

ONE

Social sciences and research design

Demand and supply

A book is a complex entity made up of inspiration, vision and ideas that, although generated by different kinds of teaching and research experience, find a single home in a text. It can be seen as the product of a truly independent mind, or as the result of writing with a specific reader looking over the author's shoulder. That is, writing in anticipation of the reaction of some type of reader that matters to the author – for most of us, this means writing with a set of expectations about the readership in mind.

Granted that we did not write for ourselves but with specific expectations about our readers, who then is the reader looking over our shoulder?¹ Who do we think 'you', our readers, are? Our book, we hope, is the result of a productive encounter between demand (or what 'you' want) and supply (or what we offer). In our experience as university lecturers involved in modules on methods and design, as well as when we talk informally, wearing our researchers' hats, to young members of the profession, we have found that there is demand for a volume on research design in the social sciences that treats the reader as a competent person capable of making responsible choices: a grown-up social scientist, so to speak. All too often, however, those who set out to write a new research project or enter a course on research design and methods looking for inspiration and guidance seem frustrated. They do not seem to find what they want. Typically, when we look on the library shelves for books on how to design research, we are provided with either a cookbook (with precise instructions about what ought to

¹*The Reader Over Your Shoulder* (Graves and Hodge, 1944) is a time-honoured handbook for 'writers of English prose' that still contains valuable suggestions for those who write up their research in professional journals.

be done), or a somewhat bewildering collection of extremely diverse propositions about the nature of scientific inquiry and its methods. It is all very well to say, paraphrasing Mao Zedong, 'let a hundred flowers blossom', but there is a point beyond which the reader starts to suspect that the flowers are in different greenhouses that do not communicate with one another. Pluralism is a virtue, but this degeneration – we argue – is not what readers are looking for.

Let us say a few words about pluralism, which seems (and indeed is, up to a point) a genuinely good, honest, reasonable approach. Of course we all accept that there are different approaches, each of them particularly strong in some respects and weaker in others. The problems arise when pluralism first turns into incommensurability, and then degenerates into sectarian thinking. Being pluralist does not mean that approaches are always incommensurable with one another, that we cannot move between traditions, that paradigms should never speak to one another. Neither should this kind of argument lead us to close our minds to what others do – quite the opposite, in fact. Yet we have met researchers who say 'I am a rational choice theorist' or 'I am a Chicago school of sociology person' – they tend to use these paradigmatic assertions as blinkers. They feel that there is no need to move beyond or outside their paradigm-bound world. The suspicion is that these researchers live in their protective paradigmatic shells and do not want to hear anything that may disturb or challenge their core beliefs.

This is understandable: it is comforting to feel at home inside our approach, and claim that we do not have to look at what others do, because what they do 'is incommensurable' with what we do. But, epistemologically, it is wrong. Even if we buy into only moderate doses of analytic eclecticism (Sil and Katzenstein, 2010; we will return to this later in this chapter) we have to accept that there has been genuine progress – in the sense of 'understanding and explaining better' – in taking intuitions, conjectures and mechanisms developed within one approach and using them to increase the leverage of another approach. To illustrate, our knowledge of what exactly institutions 'do' to social behaviour can be used to control for institutional variables in an approach that does not start from institutional premises.

There is also a vast area where we can still be pluralist but accept that two approaches are truly in competition, so that if one is right the other is wrong. It is possible to say whether, for example, a certain kind of behaviour in a given process by an individual actor (say, a political party during an election campaign) is better explained by a rational calculation of the effects of expected consequences or by the decision to conform to the identity and roles that are expected by the environment surrounding the actor. It is therefore important to determine whether two given domains of the social sciences are ontologically or epistemologically incommensurable, whether they are commensurable and therefore compete for the explanation of the same type of behaviour, and so on.



What we take issue with is not the academic debate in the philosophy of the social sciences, but rather the more mundane behaviour of researchers and doctoral students. Some scholars mentally translate the contents of books where traditions are presented one after the other in rigid, separate compartments into the (wrong) conventional wisdom that ‘anything goes provided that you back up your choices with a decent justification’.² Thus, we have heard students say ‘I have decided to study Germany and France and will find a justification later on, but these are going to be my cases because I speak German and French’. Again, we all understand why someone may be keen on exploiting language skills (why not?), but there is nothing scientific in choosing cases before the skeleton of a research design has materialized.

As mentioned, the opposite of the loosely pluralist book is the cookbook version. Here the reader is given a very passive role in the master’s kitchen. The chef provides instructions, long lists of criteria to follow, tables of what can and should be done and what must be avoided at all costs, and the steps that, although not at all realistic, in a world where ‘everything else is constant’ will provide the perfect solution to the researcher’s problems. True, recipe books for social scientists always come with the caveats that research is a process of going back and forth to the evidence, that research questions are formulated in a process of scientific inquiry rather than in a one-shot fashion, and other soothing rhetorical devices. But the substance is a pedagogical model in which the novice has nothing to contribute to the cooking experience, while the chef possesses 100 per cent of the knowledge necessary to produce fine food.

