The chapter focuses on the design of two research projects looking at visual materials found on social media: a study by Samantha Hautea, Perry Parks, Bruno Takahashi and Jing Zeng which discusses popular TikTok videos with the climate change-related hashtags (Hautea et al., 2021); and a paper by John Boy and Justus Uitermark which explores Instagram posts geotagged as posted in Amsterdam (Boy and Uitermark, 2017). Both papers are rich and nuanced, and this chapter discusses only a few aspects of the design of their research.

5.1 An Introduction to Designing a Visual Methods Research Project

If research design is about how the constituent parts of a research project are consistent with each other, what are those constituent parts? When you read an academic paper summarising the results of a research project, the constituent parts usually appear to be:

- 1. A literature review which outlines the conceptual framework of the research and relevant empirical research, and explains how the project relates to them.
- 2. A research question which explains what the project is trying to do. This can be quite broad and be more like a 'purpose statement' (Creswell and Creswell, 2018: 117), or it can be quite specific.
- 3. A description of the methods used to generate the data on which the paper is based.
- 4. The ethical procedures adopted by the researchers, if relevant.
- 5. The results of analysing the data.

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6. A concluding discussion of the results, which will answer the research question or refer back to the research purpose.

Many academic papers, especially in the social sciences, will have a separate section on each of these aspects of a research project, in the order I have just listed (though 1 and 2 are often put in the same section, and 3 and 4 are often combined too). In the humanities, these different elements are often merged in an essay format. But in all cases, there will be a clear logic that takes you from one constituent part of the research to the next.

Research design refers to that clear logic. It is about making sure that the literature review engages appropriately with existing work and develops a coherent theoretical position; that the research question emerges logically from the literature review; that the methods generate appropriate kinds of data to answer the question convincingly; that the data has been analysed robustly; and that the

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DESIGNING A VISUAL METHODS RESEARCH PROJECT

'Research design' refers to the way a research project is crafted so that all of its constituent parts are consistent with each other. The first chapter of this book noted that a research methodology justified the use of a particular method. Research design justifies the use of a methodology. Research design is one way in which the rigour of a piece of research is established. It is a skill that all researchers need to develop, whether you are designing an undergraduate dissertation or an ambitious grant proposal.

There are several excellent books about research design and this chapter is not going to replicate their extensive guidance. The focus here will be on some of the aspects of research design that are particularly relevant to projects working with visual materials, and, even more specifically, to working with this book. The chapter has four sections:

- The first is a brief introduction to research design with found and made visual materials.
- The second discusses defining your research project.
- The third explores how to decide on your research method(s).
 The fourth emphasises the improvement of the imp
- The fourth emphasises the importance of iteration in research design.

conclusions line up with the insights of the literature review, make appropriate use of the results of the analysis and answer the research question. It should be clear too that the project was conducted according to relevant ethical protocols. From this description, it should be clear that each aspect of a research project are related to each other and that they should align consistently. That is what is meant when research design is described in terms of the clear logic that connects the constituent parts of a research project together.

Figure 5.1 is an attempt by researcher Janet Salmons to visualise the interconnections between the different aspects of a research design. Notice all the arrows between the different components of the diagram and the words like 'underpin', 'influence', 'relate', 'generate', 'justify' that link them: this emphasises the need for integration between the various parts of a research project. Another thing to note about this diagram, however, is that, unlike the description of research design I have just outlined, it is not linear. Indeed, while a research paper or dissertation should hang together in the way I have just described, the actual process of design is rarely quite so straightforward, a point this chapter will return to in section 5.4. Salmons' diagram also offers some insight into what exactly underpins the words like 'appropriate', 'logical' and 'convincing' in the previous paragraph. She focuses on Methods, Methodologies, Epistemologies and Theories. Her diagram emphasises the central role of particular theorisations and their ontological and epistemological claims about what exists and how we can know that (for more detailed discussion, see Creswell and Creswell. 2018; Leavy, 2017; Panke, 2018). This book has also already indicated in broad terms that theoretical understandings of how images work directly shape how

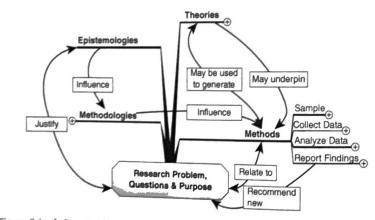


Figure 5.1 A diagram of the interrelated aspects of research design, by Janet Salmons. (www.methodspace.com/wp-content/uploads/2021/04/Salmons-Mapping-Facets-of-a-Research-Design.pdf, accessed 9 December 2021)

images are most appropriately analysed in terms of the choice of which sites and modalities to pay most attention to.

