An Introduction on Schemata: Constructing Theories or Explanation

In *Republic*, Plato asked an interesting question: 'Where the starting point is something one does not know, and the conclusion and the intervening steps are fabricated out of things one does not know, how on earth can this sort of entailment ever become knowledge?'[1] For Plato, that was a paradox. His preferred solution was the replacement of the unknown starting point with a presumed known; a standpoint that precludes any further questioning. If such a standpoint existed, then knowledge could be attained. What Plato essentially proposed was an axiomatic approach. Axioms are believed to be true propositions and therefore can serve as foundations. On axiomatic premises, knowers or knowledge-seekers can visualise, interpret, explain and understand. This is not only because axiomatic premises appear to be correct, but because they are accepted as correct. Once the structure of an axiomatic system is laid out, further propositions can arise which are then put to tests, be they empirical or logical or otherwise, with a view to discovering whether they are true or false.

Sciences, including physics and mathematics, still follow the axiomatic approach. Social sciences, however, rely on a different approach. They predominantly work with schemata, not axioms.[2] Schemata, namely schemes, frames, configurations or systems of arrangements, are imaginary constructs. We need conceptual frames and frameworks in order to make our worlds intelligible. The term 'our worlds' refers to us, our associates, social relations, political relations and practices and physical environments – in short of all those things around us and all those relations affecting us. We need frames[3] and frameworks, i.e., organised sets of propositions, in order

[1] Republic, VII, 533c.

[2] It is interesting that Husserl refused the idea of the existence of 'a mathematics of phenomena'; E. Husserl, 'Die Frage nach dem Ursprung der Geometrie als intentional – historisches Problem', I *Revue internationale de philosophie*, 1939, p. 210.

[3] Goffman defined frames as 'the principles of organisation which govern social events and the actor's subjective involvement in them'; Erving Goffman, *Frame Analysis: An Essay on the Organisation of Experience* (New York: Harper and Row, 1974), p. 10.

to categorise the sensations we receive, to make sense of our experiences, to respond to stimuli, to act, to dream and to imagine. Conceptual formulations allow us to name things, find patterns and links, and to invest them with significance. Patterns often become paradigms and paradigms become theoretical frameworks by gaining broadness and generalisability.

The role, and significance, of schemata in social sciences is thus undeniable. More importantly, working with schemata and rearranging conceptualisations have some distinct advantages. They require neither a starting point, nor an axiomatic cornerstone, nor a telos – that is, an end. All that is required is that a schema fits the world, be this social, personal, political or otherwise. Once a fitting and viable schema is in operation, ordinary human beings and researchers can join in the quest for knowledge in 'the middle of a game'.[4] The viable schema thus becomes a reliable one.

We are immersed in social realities[5] and are surrounded by collective representations which become intelligible through schemata. We grow in social communities having their stock of knowledge and their own interpretative logics and we participate in the interpretation, construction and reconstruction of these realities until we die. In this respect, the concepts, theories, frames and assumptions we use must accommodate our perceptions and experiences, make sense and guide our actions. For this reason, they tend to be adaptable and revisable. If they become irrelevant,[6] we tend to shake them off. They do not any longer appeal to us because they cannot serve us.

The same applies with respect to schemata used in social scientific research. They need to be relevant, useful, endowed with explanatory power and, according to empiricists, with predictive scope as well. In this way, they are reliable. If they are not, they are substituted by, or blended with, other conceptualisations. In fact, there exists a groundless and reflexive circularity in social scientific thinking and schematism. For like Alfred Tennyson's Ulysses, social scientists are always wondering, discovering

[4] Hodes explicitly stated that the main aim of scientific inquiry is to understand what is going on; Robert Hodes, 'Aims and Methods of Scientific Research', Occasional Paper No. 9 (New York: American Institute of Marxist Studies, 1968), pp. 11–14.

[5] According to Hoover, 'the scientific way of thought is one of the number of strategies by which we try to cope with a vital reality: the uncertainty of life', Kenneth R. Hoover, *The Elements of Social Scientific Thinking*, 5th edn (New York: St Martin's Press, 1992), p. 5.