In the ‘let a hundred flowers blossom but in separate greenhouses’ approach and its more extreme ‘anything goes’ version, the readers are told that we live in a truly diverse, if not Balkanized, social scientific world. Very few people talk to each other, and do so only within their cluster or field. Perhaps it is not true that anything goes in the social sciences – only the approaches included in the given volume are ‘good’ and ‘trustworthy’. Yet the very idea of providing a coherent approach to research design is presented to the reader as definitively ‘early modern’, connected to Hempel’s visionary (but today regarded as flawed) notion of unity

²That ‘anything goes’ is the only truth shared by the disciples of Feyerabend (1975), who in the philosophy of the social sciences has established the most relativistic position we are aware of. The problem with the epistemological anarchism of Feyerabend is that it does not tell us anything about quality criteria – how to discriminate between ‘high-quality’ and ‘low-quality’ research. We may or may not like it, but shared notions of quality and demands for quality research exist out there in the real world, no matter how deep a philosophical critique may be. These quality criteria determine our careers and reputations as researchers: why did that journal reject my article but publish that other article? Why was this project funded and that project not? What was that funding body thinking when it turned down my application last month?



in science,³ if not historically *passé*. The problem with this approach is that the reader is often offered several options that contradict each other. One cannot believe in rationality in Chapter 3 and denigrate rationality in Chapter 4! The reader can only come to the conclusion that the volume must have been written by people who were not in the same room when the project was discussed, or agreed to write the chapters only by stipulating that they should not read and comment on each others' drafts. Indeed, this is how peace in some departments is kept: people on different sides of the corridor do not speak to each other.

Thus, we think that you, the reader looking over our shoulder, are a grown-up. We believe that you want to make responsible choices. You are looking for a relatively coherent approach to design behind the diversity of individual methods and techniques. After all, the majority of funded research projects within a social scientific discipline have similar characteristics, and the major journals publish articles on the fundamental aspects of research design that acknowledge and build on each other.

After the demand has been sketched, the supply is pretty straightforward, consisting of a coherent product based on the assumption that researchers are reflective human beings who live in the real world of research funding bodies, journals, and PhD programmes rather than imaginary kitchens or on the moon. What we offer (the supply) insists on choices and trade-offs, not on definitively right and definitively wrong decisions in the research process. We also give equal consideration to problems of concept formation and problems of measurement. When we piloted our volume on two cohorts of doctoral students in political science, we found that for most of our students the notion of research design is nowadays practically very similar to the issue of what methods should be chosen. In contrast, we believe that to design a research project includes both conceptual aspects and the choice of one or several methods. It is important to be aware of whether we are making a choice about problems and concepts or a choice of methods or techniques. There is no leverage in locking horns over the problem-driven versus methods-driven choice. Successful projects deal with both problems and methods. Essentially, we would like to pitch this volume after your cookbook but before your book on methods. The simple cookbook tells you what should really be avoided in a research project. It also tells you what to do, but often with an unrealistic, idealistic approach to real-world research in the social science. The cookbook is more useful in pointing to possible mistakes than in guiding the reader. Thus, what we say is: read it but do not believe it entirely. And we add: do not jump into the methods before you give proper consideration

³Carl Hempel (1965) was one the strongest advocates of the unity of science, but one can go back to Kant, who believed in the unity of science not because there is unity in nature but because of the unifying functions or character of human reason and concepts.



to research design. Hence our claim that this volume in a sense comes after the cookbook but before the treatment of methods.

More importantly still, let us consider what research is all about. The craft of research is about tying claims, arguments and evidence (Booth et al., 2008). Becker (1998) defines the research process in terms of imagery, sampling, concepts and logic. This is the precious stuff of research. We use theories to make claims. The claims are true because of an argument we find in the theory. The evidence is decisive in corroborating the argument or in directing our attention towards something else. We can, for example, claim that governments perform better in terms of policy reforms in the first part of their mandate. This claim is supported by the argument that after elections governments enjoy a honeymoon period with their electorate in which they can push the boundaries of the possible and produce policy change. The evidence comes from a cross-section and time-series data about Latin American democracies. As this claim–argument–evidence chain makes clear, there is no point in trying to decide whether it is measurement or concepts that are decisive: they both are but for different reasons. Perfect measurement of a wrong concept pushes back science (Brady and Collier, 2010); concepts that cannot be operationalized and measured by the evidence do not tell us whether the argument supporting the claim is empirically valid or not.

Choice, responsibility and trade-offs

To achieve our vision in which demand and supply meet, we emphasize responsibility, choice and trade-offs. These are three important concepts for our volume. Let us introduce them one by one.

Responsibility means that we approach the demand of readers by treating them as responsible researchers who co-produce knowledge with their mentors and instructors. We do not subscribe to a pedagogical model where the instructor has all the knowledge needed to ‘cook’ the dish, and the reader’s skills are essentially all about following the instructions. Readers come with their knowledge of their field, the substantive knowledge of problems they want to address, and their previous experience of research and university modules. They have to interact with – rather than execute – the message and the detailed suggestions presented by their teachers. Responsible researchers have to make choices; their key task is not to follow instructions.