If you are planning to make images as part of your research project, the research design can be relatively straightforward. As Chapter 2 briefly mentioned, research methods which work with images made by either the researcher or the participants have become well established and well justified over the past decade or so. Many researchers have given explicit reasons for advocating the use of those methods, so there are plenty of precedents for using images as part of semi-structured interviews, for example, or as part of participatory research projects (methods which are discussed in Chapter 13 of this book). While that does not mean that no innovation is possible, it does mean that if that's the sort of visual research method best suited to answer your research question, there are very likely models that you can tailor fairly straightforwardly to meet your needs. This can make designing research using those sorts of methods more straightforward than designing a project that works with found visual materials.

If you are planning to work with found visual materials, however, you have a lot more leeway to choose your own combination of approach and imagery, which means a lot of things to fit together consistently: how to theorise your materials, which to select to work with, what method to use. Spending time on your research design early on will help you make 'good choices' when faced with a lot of possible options (Panke, 2018).

And remember, following Chapter 4, that ethics should be considered as part of every element of your research design.

5.2 Defining the Project

The starting point for many research projects is a spark of personal interest: some images that have caught your attention in a gallery or online, or that you make, or that you love watching. Or maybe you've read a provocative theoretical paper and want to explore a relevant empirical example. Starting with something that interests you is definitely important - it will motivate you through the project. But you also need to refine and develop that starting point into something more specific - a purpose statement perhaps, or a research question. Moving from a vague interest or enthusiasm to a productive and useful purpose statement or research question is a process (see Peters, 2017) explored in the next four subsections.

5.2.1 Doing some initial reading and thinking

Before spending too many hours aimlessly watching TikTok videos, or planning visits to galleries or watching the entire roster of Marvel films, you need to pause and do some reading. The need to read and think before plunging into a

research project has already been made in section 1.5. To repeat and elaborate, you will need to do at least two kinds of preliminary reading:

Literatures on visual culture in general. As Chapter 2 explored, there are a

range of quite different approaches to thinking about visuality and images. Section 2.1.3 drew a theoretical distinction between representational understandings of images, and non-representational, for example. A useful way to elaborate your starting point, then, is to work out in very broad terms if you are interesting in the meaning or affect of images - or some

Literatures on the specific kinds of images you're interested in, or similar sorts of images. Search for what others have written on the medium in which you are interested and on the genres you think are relevant to the images you are concerned with. If you have an 'artist' of some kind as the producer of your images, look for what has been written about them; if you plan to make images as part of your research, explore the results of similar projects.

Having done that reading, you should now be able to develop a more specific understanding of the visual materials you are working with, and to describe them in a more precise way.

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One of the differences between the two studies of social media images that are this chapter's key examples is how they conceptualise the images that they are studying. These are theoretical decisions which then impact on the rest of their research design.

Read the two papers and pick out some of the key differences between their approaches to Instagram photographs and TikTok videos.

As I read their paper, Boy and Ultermark (2017) understand Instagram images like this:

- Their visual content is taken to be photographs that selectively represent particular elements of Amsterdam's urban environment.
- They also emphasise the geolocational metadata of instagram posts, which enable them to be mapped.
- They understand each post to be a thing that circulates by being shared among Instagram users, and they work with user data too.
- They argue that users interpret city spaces through the visual content they see.

That is, they understand the images posted on instagram as meaning-making representations.

Hautea et al. (2021) approach TikTok videos rather differently. They theorise TikTok videos in these terms, I think:

- Their visual content which is highly affective and also carries messages.
- The affectiveness of TikTok videos is enabled by the platform's affordances, particularly the visibility, editability and associationality of remixed video content.
- Users feel the affects, sentiments and messages that circulate through the platform.
- The effects of that circulation on users are unclear.

