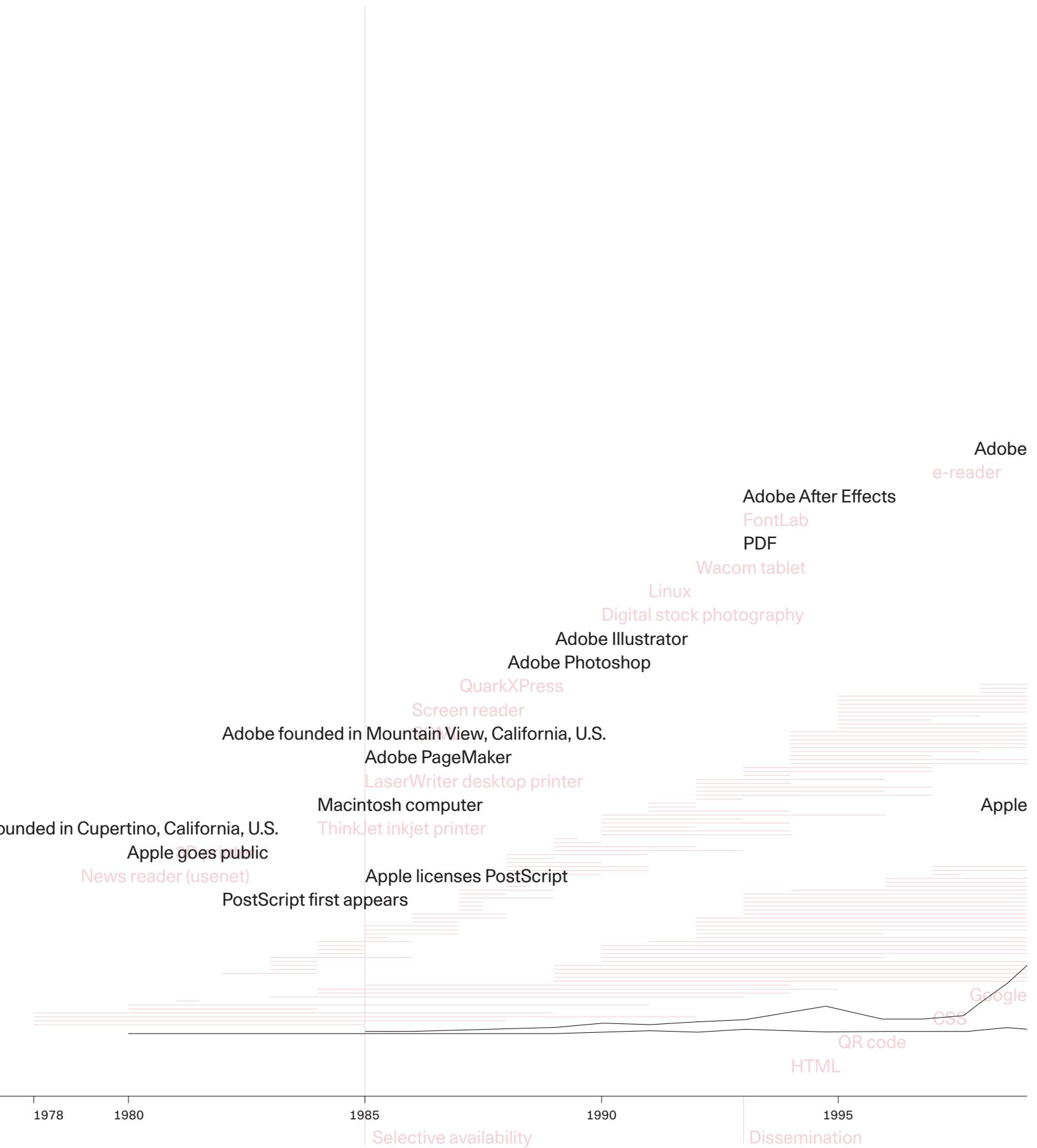
It is not only a matter of functionality whether a map can be seen as processual. The method of distribution, and whether the map is part of a conversation in which sources and design choices can be queried and subsequently updated, also contribute to the extent to which a map is processual.

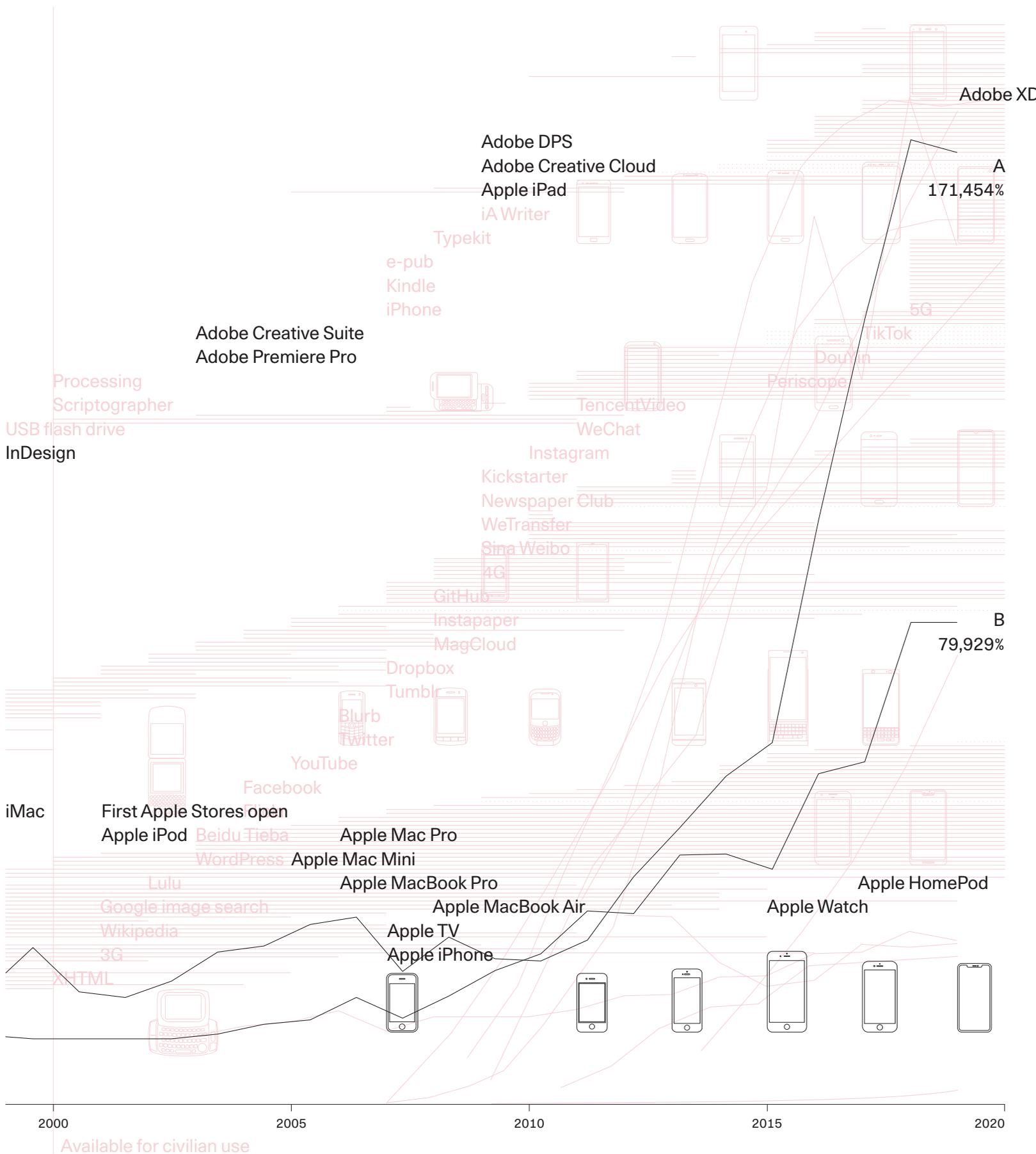
There is a third factor that determines the extent to which a map is processual and that is its design. The method of presentation—the way it looks, the amount of information it contains, the legend that has been used, et cetera—facilitates the process by which the user engages with, and, as it were, 'enters' the map.