However, these choices should be informed by an understanding of what is at stake in a specific project and in its execution. More often than not, the grand epistemological debates are silent about the design aspects of a project (Gerring, 2001). One implication of responsibility is therefore the need to make informed choices. With this volume we hope to increase the amount of information and,





overall, the awareness you need to make this type of choice. To illustrate: design and methods are contingent on notions of causality. In turn, causality raises issues of ontology, but it also directs us towards the search for mechanisms (although mechanisms are not universally present in all conceptions of causal analysis). Finally, mechanisms must connect the sphere of individual behaviour to the logic of macro explanation. This is the logic of explanation in research design. Coherent choices respect this logic.

Trade-offs are essential to this vision of how demand and supply meet. A trade-off is an inverse relationship between two equally desirable (or equally undesirable) outcomes. While there is still a sort of conventional wisdom – at least in the groups of doctoral students we talked to when preparing our volume – that research design choices are about the stark contrast between one approach or tradition and another, the reality is that we have to compromise on something to achieve something else. Our trade-offs are not the high-level divides of so many heated debates among students and faculty, nor the greenhouses that never communicate but let their flowers blossom in isolation.

Let us take a very concrete example. How many times have we heard students and faculty talk about the divide between qualitative and quantitative research (for an in-depth analysis of the divide see Mahoney and Goertz, 2006)? Or that between social constructivists and those who give priority to material interests? Yet many truly exciting projects published in major journals are produced by scholars who write across the qualitative–quantitative divide (for an example, see Ross, 2008; see also Creswell, 2009, on mixed-methods designs). Social constructivists and institutional-organizational theorists do not have to engage in tribal wars – they can talk about scope conditions instead (Olsen, 2001). A rich debate on mixed and multi-method research has moved the boundaries beyond this classic divide (Creswell, 2008). Some of the techniques we use, such as meta-analysis of case studies or qualitative comparative analysis, embody elements of the qualitative tradition in causal analysis and quantitative techniques (Jensen and Rodgers, 2001). So the language of the qualitative–quantitative divide or the ‘rational’ versus the ‘socially constructed’ is no longer valid, if it ever was. It does not match what social scientists do – at least, it does not match what social scientists like us do (cf. Mahoney and Goertz, 2006). To be clear, we are not persuaded that there is a general trade-off between quantitative analysis and qualitative analysis. There are trade-offs about establishing causality, but not at this level of thinking qualitatively or quantitatively, for the reasons to do with multi-method research we mentioned above and the arguments we put forward later in the book (for a different opinion, see Mahoney and Goertz, 2006).

In a similar fashion, we have taken part in doctoral training programmes that spend weeks on the ‘value-laden’ nature of the social sciences and the





ontological–epistemological divide.⁴ Again, this is not what we have in mind when we speak of trade-offs. Let us briefly look at these issues in turn. In a sense, most aspects of the social sciences are value-laden, including the choice of topic: why study governance and not government? Actually the same can be said of some choices made by natural scientists. Be that as it may, we have quality criteria in the social sciences that enable us to say that one piece of research is closer to evidence than another. Howard Becker (1998: 79) explains that the ‘value-laden’ dimension of research

does not mean that there aren’t degrees of interpretation, that some descriptions can’t be less interpretive (or perhaps we should say less conventionally interpretive) than others. We might even say that some descriptions require less inference than others. To say that someone looks like he is hurrying home with his shopping requires an inference about motivation that saying he is walking rapidly doesn’t.

With Becker’s words in mind, we are ready to turn to the thorny issue of ontology and epistemology. We have heard in our own PhD classes that a social ontology – that is, the fact that a phenomenon or entity exists only in the realm of social representations – calls for a post-positivist epistemology. This ignores the simple fact that a social ontology is compatible with an objective epistemology. We certainly believe that a piece of paper with some numbers and pictures printed on it is ‘money’ and has ‘value’ only because of shared social representations. Yet we count and study money (in short, we gather valid knowledge) with an objective epistemology, and central banks identify with some precision the quantity of money available in a given country (Searle, 1995). By the same token, electoral volatility or party competition does not exist ‘out there’ in the physical world. They are constructs created by political scientists with their mental representations of elections and party systems. This has not deterred generations of scholars from proposing and using indexes of volatility and measures of party competition.

This is not true only of social objects. For a social scientist, even physical objects exist because of their socially constructed nature. Becker (1998: 158) draws on the notion of the classic sociologist George Herbert Mead that ‘an object is constituted by the way people are prepared to act toward it’.⁵ Becker

⁴Epistemology sets the criteria we use to generate scientific knowledge about the objects we study. Ontology refers to our assumptions about the nature of reality.

⁵Thus, the main difference between physical objects and social objects lies somewhere else. An important distinction is that physical objects do not have intentionality. Social objects such as a soldier or an army have individual and collective intentionality. For a discussion along the lines of Searle of the epistemological and ontological problems of intentionality, see Gallotti (2012).



provides another instructive example about musical instruments. To most of us, it is clear that a guitar is a guitar. However,

a musical instrument, for all its indubitable physical reality, is the physical embodiment of all the experiments in acoustics that made it possible, but also of the choices made by many, many generations of performers and composers to compose for and play the instrument in a certain way, of the listeners who accepted the resulting sounds as music, and of the commercial enterprises that made all that possible. (Becker, 1998:47)

It follows that we should be aware of the interaction between physical properties and social definitions – as Becker would say, ‘things’ are just people acting together. But it does not follow that we cannot count the number of musical instruments in different museums, or try to explain variation in their values across time and space.