So, we can see that Hautea et al. (2021) approach the effects of TikTok videos as especially non-representational.

5.2.2 Articulate your understanding of the visual materials you want to work with

Based on that reading, articulate your own conceptualisation of what images are and how they work. This doesn't have to be elaborate or original but it has to be consistent.

In particular, think about what sites and modalities you want to focus on. Table 5.1 compares the papers by Hautea et al. (2021) and Boy and Uitermark

Table 5.1 A comparison of some aspects of the chapter's key examples. The aspects of TikTok and Instagram given most emphasis in the discussions are in bold.

	Hautea et al. (2021) on TikTok	Boy and Uitermark (2017) on Instagram
site of	describes the affective dynamics of	describes individual creative users
production	TikTok as a platform	making meaningful and value-laden
		representations
site of	evokes affective messages	describes the selective content of
image itself	shaped by TikTok's technological	Insta posts and their values (no posted
	affordances, and notes meaning	photographs are reproduced)
	is often undecidable (stills from 9	
	videos are reproduced)	
site of	assumes the constitution of	emphasis on patterns of stratification
circulation	affective publics via affect of videos	and segmentation in posts (who posts
		about where, how often, how popular)
site of	assumes that widely shared	assumes that selective representations
audiencing	videos constitute an affective	are influential in shaping identities of
and use	public	users and of city neighbourhoods

(2017) again, this time in relation to the sites on which their analyses focus. (401/) again, this time in relation of TikTok videos and Instagram posts, both In their accounts of the effects of TikTok videos and Instagram posts, both papers refer to all four sites identified by this book as part of a critical visual papers refer to all four sites induction, the image itself, its circulation and its methodology: the sites of production, the image itself its circulation and its audiencing. But they emphasise different modalities of those sites, as well as paying more attention to some sites than others. Broadly speaking, the technological affordances of TikTok are given more emphasis by Hautea et al. (2012) whereas Boy and Ultermark (2017) are more interested in the social modality of

Instagrammers and their posting.

5.2.3 Developing a purpose statement or a research question

Your reading and thinking about sites and modalities has clarified your understanding of visuality and imagery that you are going to study in broad terms. Now you can start to express more clearly what you are interested in finding out by developing a purpose statement or a research question, or both. Whether working with a statement or a question, make sure you can define each of its terms and make sure that those definitions align with the theoretical framework you are working with. You also need to ensure that relations between the terms in the statement or question make sense in relation to that framework.

A purpose statement can be fairly broad. Hautea et al. (2021) offer a typical purpose statement:

These complex relationships between affordances, affective social ecosystems, and climate-themed messaging are what we seek to better understand through multi-modal analysis that takes all these factors into consideration rather than isolating discrete variables. (Hautea et al., 2021: 2)

They say that they 'seek to better understand' something - a classic purpose statement, and quite broad. It does have some parameters though because they have also defined a fairly specific empirical topic (climate-themed TikTok videos) as well as theorising 'complex relationships between affordances, affective social ecosystems, and climate-themed messaging' in the full statement.

A research question, in contrast, is generally quite specific and so must be clear and unambiguous. Hautea et al. (2021: 3) also give three specific research questions in their paper:

RQ1: What combinations of platform affordances and features used in popular climate-related TikToks facilitate the (re)production of affective RO2: What kinds of messages are prevalent in popular climate-related TikToks?

RO3: What affective themes emerge through multimodal discourse analysis of popular climate-related TikToks?

These questions use the same key terms that have appeared in the abstract, in the discussion of literatures and in their purpose statement (being consistent with your terminology is important). The research questions might be understood as more precise versions of their statement of research purpose.



Compare the purpose statement made by Hautea et al. (2021) with their research questions. Can you think of other research questions that would be consistent with their purpose statement? Are there aspects of their purpose statement that are not addressed by their questions?

5.2.4 Explore what your question demands

Precise purpose statements and/or research questions are critical because they dictate what you need to find as evidence and how you are going to approach that evidence. So once you've got a first version of your research question drafted, you need to test it out to see how it is going to do those two things.

First, what evidence does your research question need? What sort of images? What sort of media? From where? Over what timespan? The following chapter gives some advice about sourcing images and visual materials. Will you need to look at a few in-depth, or identify patterns in many? Or both?