A Post-Representational Reading of Three Contemporary Mapmaking Practices

In this book I have adopted a post-representational approach to three case studies of contemporary mapmaking. Based on my fascination for the processual aspects of cartography, I identified three mapmaking practices for further study: the Blue

2 Friendly fire is a military term for an accidental attack by a force on its own army or allied troops.





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Dot, the location function in Google Maps; the Strava Global Heatmap, a world map showing the activities of users of the fitness app Strava; and the 'situation in Syria maps', a regularly updated map of the Syrian conflict produced by an Amsterdam teenager. Together, these practices deal with a variety of aspects that are important in graphic representation today: the user as co-creator, and the relation between a functional and critical understanding of graphic products (the Blue Dot), the motives behind, and the effects of, certain visual strategies, and the understanding and misunderstanding of certain typologies (the Strava Global Heatmap), the specialist–amateur divide, and the role of expertise in graphic production (the situation in Syria).

In the Blue Dot case study I used the three different modes of cartographic thinking presented above to investigate Google Maps, which is the most used map today. Each of these modes of thinking generates considerations that become criteria for evaluating the look and functionalities of a map. Conversely, how the design of a map is perceived will be informed by the viewer's conceptual understanding of the cartographic product. From this it follows that a purely functional reading of the map, without it being questioned on a conceptual level, does not suffice. Nor does a critical reading of the map solely focused on understanding the hidden structures suffice, because it does not provide criteria for how a map should function. Building on this idea, it can be stated that design is a way to invite theory. In mapmaking, theory and design are intertwined. A theoretical understanding of a product is necessary to perceive the significance of its design.

Google Maps is the quintessential example of a processual map. It has a fundamentally emergent status: it looks empty, and its colours are pale as if the map anticipates being filled with a highlighted location or route. Opening the app, the software does not show a map that is complete but one that is the starting point of a process of searching, scrolling and zooming in and out. The My Location function in Google Maps enables users to perceive their position as a small blue dot. This Blue Dot puts the user on the map, literally. Besides being a visual sign, it is also a symbol, characterizing a next stage in thinking about production and use. Here, the binary division between producer and user no longer applies. The user is not the recipient at the end of a process, but to a certain extent she is the co-creator of a graphic product. At the same time the Google Maps user is a victim, as Google exploits her data as raw material. On another level she is prey, because orientation by way of using Google Maps is not a process of comparing a site with its diagrammatic representation, but about seeing a single version of that reality. One that is blind to any version but that of Google.

The second case study of the Strava Global Heatmap, a map based on data generated by users of fitness tracking app Strava, considers knowledge from a variety of fields in order to investigate the technological, economic, social and cultural aspects of the Global Heatmap. I argue that there is a disconnection between the data that form the basis of the Strava Global Heatmap and the information it displays. The map uses a deceptively familiar formal language, but in fact it is a type of visualization that we are not yet familiar with. The map's content is manipulated, using a visual language with similarities to photography. If defamiliarization is the technique of disrupting the user's expectations to stimulate fresh perceptions, then the visual strategies at work in the Global Heatmap do