We can even go a bit further. We argue that rather than pigeonholing the young members of our profession into social scientific ‘sects’ or non-communicating ‘schools’, we should liberate them. We have already mentioned analytic eclecticism. This is useful to those who work at the shop-floor level, that is, in specific empirical projects. Analytic eclecticism assembles substantive and theoretical aspects of scholarship originating in different research traditions. It is different from, and more than, the operation of drawing on different methods to address causation and inference (see Chapters 3 and 4). Essentially, this approach ‘seeks to extricate, translate, and selectively integrate analytic elements – concepts, logics, mechanisms, and interpretations – of theories or narratives that have been developed within separate paradigms but that address related aspects of substantive problems that have both scholarly and practical significance’ (Sil and Katzenstein, 2010: 10). Thus, instead of segregating researchers, we should be open to the possibility of selectively and intelligently importing major conceptual findings from different traditions. We cannot deny that rationality explains a lot of the variation about compliance: if there are speed cameras in a street, drivers tend to comply with the limits and the same drivers tend to drive faster when in a country lane with no speed limits. Governments make calculations before they decide whether to implement international obligations or to ignore them. Yet we account for other aspects of non-compliance by looking at mechanisms of trust, collective identities and historical memories when we compare the efficacy of speed limits and compliance with international obligations across countries. We all know that Moscow is not Stockholm, as a famous article by Rothstein (2000) puts it, because citizens hold different collective memories in the two countries. Instead of wasting time building walls between one paradigm and another, we should direct researchers towards the exploration of scope conditions that tell us when one logic applies and when the other applies (Olsen, 2001).

To sum up, the thrust of our volume is to move beyond these stark contrasts and paradigm-bound visions and to acknowledge trade-offs. The presence of trade-offs makes the cookbook approach less useful than it seems prima facie. When there is a trade-off, strictly speaking, it is not between a group of choices that are right and another group that are wrong.⁶ These trade-offs can be eased of course – this is one of the key motivations for writing the substantive chapters in this volume. But the trade-offs do not disappear. Some have to do with the limitations of a single research project: for example, in a one-year project it is impossible to give equal weight to concept formation and measurement, so there will be a trade-off between, say, discussing the concept of the authoritarian personality and measuring it in a sample of candidates for elections. Other trade-offs are more sophisticated, for example, that between focusing a project on the causal explanation of a phenomenon (such as variation in the levels of taxation between two neighbouring countries) and looking at the consequences of an important factor we have highlighted, such as actors with veto power. One can either study the causes of war, and in this context pay some attention to emotions, or study how emotions influence different aspects of world politics. It is important to be aware of whether we are pursuing one type of explanation or the other, otherwise we will most likely publish results that do not stand up in terms of causal analysis (see Chapter 3).

What is research design?

We have just mentioned the importance of being aware of where one stands in terms of trade-offs. But this can be generalized to the whole of research design. Even those who claim they are interested only in methods have made implicit choices about research design. Indeed, research design can be a real problem if one ignores it. We still find many articles that say nothing about research design; that is to say, they are not clear about what they seek to explain; they do not justify the cases; they do not say how the findings corroborate theories or support this or that middle-range model (for a review of these problems in the field of European Studies, see Exadaktylos and Radaelli, 2009). These are the publications that are most likely to be found deficient by other authors working in the field, and in consequence will gather few citations.

We also have direct experience of editing journals and special issues of them. Our impression is that reviewers tend to wear their research design spectacles

⁶The effects of trade-offs are discussed in a very important volume titled *Rethinking Social Inquiry: Diverse Tools, Shared Standards* that has now been published in two editions (Brady and Collier, 2004, 2010).

when they peer-review papers, so it is becoming increasingly hard to neglect this aspect of research. It is better to be explicit about research design choices and trade-offs than to be accused by a reviewer of having made the wrong implicit choice.

This brings us to the question of what research design is. There are different answers, of course, but it is useful to concentrate on a minimalist answer and a more elaborate response. Basically, social science research is a map of reality. It is not reality itself. Indeed, we want a map precisely because it helps us to understand some elements of reality that we need to understand – for example, because we need to travel from Golders Green to Stockwell on the London Underground. All studies contain bias, the most classic bias being about measuring reality with indicators – even the best indicator will capture only a dimension of the rich fabric that makes up reality.

Research design – this is the minimalistic definition – is a set of decisions we take in order to reduce or control bias. We like this definition because it is humble. It does not say that research design cooks the perfect dish. It only controls for, and hopefully contains, bias. However, it does not say much about the specific dimensions of research design. It is also true that bias is only one dimension of a research project. This is why we turn to more textured definitions. For John Creswell (2008: 3), author of an influential textbook on the subject, research designs are ‘plans and the procedures for research that span the decisions from broad assumptions to detailed methods of data collection and analysis’. Creswell talks about three broad families of research designs: qualitative, quantitative, and mixed-methods – though in so doing arguably does not differentiate sufficiently between ‘design’ and ‘methods’.