Second, which site does your research question suggest you need to examine most closely? The image itself, or its audiences, for example? Do you need to talk to the producers of images, or analyse the content of images, for example?

At this point you might find that what your question demands does not suggest quite what and how you want to research, a very common situation addressed in section 5.4.

5.3 Deciding on Your Method(s)

Having developed your theoretical framework and honed your research question, you can finally turn to thinking about your method - or methods, if you choose to use more than one. Your method needs to align with what this chapter has just discussed:

Your method needs to match how you conceptualise the various elements of your research question: how you understand your images and what sites

Your method needs to provide the evidence needed to answer your research question. Broadly speaking, if answering your research questions demands the analysis of large numbers of images in order to identify broad patterns, quantitative or digital methods are most likely to be appropriate. Questions that are more interested in meaning and social practice demand more in-depth, qualitative analysis of smaller numbers of images. You might also consider combining the two approaches and using a quantitative method to identify large-scale patterns and a qualitative method to unpick more detailed processes. Many studies of images on social media platforms adopt this mixed approach (including Boy and Uitermark, 2017).

Every chapter in this book that discusses a method emphasises that each method does some things really well but doesn't focus on others. Some methods deal with large numbers of images better than others. Some methods really only focus on one site, or one modality. Tables 1.1 and 1.2 give you an overview of some of those emphases. Once you have a broad sense of what method might work for your project, use those Tables to go to the relevant chapter as a starting point.

Identifying the sites and modalities most relevant to your research will also help you to identify the most appropriate method to use. After all, if you think that the audience is the most important site at which the meaning of an image is made, and that the social is that site's most important modality (these are theoretical choices), there is no point choosing a method that focuses mostly on the technological aspect of the production of the image you are concerned with. Table 1.2 summarises which methods discussed in this book focus most directly on which sites and modalities.

Let's see how this works out in the case of Boy and Uitermark's (2016, 2017) investigation into the representation of Amsterdam on Instagram. Their research questions were: 'How do people represent the city on social media?' and 'How do these representations feed back into people's uses of the city?' (Boy and Uitermark, 2017: 612).

Unlike Hautea et al.'s (2021) conceptualisation of TikTok as a platform that co-constitutes affective publics with its creators, Boy and Uitermark (2017) conceptualise Instagram as a platform on which users share representations. They approach Instagram as a platform whose self-aware users choose to represent only some of Amsterdam's neighbourhoods and not others, and attach particular meanings to them as they do so. In order to access those meanings, Boy and Uitermark interviewed 10 of the most popular Amsterdam Instagrammers (their paper explains how they identified these 10) in order to understand what was being posted and why: what sorts of neighbourhoods were being represented and how. Given their conceptualisation of reflexive Instagram users who create meaningful posts, interviews are an obvious method to use because interviews precisely aim to give interviewees a chance to explain what they do and why.

However, Boy and Uitermark also share Hautea et al.'s notion of the social media platform as something which is near-ubiquitous. This encourages them to undertake a large-scale analysis of lots of Instagram posts in order to understand how 'the city' is selectively represented on Instagram as a very widely used platform, and their interest in the selectivity of representation leads them to focus on finding out what neighbourhoods in the city are represented more than others. They analysed 480,000 geotagged Instagram posts and their comments, using digital methods (Boy and Uitermark, 2016). They designed this analysis to do three things. It mapped Amsterdam's Instagram 'hot-spots', showing what parts of the city are most 'grammed' and which are invisible on the platform (see Figure 5.2). It allowed them to identify eight clusters of Instagram users who post largely to each other about particular parts of the city. And it identified the most influential users (those whose posts were most liked, commented on and shared).

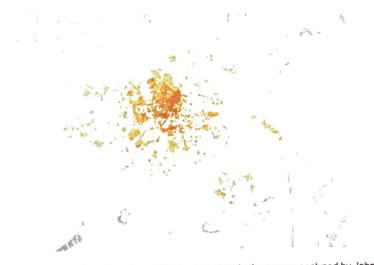


Figure 5.2 The distribution of geo-tagged Instagram posts in the corpus analysed by John Boy and Justus Uitermark (2017: 615). Basemap © OpenStreetMap contributors.