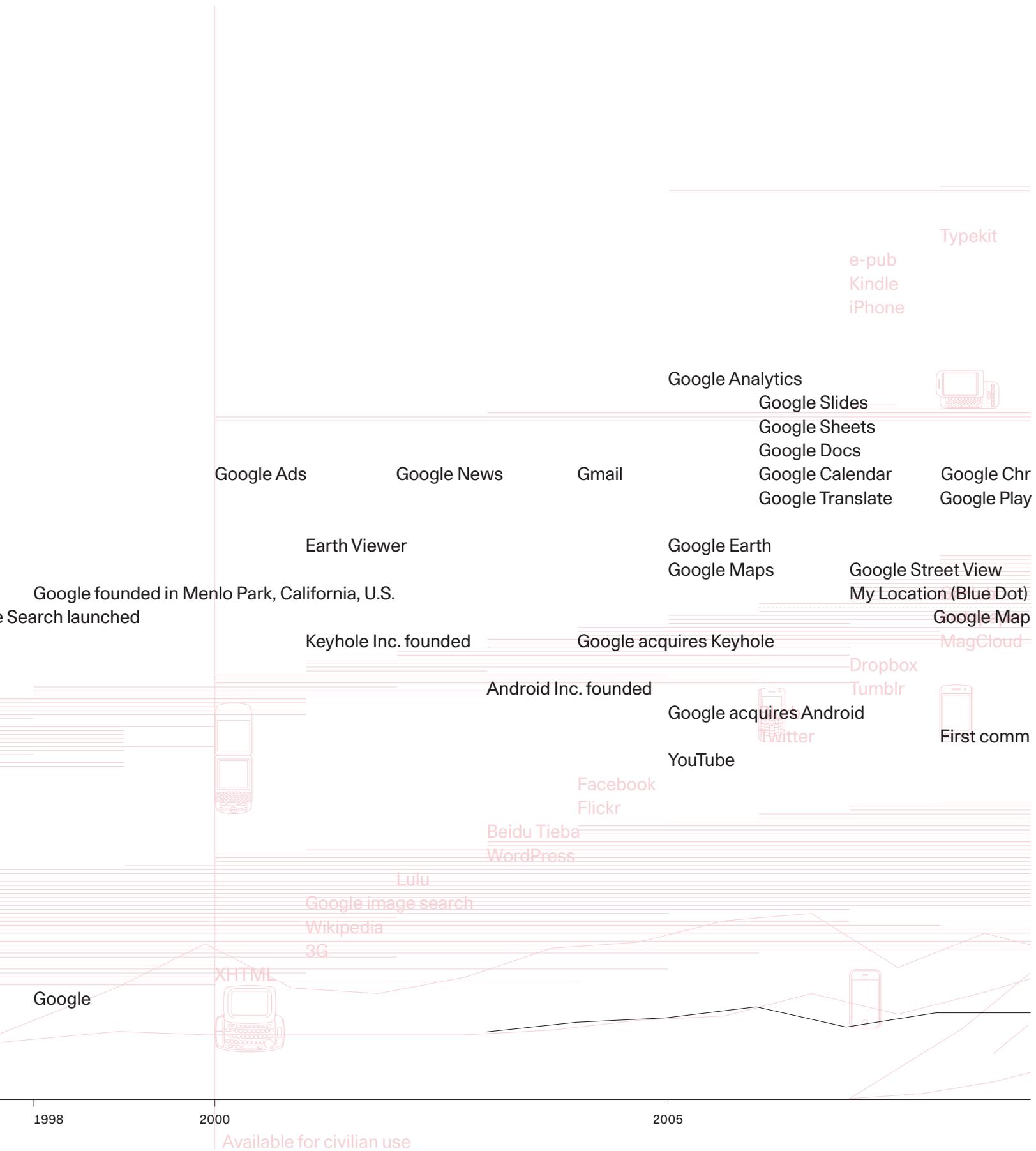
exactly the opposite. The map's design renders it in a soothing, familiar format that prevents users from questioning it. The deceiving familiarity of the Strava Global Heatmap raises an intriguing question: Can a map that is misread still be called a map? This issue becomes especially relevant when a map is considered to be a process, an unfinished product that needs a user to complete it.

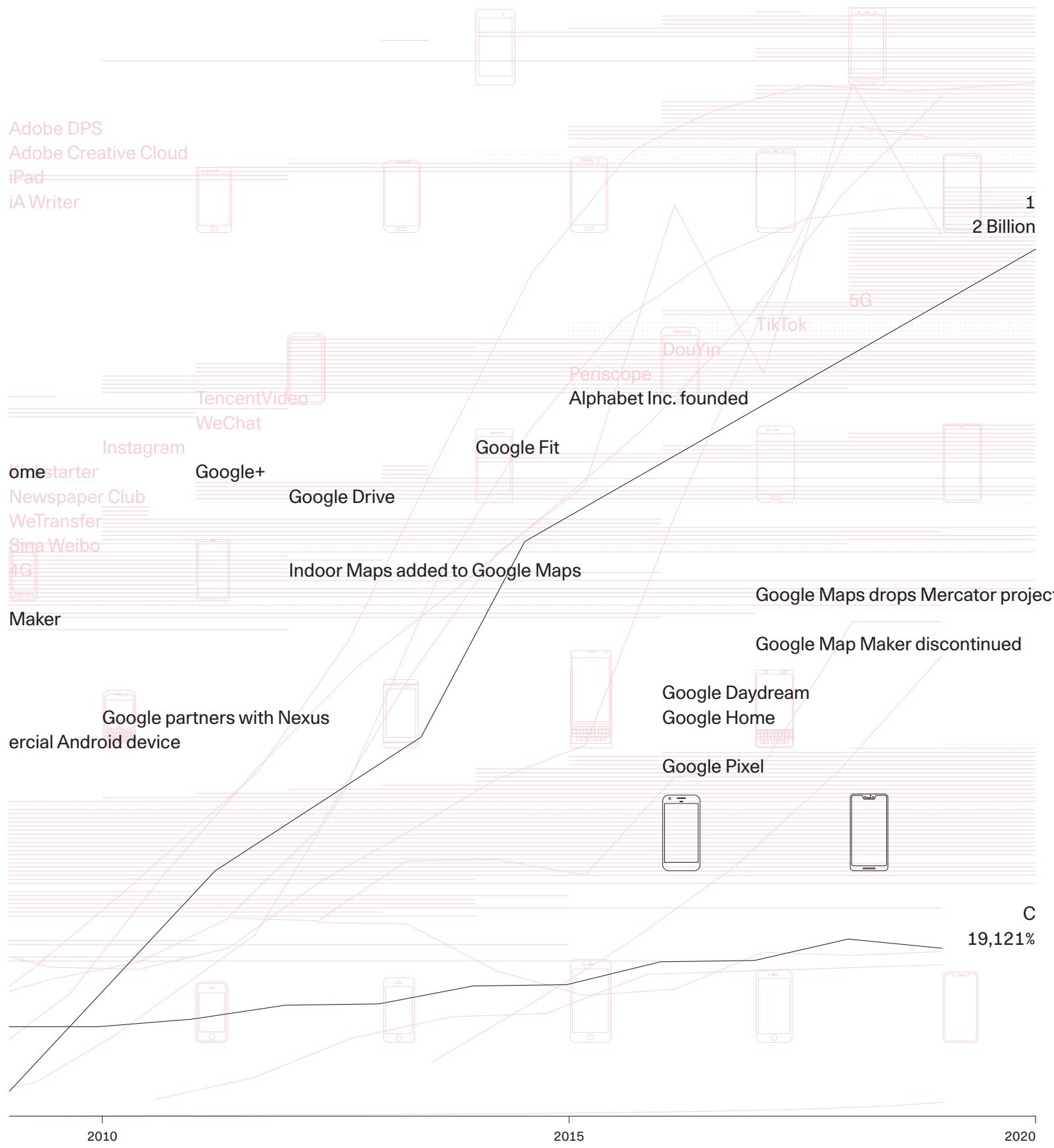
The case study of the Strava Global Heatmap demonstrates how strategies of visual deception, caused by familiar references, are at work on several levels. For example, the platforms offered by social media companies such as Strava are presented as public spaces, whereas in fact they are private spaces designed to keep users there, maximizing the number of moments to monetize on their presence. Another example is the Global Positioning System (GPS), the technology essential in all three case studies. Originally, GPS was a defence technology, which was later opened up to empower civilians, but at the same time the move was a shift in power from military to economic dominance. GPS tracks are personal expressions of users exploited by technology companies in their pursuit of total vision and economic gain.