Broadly speaking, we follow John Gerring (2001) and identify the following elements of research design:

- Theoretical framework
- Concept formation
- Types of propositions, such as generalizations, classifications, predictions, and causal propositions
- Research questions
- Causality, especially using evidence to draw causal inference
- Selection of cases
- Variables
- Explanation (what is the type of explanation we are seeking with a research project, an article?, etc.)
- Mechanisms
- Methods

Today, it is indispensable to add ethics to Gerring’s list. In several countries, social science funding councils have their own ethical requirements that grant-holders



have to comply with. To illustrate, ethical issues arise around the following: rights of those who participate in our research projects, professional integrity, legitimacy of data, safety and risk. Researchers have obligations to people who come to be involved in the research project (as informants, interviewees, subjects of experiments). But they also have obligations to themselves and their research associates, in terms of distress in response to participant's disclosures, physical intimidation, and antagonism from authorities in foreign countries.

Another important element is the communication strategy. As will be explained in the final chapter, we write research for different audiences, in different contexts. We have to be aware that when we write for our university's press office, we are addressing an audience that is not generally able to discern the difference between a statistical test and fully fledged proof of causation. When we communicate to policy-makers there is often more interest in 'what should be done' than in how our findings were generated. Some of us also communicate findings during the research project via Twitter, Facebook, websites, blogs and podcasts. This is where our communication strategy intersects with ethical issues: in a short post to a blog on a political issue it may be difficult to spend time separating our findings from the more general opinion we have on the issue, but it is indispensable. When we talk to the media it is vital to distinguish what 'we think' from what we actually found in our research project.

One word on the status of methods in research design is now in order. While some students still ask for 'more training on the methods' at the beginning of the academic year, and they certainly have a point, we see methods at the end of the research design choices. This is because the decision to go for one method rather than another is informed by previous thinking about cases, variables, mechanisms and, in a deeper sense, explanation and the type of causality we wish to establish. We do not assign a chapter to each of these elements of research design, but they will be our fellow-travellers throughout the book. To illustrate, we will return to causality in different chapters. Given that we are interested in shop-floor practice, we take seriously the notion that researchers move back and forth between the various elements of research design. Becker (1998) argues that researchers are hectic travellers moving back and forth between their imageries, the cases they use, the concepts they employ, and logic. Some order is needed – as mentioned, one cannot choose the cases before everything else. But the research process is a process of iteration and discovery. It is also a process of constantly redrafting – writing 'yet another draft' is intrinsically connected to the process of scientific discovery (for the presentation of this argument, see Booth et al., 2008).

Two other questions are in our view connected to research design, although they are not design criteria in the sense of Gerring (2001). We call them the *so what* and *who cares* questions. We often speak to people who are in the early



stages of their research project or doctoral students saying that they feel very strongly about a given topic. They want to study something that is subjectively important for them. We have heard students asking to write a PhD on a directive of the European Union, or on why their country has not embraced certain tools of the new public management. These subjective motivations fuel the research project. But the *so what* question alerts us to the fact that projects must contribute to a specific field in our disciplines. Thus, a given directive may or may not be the right focus for a project. It may be if, for example, the project is about the quality of law-making in the European Union or an ethnographic study of how officers evoke roles in their daily management of proposals. Colleagues will be interested in the project not because it is a well-documented study of a directive (often journalistic sources and websites will most likely provide more details on this than academic articles) but because it contributes to the field of legislative studies or is about bureaucratic roles in supranational settings such as the European Commission.

The same happens when we try to publish our findings at the end of a project. It is important to report on our substantive empirical findings, but we also have to convince our colleagues in our discipline: why should they cite our findings? Why should a good journal publish our research on case A and not someone else's paper on case B? How do our findings help colleagues – who are not engaged with the empirical details of our study but are working on common puzzles in a given field of the discipline? How does our work fare in terms of the quality standards shared by the discipline, or at least by the major journals?

The *who cares* question is difficult to handle. We do not offer any predetermined answers. We have already mentioned that for most of us an idea (at least) or, better, a plan of how we want to communicate our findings is a component of design. If we plan to communicate, then we expect someone out there to care about our findings. In some countries, however, researchers have to show that public funding of the social sciences leads to findings that can be utilized for reasons other than the training of a new generation of academics – or 'the production of paper by means of paper', as cynical observers are fond of saying by way of paraphrasing the title of the economist Piero Sraffa's (1960) book, *Production of Commodities by Means of Commodities*. In the UK, the Research Excellence Exercise, a major exercise that determines the level of public funding for individual universities and departments, has an explicit emphasis on the 'impact' of research (in the social sciences, but also in the humanities, arts and natural sciences). Universities have to demonstrate with case studies that their research has produced observable impacts if they want their research to be funded by the taxpayer.