The combination of interviewing influential Instagrammers (identified by the large-scale analysis) posting particular sorts of images that value specific kinds of lifestyles (identified in the interviews) about certain neighbourhoods and

not others (identified by the large-scale analysis) gives them the answer to their not others (identified by the burger of the city on social media?' and 'How do these questions 'How do people represent the city on social media?' which is it questions now to people representations feed back into people's uses of the city?', which is: 'Instagram representations need back may require and selectively imbue places with users develop uneven networks, claim space and selectively imbue places with symbolic value. These social media practices, our findings suggest, feed on as well as perpetuate inequalities in the city' (Boy and Uitermark, 2017: 613).

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Try tracing the connections between the theoretical framing of TikTok in Hautea et al. (2021), the sites and modalities it emphasises, the methods they use

Given their interest in the technological affordances of TikTok as a platform and how it enables affective publics to emerge around #climatechange, Hautea et al. (2021) choose different methads from Boy and Uttermark (2017) They decide to focus on a close reading of the platform itself and what happens there. So, no large-scale analysis and no interviews. Instead, they identify the 134 most liked and shared videos using climate change-related hashtags over a specific time peried land carefully detail their selection process). They then used 'multimodal analysis' to interpret those 134 TikToks. Multimodal analysis has nothing to do with my use of term 'modalities'! It is a research method mentioned briefly in section 9.4 that focuses on the way in which meanings are conveyed in a wide range of communicative 'modes', including images but also writing, music, layout, speech and 3-D objects. They used multimodal analysis because the audio content of



Figure 5.3 Figure 4 from the paper by Hautea et al. (2021: 9). Its original caption was: Stills from a Tik Tok discussing losail fuels and plastics. As they rapidly bring up one image after another, the creator links (a) plastics, (b) tossil fuels, and (c) dinosaurs, in a nearly stream of consciousness like flow. © Sage

TikTok videos is crucial to their effects (see Figure 5.3). Through a careful descriptive analysis of the visual content of a sample of those videos (the site of the image itself) as well as their soundtracks, they show how hashtags and music as well as visual content enable videos to be shared, and how all sorts of cross-video referencing creates an affective public that 'transcends individual posts' (Hautea et al., 2021: 8). They also try to evoke the affective feel of the site of the audiencing of the videos, using terms like 'ambivalent', 'parodic', 'emotional', 'mocking', 'imprecise', 'uninformed', 'helplessness' and 'culpability'.

At this point, it can be a useful exercise to test your own research design's links between its theoretical framework, the research purpose or question(s) you have drafted and the methods you propose to use. Ask yourself these questions:

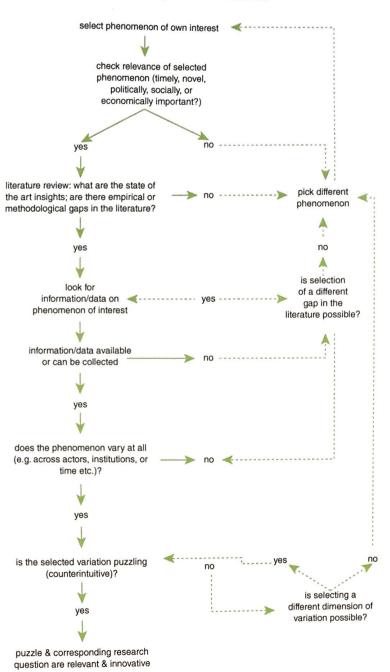
- How does your research question sit in relation to the reading that you've done? Does it emerge from it, using similar concepts and relations? Does the question imply something which the theoretical framework does not encompass?
- Does the question really demand a focus on the images you want to study, or would another kind of image be more appropriate? It can be useful to disentangle what you really want to do (your starting point, those TikTok videos for example) from the visual materials that your research question, as you've drafted it, suggests might be the most relevant visuals to study.
- Will the method you think you're going to use allow you to focus on the relevant sites and modalities, or would another method be better? Do you need to modify an existing method in any way?
- What are the ethics of your proposed research and are any ethical concerns properly addressed?