The third case study, of the 'situation in Syria maps', examines the practices of amateurs who create maps of armed conflicts. I consider their work to be an anti-representational form of cartography. One of the aims of representational cartography is to improve the effectiveness of a map, to carefully balance the content of the map and its graphic container. Amateur conflict mapmakers lack the skills and knowledge to make the kind of sophisticated map that representational cartography pursues. Given the nature of their subject matter, and the (predominantly online) debates they are part of, amateur conflict mapmakers put more emphasis on the process of unearthing data, on showing what otherwise would be hidden, than on the representation of information, on mapmaking. Their maps are visibilizations, rather than visualizations.

The maps of amateur conflict mapmakers may lack certain visual qualities, but they may have other merits when considered processually. Conflict maps have a high level of accountability because they are part of a public debate. The maps by amateur conflict mapmakers are shared on online platforms, where they are shown with their sources, together with previous versions, and surrounded by discussions about claims made on the map. In my analysis of the work of Thomas van Linge, an Amsterdam teenager who mapped the conflict in Syria, I have shown that a map can be embedded in several debates. These can vary from open dialogues on social media to more internalized debates that show the process and considerations of the mapmaker when comparing several maps. These debates highlight the processual nature of conflict maps. They are never finished, constantly updated, and open to discussion.

Non-specialists map makers mostly use free and generic software to produce maps. Specialist designers, on the other hand, mainly use commercial specialist tools. Tools shape the practices that use them. Specialized software generates a specialized practice because of the economic model employed by software manufacturers, the demands of an industry that imposes specific exchange formats, and the curricula of educational institutes training new practitioners. By means of improvisation, and the use of generic tools, amateurs create different kinds of graphics editing practices that are not based on specialization.





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A Post-Representational Approach to Graphic Design

Theoretical research into post-representational cartography and insights from the case studies enabled me to formulate two visual concepts: the Blind Map and the Blue Dot. Both deal with the fundamental processual and dynamic status of respectively the map and its producer-user. They are transdisciplinary and applicable to other forms of graphic representation. The two visual concepts, and the various ways they interact, together constitute a post-representational approach to graphic design.

The Blind Map is based on a type of map that does not contain any text labels and that is mainly used in education to let pupils fill in the missing names in tests. Graphic products are Blind Maps, they are in a permanent state of emergence, never fully formed, but completed every time a user engages with them. Google Maps is the quintessential example of a Blind Map: its colours are pale as if the map anticipates being filled with a highlighted location or route, and its crop or zoom to be changed. In essence, Google Maps is a processual map. For a graphic product to be a Blind Map it should offer opportunity for a user to engage with it. In my experience as a designer, one way to do this is to create space, moments of emptiness, for a user to project her ideas and actions on, to fill in, to enter the graphic product.

The Blue Dot is both a visual sign indicating the user's location on a digital map and an emblem marking a different phase in the thinking about production and use of maps in which the binary division between producer and user no longer applies. The Blue Dot is about control and being controlled. The user takes control by producing a map based on her location, choice of zoom-level and preference for additional layers of information; she is as much a producer as a user of the graphic product. The extent to which the user can also be a co-producer of the map is limited by what is permitted by the producer and publisher of the map and to a lesser extent by possibilities offered by the software and the device on which the map is accessed. At the same time, the user is being observed by the publisher of the map that is exploiting the generated user data. In that regard the producer is also a user. This fluctuating dynamic between producing and using can also be observed in other graphic products than maps: designers developing graphic tools like apps or typefaces for others to work with, designers developing co-creation projects through online platforms, or amateurs producing photo books of holiday snaps using Internet-based software. These are all examples of practices where the producer-user divide dissolves.

The two concepts I introduced above are interrelated. The Blue Dot gives the user a presence in the process of graphic representation, but in order to take on this role the user needs to be given room and agency to co-produce. The Blind Map offers space for the user to take this position. The use of a graphic product is an encounter between two dynamic entities, the ever-emergent product and its producer-user, who is constantly fluctuating between making and using. The insights I gained during my research are a consequence of this encounter between two dynamic entities.

If the graphic product is regarded as constant, and the information chain of publisher, editor, producer, user as solid, then the relation between the product

and each participant in the information chain is distinct but fixed. However, if we regard both the graphic product and the participants in the information chain as entities in flux, then their encounter is ever-changing, causing various misalignments. The dynamics of varying oblique positions of formats, users and producers result in misunderstandings and false expectations of the information contained in a graphic product, or of the presumed knowledge and authority of a participant in the exchange.