[6] Compare here Arthur L. Stinchcombe, *Constructing Social Theories* (New York: Harcourt, Brace and World, Inc., 1968); Alfred Schutz, 'Concept and Theory Formation in the Social Sciences' in M. Natanson (ed.), *Philosophy of the Social Sciences* (New York: Random House, 1963).

and yearning for more knowledge.[7] They seek 'to follow knowledge like a sinking star / Beyond the utmost bound of human thought'.[8]

Tennyson was only twenty-one years old when he wrote this poem. Perhaps surprisingly for his age, he felt demoralised, sad, almost worn out. Yet he summoned all his inner courage in order to rise above adversity by writing a masterpiece in which he has Ulysses remarking that 'all experience is an arch wherethro'/Gleams that untravell'd world …'[9] Seeing the arch from afar, individuals know that they may yet journey to unknown places. If Tennyson's Ulysses were invited to ponder over Plato's question mentioned at the outset, I imagine he would probably remark that 'this is precisely the point of seeking knowledge'.[10] And as knowledge 'piles on' knowledge, human beings develop more sophisticated schemata and conceptual reasoning in order to eliminate fallacies. By so doing, they satisfy their 'yearning' for answers and thus their desire to know how they ought to live.

Everything we do is governed by schemata; by frames, concepts, frameworks, systems of thought, ideological templates and so on. Observing the world, measuring, making connections, understanding, behaving in a certain way, all are frame-loaded operations. For example, we cannot observe properly if we do not invent the concept of perception. And perception is influenced by ideas.[11] Similarly, we cannot measure if we do not have the concept of length and the proclivity to make comparisons in length, that is, to ascertain whether the distance between x and y is shorter or longer. In addition, we cannot make connections without the influence of a priori classifications of things, an understanding of sameness and difference, and we cannot reach an understanding of relations without invoking certain valuations as to how relations within a certain context ought to be or by using conventional labels for their functionality or disfunctionality.

[7] Alfred Lord Tennyson, Ulysses, available at www.poetryfoundation.org/poem/174659, accessed 30 June 2015.

[8] Ibid.

[9] Ibid.

[10] John Locke had made a very honest observation in his *Essay Concerning Human Understanding*: 'it is ambition enough to be employed as an under-labourer in clearing the ground a little, and removing some of the rubbish that lies in the way to knowledge'; The Epistle to the Reader in *The Works of John Locke*, Vol. 1 [An Essay Concerning Human Understanding, Part 1] [1689].

[11] The British philosopher of Science William Whewell (1794–1866) had observed this. See his book entitled *The Philosophy of the Inductive Sciences* (London: Routledge/Thoemmes Press, 1996 [1840]). For a discussion of his work, see Jonathon W. Moses and Torbjorn L. Knutsen, *Ways of Knowing: Competing Methodologies in Social and Political Research*, 2nd edn (Houndmills Basingstoke: Palgrave Macmillan, 2012), ch. 8.

This has its disadvantages too; quite often, habits of thought, certain beliefs or hidden assumptions may 'contribute both to the way in which a question is construed and, also, to the way certain answers to it are judged'.[12] In other words, like arts and humanities, social sciences are anchored on creative thinking. Only minds perceive, explain, connect, understand, test, reflect, critique and imagine. Minds dare to make those important leaps of thought.

Socio-political life also requires schemata. People stand in mutual reception (and in opposition) and thus need to make judgments about their actions, reactions and relations. In order to make judgments, and, more importantly, to make significant judgements, that is, judgments that have effects and are life-changing, there must be frames, standards that are set and approaches that can be developed. There also exist reversions, misconceptions, changed courses of action and, generally speaking, circumstances calling for a fresh approach, a new direction and a new frame of mind. Political organisations, on the other hand, need legitimising narratives and ideas to inspire politics and policy-making.

Plato's paradox about knowledge mentioned at the start of this introduction, Tennyson's arch of knowledge, conceptual advancements and paradigm shifts in social science[13] and ordinary processes of human cognition and behaviour are possible because we 'journey' in time and through time. Ulysses' sea is time itself, and journeying is only possible within a motion-ridden world that brings about change to, and in, us.[14] However reasonable our adjustments to it might be and however secure we might feel in the realities we construct, we cannot foreclose shifts in our conceptions and different realisations. We need to leave room for revelations that our angles are incorrect, for reformism and for transformation. Transformations, be they in society, social sciences or ourselves, essentially commence as re-orientations. Things suddenly look different. From this standpoint, new

[12] Gabriel Stolzenberg, 'Can an Inquiry into the Foundations of Mathematics Tell Us Anything Interesting about the Mind?' in Paul Watzlawick (ed.), *The Invented Reality: How Do We Know What We Believe We Know?* (New York: W. W. Norton and Company, 1984), pp. 257–308, 259. See also Imre Lakatos, *Proofs and Refutations: The Logic of Mathematical Discovery* (Cambridge: Cambridge University Press, 1979). Compare, Karl Popper, *Objective Knowledge: An Evolutionary Approach* (Oxford: Oxford University Press, 1972).