True, the range of what we could explore has no limits. There are millions of things we do not know in the social sciences. The unknowns vastly overwhelm the knowns. When we propose to study something we do not yet know about,



we can do that for reasons internal to our field (*so what*) but we may also wish to think about the relevance or topicality of our research choice. It is easy to find an answer to *who cares* if the project is in public management, the transplantation of legal constructs such as contracts from one country to others, and so on, but less so if we are trying to answer some fundamental questions about learning, reflexivity in law, and the types of discourses in bureaucratic representations. Yet in the end if the fundamental questions are answered properly, many more people and organizations will care – precisely because fundamental ‘answers’ are applicable to many different domains.

What looks like a rather curious and abstract type of inquiry, such as finding the mechanisms that lead people to free-ride on the funding and provision of public goods, scores high in terms of *who cares* because there are thousands of situations in which the free-riding syndrome operates. In short, we find it difficult to believe that a good piece of social science research is not relevant to anybody, except the few people in the world who can use the paper to train the next generations of academics on an esoteric topic. In the end, questions about external impact and *who cares* in general are contingent on the type of professional researcher one wants to be.

The social sciences: an autonomous field of knowledge

It is intrinsically difficult to speak of ‘results’ in the social sciences, at least in some disciplines such as international relations or comparative politics, and perhaps less so in social psychology, public policy analysis, and education. This is why researchers often talk about their ‘evidence’ rather than ‘results’ – arguably an indication of how they feel about the possible usage of their findings outside academia. There is also a lively debate about what constitutes an explanation in the social sciences, with different schools of thought, particularly those who argue for interpretivist approaches as alternatives to ‘explanatory’ approaches. Hedström (2005), among others, reminds us that research arguments we commonly refer to as ‘explanations’ (no matter how interpretivist we are) are after all truths (or ‘statements’, if you prefer) about subjects (actors, political parties, movements, and so on), because of reasons, based on evidence. Here we have the holy trinity of social scientific explanation, namely, subject-related truths or statements, reasons and evidence. On this basis, we can distinguish between explanatory arguments, covering-law explanations, statistical generalizations, mechanism-based explanations and, perhaps, mechanism-based generalizations. Explanatory arguments are explanations of certain facts, because of reasons, based on evidence. When we have an explanation of facts in terms of laws we



have a covering-law explanation. In statistical world views, there is an explanation of a dependent variable because of middle-range theorizations, based on data. A mechanism-based explanation is concerned with cases, often events, in terms of theorized mechanisms, based on conditions and occurrences (that is, facts). Finally, the mechanism-based generalization is a generalizing statement we make about processes, in terms of theorized mechanisms, based on explanations of cases.

So far, we have avoided solemn declarations about what the social sciences are or should be. Instead, we have tried to illuminate the corner of the social science in which we operate as researchers in our daily professional life. No matter how wide our angle of observation is, we cannot claim to represent in a single volume all the traditions in the profession today. Neither it is up to us to lecture on what the social sciences ought to be. What we aim for in this volume is a coherent vision of the social sciences, certainly not the only vision that exists in the current debate, but a coherent one. This is our way of handling the trade-off between being ecumenical and being coherent, without running into the problem of Balkanization we mentioned earlier. The problem with saying that there are myriad approaches to explanation and to the very definition of the social sciences is that we cannot establish why one paper should be more useful or relevant to the people out there than another: we can only say 'it depends on your research tradition'. Remember that we are pluralists, but we are not saying that pretty much anything goes! If we accept incommensurability among the strands and traditions, we end up with a position where we have nothing to offer in terms of addressing the *who cares* question – as Gerring (2001) rightly observes.

To be more explicit and to summarize, we do not believe that the social sciences are just a (perhaps poor) cousin of the natural sciences. Neither do we believe that the social sciences are yet another branch of the humanities. Instead, they exist because they are neither the humanities nor the natural-physical sciences, and cannot be reduced to 'something else'.

In the domain of research design, questions of ontology and epistemology over which first-year doctoral students regularly agonize are not a priority. Philosophy of science is a preliminary step but it does not answer the key questions of research design. Ontological puzzles should liberate researchers, not paralyse them. We cannot simply state 'I am an objectivist in epistemology' to know how exactly we design a project on peace-building missions; we can only say that our epistemology will guide us towards some types of questions rather than others. Thus, we argue that research design is not predominantly about epistemology: indeed, we have two different terms in our vocabulary, 'research design' and 'epistemology'!

Arguably, it all depends on the perspective one adopts. We are not interested in how social scientists talk about their research but in how they 'do' their research,

that is, as we said earlier, in the shop-floor practice. Studies of scientists at work (Latour and Woolgar, 1979) have revealed that scientists talk about their research in formal language that has little to do with their shop-floor practice, that is, what they really do. We suspect that a similar kind of hypocrisy affects social scientists, too. While handbooks used in doctoral training in countries such as the UK suggest that the research process is informed by theoretical discussions about structure and agency, ontology and epistemology, and the like (Marsh and Stoker, 2010), those who draft applications for funding and carry out successful projects deal with a completely different set of intellectual problems (as argued by Becker, 1998: 5).