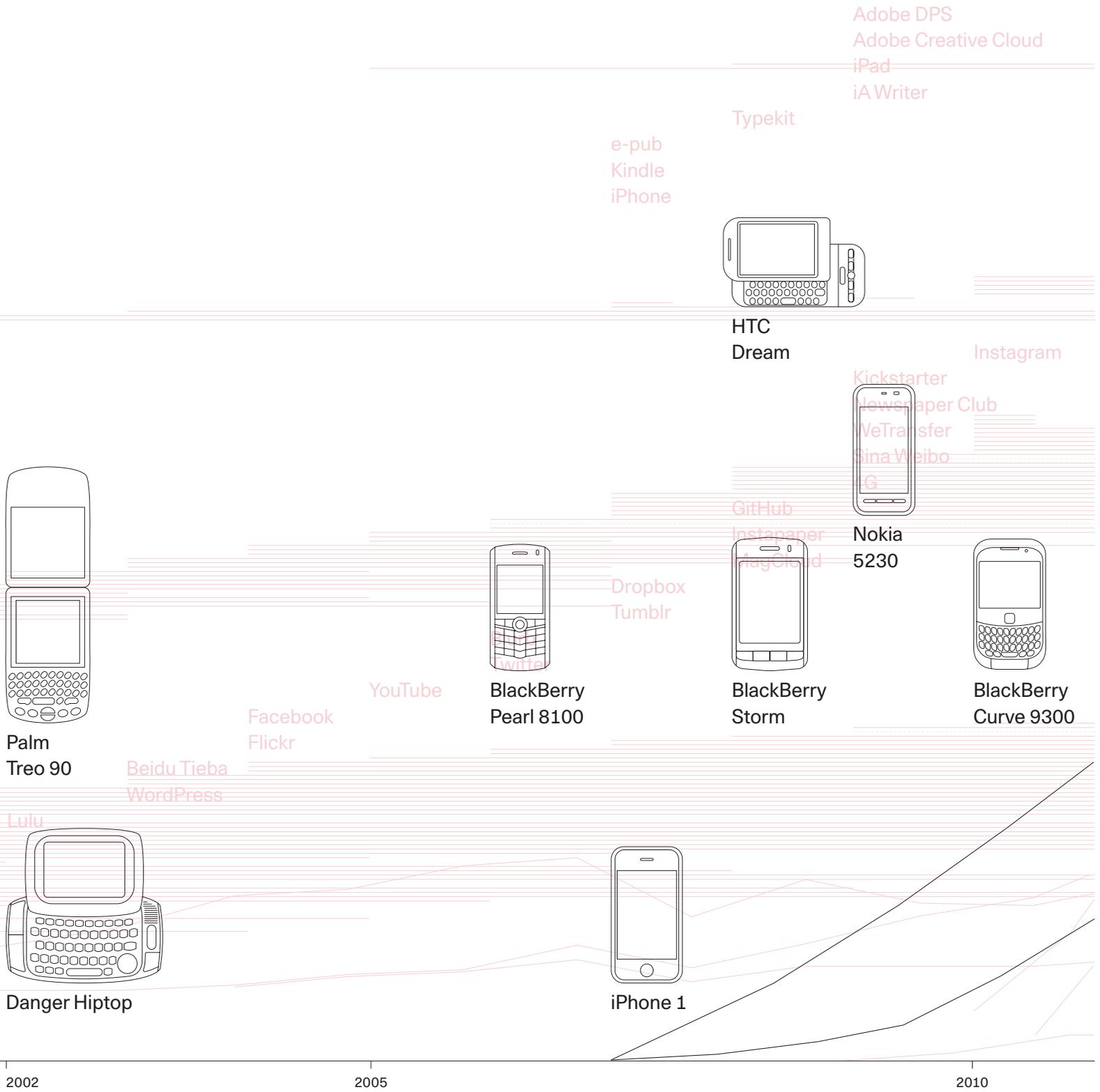
Examples of misalignments are the deceiving familiarity found in the various case studies. For instance, the light colours in Google Maps make it look like a paler version of something well-known, the memory of a map. Or the Strava Global Heatmap, which uses visual strategies that are reminiscent of long-exposure photography that create an image type the user has seen before and thinks she knows how to read. Or the use of design tropes of traditional cartography, which makes the maps of Thomas van Linge appear neutral and authoritative, and provide the mapmaker with the status of a specialist.

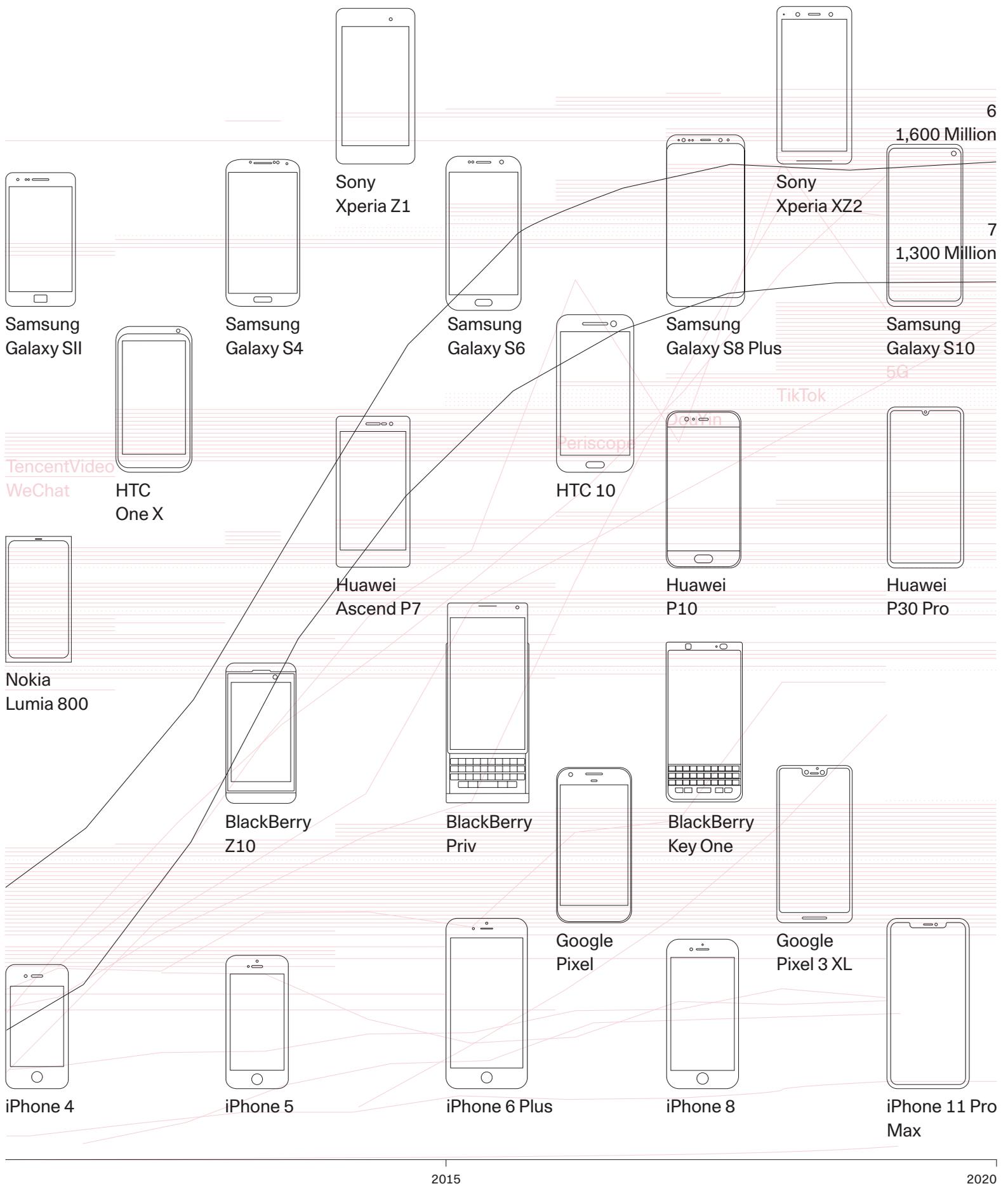
An ever-changing graphic product gains authority when it is embedded in a public debate, where information about the reasoning behind decisions is provided, where sources can be checked, and where users and producers can engage in a conversation. Besides featuring in this public debate, a graphic product may also conduct an internal debate, which can be observed when various stages of the product are published, revealing the ongoing process of production and reproduction. Another example of this internal debate are the traces of previous steps that are incorporated in later editions of the graphic product.