It's good practice to keep a record of all your decisions about questions, methods, ethics and sources - it will help you if you need to write about your methodology as part of your research project.

The other really important thing to do at this stage - if not before - is to ask yourself if your project is workable (Peters, 2017). Do you have the right skills to do it? Are the key sources you need to answer your research question available to you? Do you have sufficient time to do what you are planning? Will you be safe? If the answer is 'no' to any of those questions, you need to do some redesigning of your project. Which leads neatly on to the next section of this chapter.

Research Design and Method Selection

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5.4 The Importance of Iteration in Research Design

As noted in section 5.1, a really important point about research design is that, despite the impression given by most published academic research, research is not a straightforward process. While research design appears to have six key components – the six that often appear one after another in an academic paper – they are not the only things that happen as part of a research project, and they do not necessarily happen one after the other, either during the process of research design or during the actual research (in fact, I would say that they rarely do). A researcher will start off with an interesting question, and do some reading of existing research on the topic; that might change the question. Then you might realise that, much as your research question invites a digital method and you'd love to use one, you don't have time to learn how to use the necessary software; that might shift your question again.

Then there is all the work of integrating the different components into a whole, which can demand a lot of iterative work, from tweaking sampling procedures to choosing to work on a different set of materials. This iterative approach is shown in Figure 5.4. Assume it starts off with your favourite images. But Diana Panke (2018), who designed the figure, suggests that your interest alone might not be sufficient. Is your interest relevant and resonant in some way? Does it speak to a gap in a literature (their contribution of something new to the literature on social media is emphasised in Hautea et al.'s [2021] paper)? Are the relevant images available? Are they puzzling or interesting in some way? If the answer to any of these is 'no', Panke suggests your research design needs to change so that the answer is 'yes'. Her approach is quite schematic, and in my view a 'no' doesn't mean your whole project needs redesigning - but a 'no' might give you pause just to make sure that the design is holding up.

So research design is much more messy than academic papers generally admit. It is iterative; it is emergent. It can be constrained by practical issues, like the ideal images being unavailable for some reason. And quite unexpected things might happen during the course of a research project to throw it off track (which can be a disastrous dead end or can be a really interesting and unexpected new route).

Summary: Designing a Visual Methods Research Project

This chapter has emphasised the importance of consistency to the research design process; research design is about making consistent connections between your research question, the materials you choose to work on, the methods you use and your interpretation of your findings. Achieving such consistency is an iterative process. The two key examples discussed in this chapter - the papers by Hautea et al. (2021) and Boy and Uitermark (2016, 2017) - both focus on a

Figure 5.4 One demonstration of refining your research question as an iterative process (Panke, 2018:52).

social media platform that carries lots of images, and both are interested in the social media platform that sature theoretical orientations encourage different platform's effects. However, their theoretical orientations has been platform's effects. nowever, they discussion of their work has been careful not choices of method. The chapter's discussion another. The point of the to suggest that one orientation is better than another. The point of the chapter has been to demonstrate that theoretical accounts of images shape the methods that are most appropriate for exploring the effects of those images. This book's discussions of individual research methods will continue to make that point.

urther Reading

Your Human Geography Dissertation. Designing, Doing, Delivering by Kimberley Peters (2017) is an excellent and very practical guide to doing a research project. Don't be put off by the 'human

- geography in the title the advice given is applicable to a very wide range of dissertation topics. Research Design. Qualitative, Quantitative, and Mixed Methods Approaches by John W. Creswell .
- and J. David Creswell (2018) is another very useful overview of the research design process which works well with the approach of this book, and has lots of examples from published research.

6

HOW TO FIND, FORMAT, REFERENCE AND REPRODUCE **IMAGES**

Key terms

reverse image search

Each chapter of this book that discusses a method will say something about the implications of that specific method for finding appropriate images. Some, for example, have specific requirements about sampling procedures or metadata. However, there are also some general considerations about finding images which you should explore at an early stage of your research design. This chapter briefly discusses four aspects of locating and then being able to work with images. It has four sections:

- 1. Finding your images
- The format of your images 2.
- 3. Referencing your images
- Reproducing your images 4.

VISUAL Methodologies

An Introduction to Researching with Visual Materials

5TH EDITION

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