What are the social sciences, then? In the end, we agree with Gerring's (2001: xv) proposition that social scientists study human action and relationships 'in a systematic, rigorous, evidence-based, generalising, non-subjective and cumulative fashion'. What is systematic and rigorous depends on intersubjective understandings among a community of professionals, that is, the 'shared standards' of Brady and Collier (2010). The role of evidence distinguishes the vast majority of social scientific projects from philosophical investigations, with the exception of modellers (like game theorists) and some types of political theorist concerned with the history of ideas (although these projects do make use of their own textual evidence to relate a body of work to the intellectual climate of an era, for example). The generalizing fashion indicates that individual cases, personal narratives, oral accounts do matter, but because they contribute to more general conjectures about people, or some political parties, communities, schools, cities and so on.

This is not to be taken as primitive positivism – we all know that we are studying social behaviour that responds to the fact of being observed. But, first of all, this happens only with some treatments (such as a negative income tax administered in a region of the country, to which citizens respond by calculating the likely policy effects of their responses⁷), not with others – a political system does not respond to the fact of being observed via panel data of electoral results across years and constituencies. Second, 'non-subjective' means that precisely because we all know there is bias in our observations, we can use validity and reliability tests – which tells us whether our measure really reports on what is being measured or on something else, and whether two different researchers would come to the same value of the measure if they were to use it independently. Thus, we are

⁷Citizens who know they are part of a negative income tax experiment may react by using the additional disposable income made available by the negative tax to invest in education for their children. Once the experiment and the observers are gone, however, they may spend the money on drink! This is called the Hawthorne effect (after Hawthorne Works, near Chicago, where experiments on factory workers were carried out between 1924 and 1932), and it is a classic source of observation bias.



back in research design. For us, research design is a device to control for bias and an attempt to reduce it in a (definitively) disenchanted, sceptical world of tough peer reviewers and journals where it is hard to publish.

Organization of the volume

In the next chapter we turn to concepts and categories. What are the constructs through which we ‘think’ our objects of analysis? How do we create concepts? How do they differ? We start from a simple, yet useful, benchmark for conceptual analysis and then explore trade-offs and violations of the conditions behind the benchmark. Concepts have to be organized. Consequently, we introduce typologies as a tool for conceptual analysis (and explanation, thus establishing the link between concept formation and explanation). Specifically on explanation, we go through the so-called bathtub to show how concepts at different levels can be connected in an explanatory social scientific model.

In Chapter 3 we introduce the main theories of causation and the main strategies of causal analysis in the social sciences. The clarification of these conceptual foundations is the first step in making informed decisions about how to conduct a research project. The chapter shows that there is no general consensus about the definition of causal arguments, and there is no stable agreement on the methodologies of causal explanation. The different existing approaches to causal analysis should be recognized so that this diversity can be handled in a proficient way. There are four main conceptual approaches to causal analysis: regularity, probabilistic, counterfactual and manipulative. It follows that different strategies of causal analysis in empirical research follow different research goals and types of data: experiments, comparative case studies, statistical analysis, process analysis and set-relations analysis. Methodological pluralism is useful for improving causal analysis and to provide the right answers to distinct research questions. In fact, empirical research has already gone beyond the sharp divide between ‘qualitativists’ and ‘quantitativists’. Social scientists tend to think in an integrated way about data analysis. Qualitative and quantitative techniques are frequently combined. What is more, recent advances in social science methodology demonstrate that different methods can be not only juxtaposed but also integrated in a coherent theoretical and empirical analytical framework.

In Chapter 4 we turn to statistical research designs for causal inference. The key to these approaches is the identification or construction of comparable treatment and control groups. For example, if we are interested in the effects of quotas on women’s representation in parliament, the ideal set-up is one in which we can compare two groups of countries (or other units) which are similar in all respects except that in one countries have quotas and in the other they do not.



Setting aside practical and ethical constraints (see the above discussion on ethics), the best way to enable such a comparison is through ‘randomization’, that is, the randomized assignment of treatment (quotas) to units. This feature is the hallmark of experiments. In experiments proper, randomization is undertaken by researchers themselves, whereas if it happens thanks to circumstances outside researchers’ control we speak of quasi-experiments. Both have been used with increased frequency in the social sciences. Because they rely on statistical techniques, these research designs obviously have a strong quantitative component. However, successful experiments and quasi-experiments usually require important qualitative information. For instance, extensive fieldwork similar to that of typical qualitative case studies is carried out in the context of certain types of experiments, while quasi-experiments often need archival work and other types of qualitative research to access data and back up the assumption that the study actually has the characteristics of an experiment. Thus, the usual quantitative–qualitative dichotomy is of limited use here – back to one of the key themes of this book! Like any other approach, statistical research designs for causal inference involve trade-offs. Experiments and quasi-experiments ensure internal validity (the causal relationship can be measured precisely in the sample) but have problems of external validity (to what extent can the findings be generalized?). Moreover, the strict requirements of these designs may lead researchers to focus on narrow, tractable questions at the expenses of big, complex problems.