The publishing strategies of amateur conflict mapmakers on social media platforms are an example of how these mapmakers engage in a public debate. Another is Strava's publication of a background article on the making of the Global Heatmap. An opposite case is Google, that does not provide a map key of Google Maps, which causes me as user to be suspicious of the map and the motivation of the mapmaker.

In the dynamic constellation of production and use, devices, digital platforms and tools play a pivotal role as the mediators between the graphic product and its producer-user. The technologies that enable creation, recording, editing, production, distribution and access were always positioned between the product and the producer-user. But because the status of the graphic product and that of the participants in the information chain is dynamic, the mediating technologies between them gain importance. Take, for instance, a map displayed on a smartphone. It has no predefined crop, but is based on the location of the user. The proportions, resolution and size of the screen are meaningful elements in the design of the map, even if this is only partly controlled by the mapmaker. Another example of a mediating technology that plays a pivotal role in the exchange of producer and user is design software that has incorporated various design decisions, like typographic settings, colour palettes and predefined sizes. One could wonder in such a case to what extent the design is solely made by the graphic designer?

The democratization of design tools, and the widespread digital networks for exchange such as the Internet, have ensured easy access to the means of production for anyone who has access to a computer, smartphone, or other digital





device. Tools incorporating design knowledge and the decreasing expertise of users who lack training but do have access to the tools are opposite phenomena that reinforce each other. These mutually opposing movements increase the enormous impact of technology companies on the graphic design field. In fact, the tech industry partly determines what is produced because its tools incorporate design knowledge in the menus and settings. These companies already have a dominant position because they develop the file formats for exchange and production and thus dictate how visual information is produced. Moreover, the products of software and hardware companies have a strong presence in the curricula of design schools, so that they also determine how production will take place in the future. The dominance of software companies in the design field manifests itself in the economic model used to exploit their products that almost exclusively leaves room for highly specialized practices. In this way, technology companies not only determine what is made, how it is produced, now and in the future, but also how designers work.

The notion of the incredibly powerful position of technology companies extends beyond the realm of the design field to the full spectrum of our lives. They monopolize and centralize the technologies that allow us to find our way, record our activities and ideas, and share these in our conversations with others. The data we generate, in turn, becomes the property of these powerful companies who then exploit it as raw materials to increase their economic power. The notion of friendly fire also seems to apply to this catch-22 situation: we are casualties of the tools that we can no longer do without.

Graphic designers and other editors of visual information know how to escape this seemingly inevitable model of production and specialization, by employing insurgency tactics: using generic tools or creating their own means of production. Although certain designers do exactly this, it is not yet a general praxis. In my practice mainly tools from the large commercial technology companies are used. With the insights from this research I will certainly investigate how we can develop more tools of our own. This may be even more urgent in the context of education. What is the significance of the dependence on software companies for the re-evaluation of educational curricula? And: the fewer designers, and people in general, that actually depend on tools developed by others, the less likely they are to be struck by friendly fire.

Ambiguous Strategies

In my design practice I have developed strategies of incorporating ambiguity as an antidote to the misalignments in the encounters between the producer-user and the graphic product. Following the ideas of American visual theorist and culture critic Johanna Drucker, I acknowledge the fundamentally constructed nature of data. By incorporating the ambiguity and uncertainty of data in the design of information, I highlight and challenge the manipulations in visualizations. This can be done by making maps with more nuanced legends that challenge the assumptions implied by the use of certain colours, shapes, lines and transitions. By using a variety of visualization typologies, rather than one singular type, so that the

selective nature of any type of representation is questioned. And by using the means of production to emphasize the manipulations taking place in the process of visualization: by using inks with a different materiality, letting images bleed off the screen or page, and using the opacity of the paper.

I relate the position of the design of information to the notion of 'situated knowledges' as advocated by American feminist scholar Donna Haraway. We need to think outside the duality of objectivity and subjectivity, Haraway claims, and instead aim 'for a doctrine and practice of objectivity that privileges contestation, deconstruction, passionate construction, webbed connections, and hope for transformation of systems of knowledge and ways of seeing'.³

Creating visualizations is a process of editing, controlling, distorting and altering data. In my work I highlight these manipulations. Noticing the misunderstandings, false expectations and presumptions embedded in the case studies, I found the research to be an endorsement of the intentional ambiguous strategies I employ in my design practice. The presentation of complex information calls for a design approach that both presents the content and questions itself, that is, questions the methods and formats employed to show it. When there is no clarity, show the opacity.

A similar ambiguous strategy can be formulated for the interpretation of visualizations. Question what a visualization looks like, doubt what looks familiar. Question what a visualization shows: what is shown, and, especially, what is not shown? Question first and foremost why it is shown and wonder if it should be shown at all.

Multiple Languages

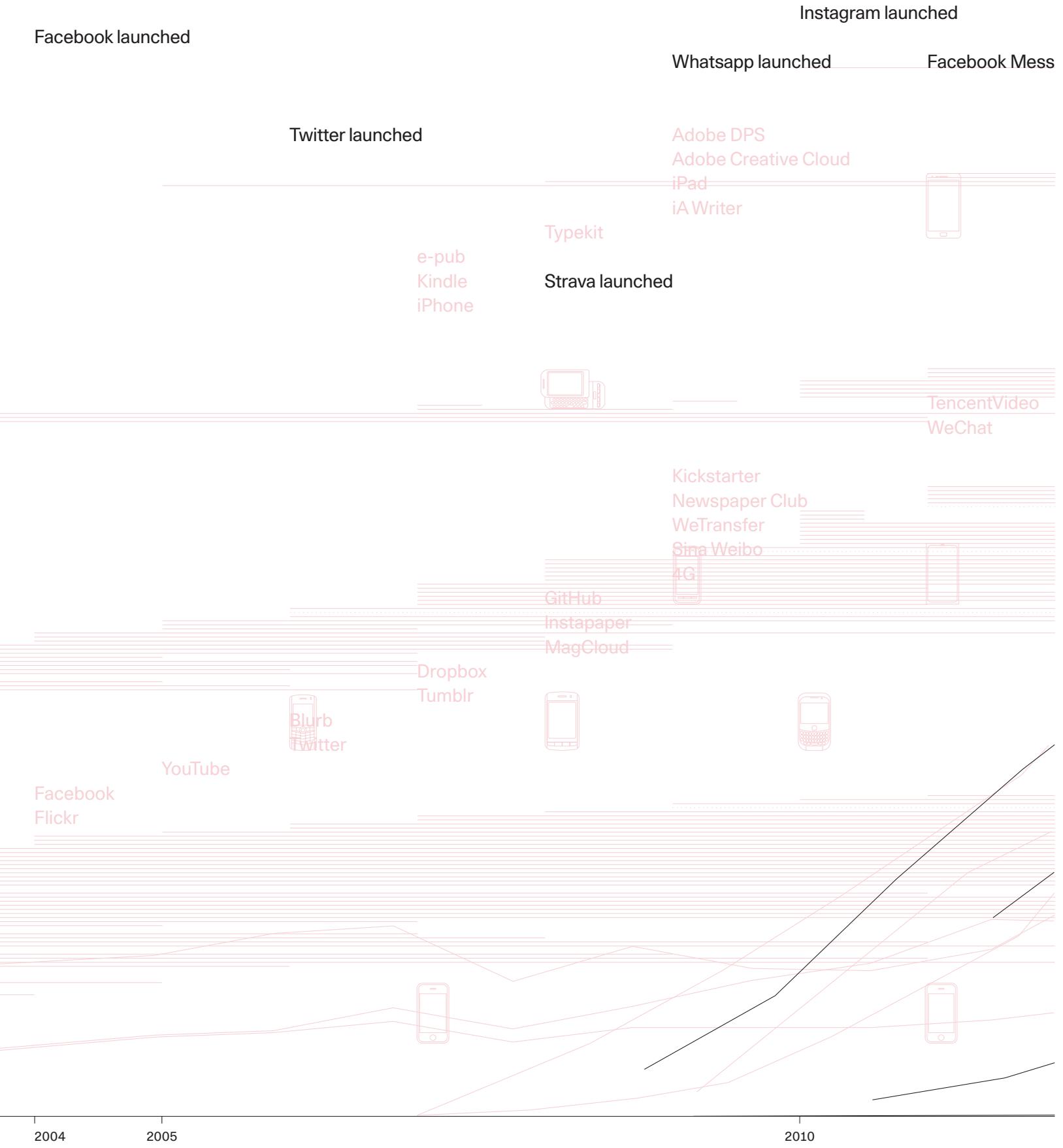
When I started this research process, I expected to gain insights into and new ideas about the relationship between the map, its producer and user. The Blind Map and the Blue Dot became visual concepts that I developed along the way. A totally unexpected insight was the obstructing role of specialist language in advancing a field.

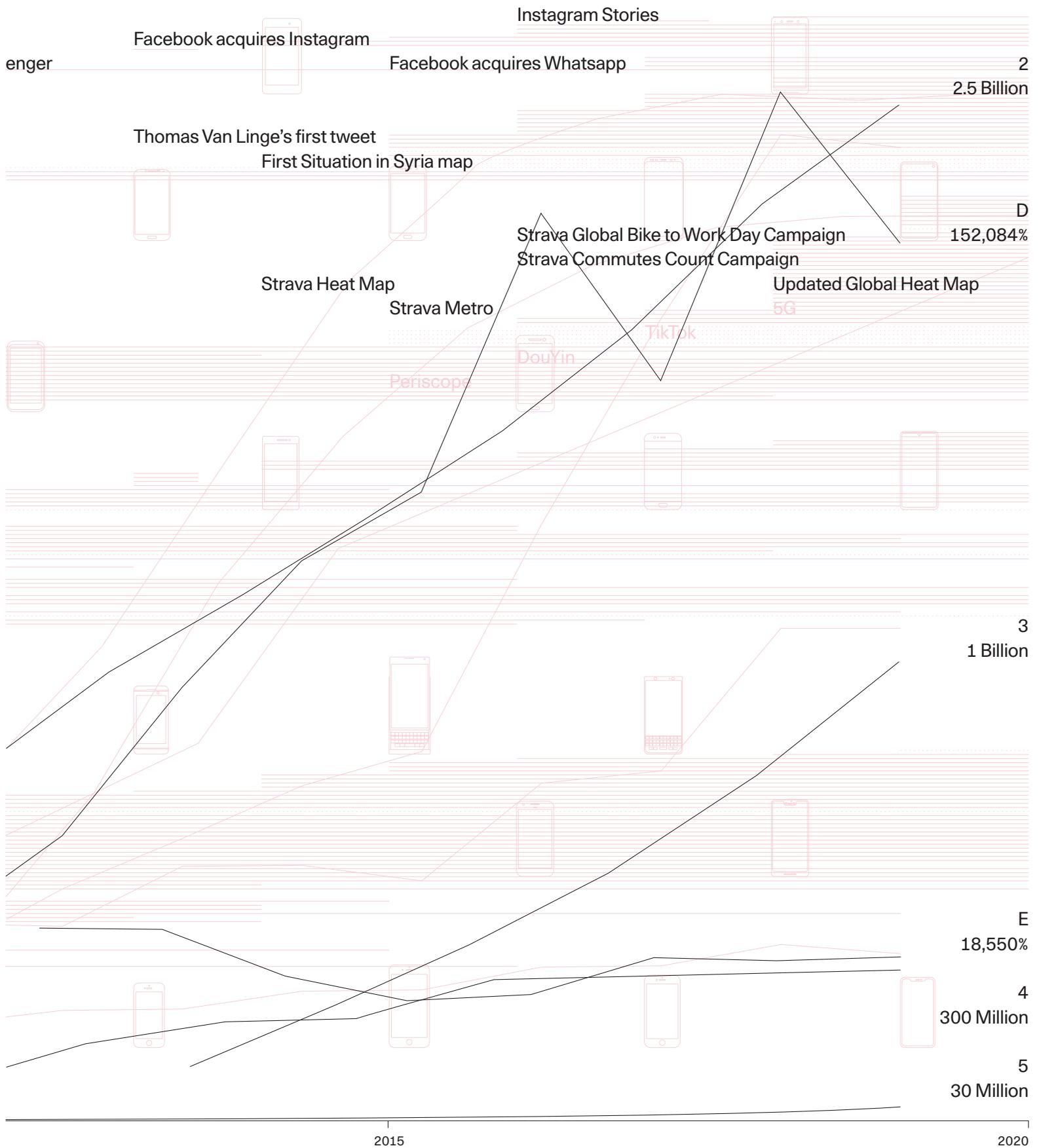
Specialist language employed by the practitioners of a field, like technical jargon, enables the exchange of ideas within a field, but it also functions as a form of gatekeeping for people outside the field. While the tools of graphic design have been democratized, its terminology has not. Language thus becomes an obstacle in opening up the field to new players. In this book I have tried to write texts devoid of jargon. This kind of technical language, in my opinion, is a means to exclude rather than to connect.