In Chapter 5 we invite you to reflect with us on time. Temporality is a foundational concept for causal analysis because causal relationships unfold over time and become observable only after a certain lapse of time. Above all, time is a crucial dimension of variation for empirical research. Time-related variables can be studied in different ways. Examples are historical case studies, descriptive statistics, simulations and the analysis of sequences. In this chapter you learn how to connect specific research goals about temporality to appropriate research designs and to methods to operationalize it. For instance, psychologists may want to study the effect of psychological therapies and treatments on the duration of depressive episodes; economists may want to assess abnormal fluctuations in stock market returns and possibly make predictions on future variations of stock prices; lawyers may try to explain the variation in the duration of civil and criminal trials in different jurisdictions; sociologists may seek to compare the family–career balance of a cohort of respondents over time; political scientists may want to interpret the persistence of social welfare policies in advanced democracies in a context of economic globalization. It is thus possible to examine the duration of social phenomena with historical or simulative methods. The description and the analysis of a tendency make it possible to characterize the overall trend of social phenomena and unexpected deviations and anomalies. Other research designs can operationalize the causal effect of the temporal ordering of events or



the impact of the transitions from one social state to another. Finally, the concept of path dependence allows us to make sense of the stability and inertia of social phenomena.

Chapter 6 opens the door to the world of heterogeneity, that is, the fact that social phenomena present dissimilar features, behave differently from each other and constitute diverse classes of things. In many cases social phenomena are deeply heterogeneous at many levels of scale, and you may be interested precisely in exploring these levels to make sense of this heterogeneity. You first encounter heterogeneity across individuals or social groups. Individuals vary in their socio-economic status, motives, ideational frameworks, emotions and behaviour. Similarly, social groups can display different degrees of internal and external heterogeneity as regards their composition, function, role and resources. Second, you find the heterogeneity of causal relations. Social phenomena are commonly the result of a combination of conditions that is highly contingent. The explanations of social phenomena are also frequently equifinal, that is, a different set of factors may explain the same outcome. Third, there is heterogeneity in the particular cases that you have examined. In fact, some 'special' features may be discovered within the categories of things and events that are investigated, such as students, organizations, cities, religions, democracies and social movements. This chapter presents research strategies and methods for examining these different forms of heterogeneity. Different approaches exist for grouping variables and for the examination of the variation between and among samples. Complex causation can be operationalized with comparative configurational methods, namely with qualitative comparative analysis (QCA). Case selection techniques for the investigation of special cases conclude the chapter.

Chapter 7 takes you through interdependence. Interdependence is a central feature of the social world. It has been studied in most social science disciplines, such as sociology, political science, international relations, public policy analysis, communication and economics. Many questions are related to this topic. For instance, is someone more likely to give up smoking if many of his or her friends are or have become non-smokers? Are sub-national units more likely to adopt a policy if it has been successful elsewhere in the country? To what extent are states influenced by other states with which they compete for trade or foreign direct investment, or which participate in the same international organizations? Social network analysis is a first way to study these questions. It is a method that allows a precise description of the connections that exist between units and can be combined with various research designs. For instance, it can be used to construct 'connectivity matrices' that are employed in quantitative approaches such as spatial regression. Another quantitative approach to interdependence is dyadic analysis, in which units of analysis are pairs of units. This approach allows us to focus directly on the connections between units, such as whether they share a



border or a language. Quantitative research designs offer quite powerful ways to measure interdependence, but usually they are less appropriate when it comes to identifying the precise nature of interdependence. Qualitative approaches have the opposite characteristics. They cannot demonstrate conclusively that interdependence is a general pattern, but they can describe precisely how it operates in individual cases. A general problem in the analysis of interdependence is 'homophily', namely, the fact that stronger contacts tend to be established among units that are more similar. Therefore, it is quite difficult to establish whether units become more alike because they are connected, or become more connected because they are alike. However, ignoring the problem of interdependence is certainly no better a solution than analysing it with the best tools that we currently have, even though they are imperfect.

Finally, in Chapter 8 we reflect on what we have learned. The volume follows a pattern of logic from concepts to interdependence, but you may wish simply to read the individual chapters you feel are closer to your research interest and motivation.

Checklist

- The craft of research is about tying claims, arguments and evidence.
- Research design is about responsibility, choice, and trade-offs.
- A design is a plan covering theory, concept formation, types of propositions we wish to establish, research questions, a given approach to causality, case selection, variables, mechanisms, type of explanation, and methods.
- Ethics and communication plans are components of research design.
- Research design is concerned with identifying and controlling bias.
- Strong research projects address the questions *so what* and *who cares*.
- Pluralism does not mean incommensurability and sectarian thinking.
- The social sciences are neither a branch of the humanities nor a strand of natural sciences. They have an autonomous paradigm, internally varied but different from the paradigms of humanities and natural sciences.

Questions

- 1 Why do you think you are a social scientist?
- 2 Are you worried about bias in your project? Where can bias come from?
- 3 What do you plan to write about research design in your project?
- 4 What is the relationship between the different components of research design?
- 5 What do you plan to do to address bias in your project?
- 6 Can you persuade your reader (or funding body) that your project will survive the *who cares* and *so what* tests?

- 7 Illustrate how your project will effectively exercise responsibility, choice and address trade-offs.
- 8 Write a 200-word press release about your new project: 'Today, Dr X (you!) has kicked off a new research project on ...'
- 9 How have you coped with ethical issues in your previous projects? Did you learn any lesson from the experience?
- 10 Do you plan to communicate during the research project, and, if so, how?

■ ■ Further reading ■

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