Technical language also complicates the re-evaluation of graphic design beyond its current conceptualization. As terminology is tied to a certain way of operating, documenting and validating, the development of alternative ways to do, see and evaluate needs to happen outside the reach of that specialist language.

Yet another way in which specialist language plays an obstructing role is how it causes miscommunication in transdisciplinary exchanges. The tradition of every professional field is embedded within the language it uses. A meeting between fields is a meeting of languages: the confrontation of different sets of concepts

3 Haraway, 'Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective', 584–585.





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and the encounter of different origins. In transdisciplinary conversations we need to acknowledge that each discipline uses a fundamentally different language.

An expanded understanding of the field, like the one I have tried to develop in this dissertation, therefore needs to address the modes of communication used to characterize it. It has been my ambition to go one step further and also develop alternative and additional languages to characterize graphic design. In this book I have added an additional flow of information that is primarily visual. This second strand documents the same research as the texts, but uses an alternative language that requires a different mode of processing the contents: looking instead of reading.

The design of the alternative and additional visual language is informed by the 'mixed methods' approach that combines different kinds of data in a single display. What appeals to me in the mixed methods approach is its aim to combine qualitative and quantitative research. It fits the subject and strategy of my investigation. On the one hand the complex data and in-depth analysis of contemporary mapmaking practices, and on the other the low-complexity data of the comparison of a large variety of graphic design tools, practices and histories. I also see a connection between mixed methods and post-representational cartography, in the ability of the latter to bring together different kinds of theoretical approaches. The British geographers Rob Kitchin and Martin Dodge state that post-representational cartography offers a theoretical space where the practical applied knowledge of representational cartography and the critical thinking of more-than-representational cartography can meet.⁴

In my view, the development of alternative and complementary languages is an essential aspect of artistic research. Concerned with, and conducted by means of practice, artistic research is a type of investigation that produces two outputs, a discursive and an artistic one. In my case I have combined them into a single format, a book, but they remain two distinct flows of information that complement each other but at the same time are each an alternative incarnation of the other. I see the artistic output of artistic research projects as an argumentation embodied in an alternative language. This artistic argumentation is self-contained and complete as a report of the investigation in itself. At the same time, as an additional presentation to the discursive argumentation, this artistic line of reasoning questions the language and the format of the discursive product, and all prejudices and histories contained therein. In that respect, there are similarities between artistic research and the ambiguous strategies I employ in my practice: simultaneously presenting the content and questioning it in order to highlight the fundamentally constructed nature of research.

This investigation started from a sense of urgency I experienced in my own practice. I felt the need to understand the changes that were happening in graphic design. Crucially, with the urgency came the objective to bring the insights I would obtain in the research back into my artistic practice, to use them as strategies in my design work. I was therefore as equally interested in the 'how' as in the 'what' of the case studies. During the research process, I realized that a purely critical position would not bring me a new awareness or a perspective that I could transport back into my practice. In thoroughly studying the technology companies I found many troubling things, but this did not result in ideas I could use in my

practice. Nor did an empirical approach aimed at improving the communication help my design work, because this seemed insufficient to address the full complexity of information exchange. The insight I wanted to bring back into my practice would have to be a combination of those two approaches, questioning the hidden structures behind and showing the full scope of the data used for a visualization.

So, what insights *can* I bring back to my practice? Post-representational cartography and mixed methods appeal to me because they offer a step beyond the quantitative and qualitative research paradigms. The post-representational approach offers a space where critical and functional research methods can meet. In this way I can closely scrutinize underlying power structures, and at the same time I can study how these are supported by design choices. Similarly, but in a different way, mixed methods offer me the option to combine things, rather than to select them. For this book, it means the merging of various presentation formats. A third crucial insight is the approach of ‘withholding judgment’ as propagated by Venturi, Scott Brown and Izenour in *Learning from Las Vegas* (1972).⁵ Postponing opinion helped me see beyond the dubious surveillance tactics of technology companies to discover the deceptively familiar formal language that was employed to camouflage commercial space as public space. Looking beyond the occasionally clumsy designs of amateur mapmakers allowed me to get to know their interesting strategies for production, distribution and exchange. All three approaches listed above are essentially methods to not choose: to combine modes of research, to combine modes of presentation and to postpone opinion. The combination of the three helps me to observe, understand and design.

Postscript: In the Future

In 1984, at the start of the process of the digitization of the means of production of visual information, the song *In the Future* by Scottish-born American songwriter, musician and artist David Byrne was performed for the first time.⁶ In it there is a line that resonates with me: ‘In the future TV will be so good that the printed word will function as an art form only.’ It feels as if the line addresses me directly: I design printed matter, I have made a book about my work titled *I swear I use no art at all*, and it is me who believes that design can play a meaningful role in informing users. I read in the line from Byrne’s song that technological developments will transform a field, and that this change is inevitable. Could it be possible that the fate of graphic design is to be only art? This research project has taught me to embrace ambiguity, and that the choice not to choose—by postponing judgment, by combining several research methods and by using multiple types of representation—leads to a deeper understanding of the many complexities in the production of visual information. I am convinced that a multi-layered approach is capable of coping with unforeseen changes. This is what I intended to do in this research: to open up my field, to make it more inclusive in terms of the types of works produced, the variety of practices and the kinds of languages used to characterize it. In other words, in this dissertation I have attempted to open up the thinking about graphic design so that it can become future-proof.

4 Kitchin and Dodge, ‘Rethinking Maps’, 337.

5 Venturi, Scott Brown and Izenour, *Learning from Las Vegas: The Forgotten Symbolism of Architectural Form*.

6 Byrne’s song *In the Future* was part of *The Knee Plays*, a section of the larger opera *the CIVIL wars: a tree is best measured when it is down*, by American playwright and theater artist Robert Wilson. *The Knee Plays* premiered in April 1984, three months after the Apple Macintosh computer went on sale. Incidentally, the premiere of *The Knee Plays* took place at the Walker Art Center, Minneapolis, where the aforementioned Andrew Blauvelt was design director and curator of, among others, the *Graphic Design: Now in Production* (2011) exhibition.