[13] T. Kuhn, *The Structure of Scientific Revolutions*, 3rd edn (Chicago, IL: Chicago University Press, 1996); *The Essential Tension* (Chicago, IL: Chicago University Press, 1977).

[14] As Shelley poignantly observed in his poem entitled 'Mutability': 'Man's yesterday may ne'er be like his morrow; Nought may endure but Mutability'; Percy Bysshe Shelley, *Poems* (London: Carlton Classics, 1924), p. 60.

explorations are possible, new meanings can be discovered and the fine-structure of a relation to which things can be added is revealed.

In this volume, I bring mind, time[15] and change together with a view to making a contribution to social epistemology and to enhancing its toolkit. My interest in social epistemology, that is, in how knowledge is acquired in social sciences, is unravelled through the themes of conceptual frames and patterns of change and their application in the field of EU law and politics. I essentially raise three questions, as follows. (1) If our inquiries started from the premise that the world, i.e., both micro- and macro-realities, is unbelievably complex, what kind of methodological models would we develop (– this is the issue of sufficient complexity)? Much of social epistemology has been based on either monistic paradigms or on dualisms, be they explicit or implicit. Yet, on closer inspection of both, we realise that monism and dualism have more in common than is generally believed (– this is discussed in detail in the subsequent Chapter 1). (2) If this were conceded, how could we move beyond monism and dualism in social sciences? What variables could one envisage and how would we conceive of their relations (– this is the issue of the choice of variables)? In the subsequent discussion, I argue that beyond the cause and effect epistemological principle, the empiricist tendency to explain wholes by parts,[16] one-link theories, the principle of constraints that has characterised scientific evolutionism and the dualism of dialectics, lies connectionalism; a philosophy of relations among variables and processual thinking. (3) Finally, since the realities to be known are continuously changing, how should social scientists conceive of, theorise and understand change (– this is the issue of imagery)? What are its modalities and patterns? And what might the accommodation of continuous change within an indeterministic matrix require? These questions are explored in Chapter 3 and the subsequent discussion.

The answers to these questions are far from simple. They require both mappings and multivariable models. As regards the former, in this book I use constructivism as my 'arch'. By discussing the many contributions of constructivism in social sciences, I show how these perspectives have

[15] Social scientific thinking would benefit from a more sustained attention to time and space. Notable theorists of the latter include Henri Bergson, George Herbert Mead, Martin Heidegger, Marcel Proust, Paul Ricoeur, Edward Soja, Robert Ashley, Paul Pierson, Michael Lockwood, Christopher Ray, Martin Friedman and Reinhart Koselleck. But space and time are relatively under-researched in law.

[16] Pragmatist philosophers and, in particular, William James noted this at the turn of the twentieth century.

enabled us to construct realities and move to more complex discussions and from there to continue our quest for understanding the balance among being, knowing, acting and reflecting. In terms of models, I develop a *Connexio Rerum* model and show the productive quality of turning things into relations and of highlighting connections within moving ensembles. The subsequent chapters reveal how I draw the proposed map of knowing, gather things together and envision various connections.

I do not wish to claim that the subsequent discussion will provide a perfect map for scholarly exploration. Nor do I believe that other approaches are necessarily deficient in providing lenses through which to understand and explore the world.[17] But I do believe that this volume will furnish a useful and reliable map[18] for social scientific explorations in law and in other disciplines, such as political science, sociology and European studies.

Because this is a book on methodology, normative theorising does not receive a visible and sustained exposure. Unlike my previous work, the subsequent discussion does not address the question of alternative social realities, does not suggest new democratic practices and does not embark upon the redesign of institutions. I am more concerned about drawing maps for knowledge acquisition and the understanding of realities, institutions and events that enable a new gaze on them and on our relation to them. Certainly, questions of doxa, power, privilege and prejudice cannot be disentangled from the socio-legal context. Nor are social scientists and the work they produce separate from it. Methodological principles, models and concerns, on the other hand, rely on the freedom to explore and experiment, on democratic critique and the desire to improve the conditions of our lives and society, in general. In writing this book, I take all the above for granted and steer the discussion explicitly and in a more concerted manner within the confines of the epistemological domain, knowing that

[17] Generally speaking, it is true that researchers are interested in justifying their chosen methodology and illustrating its superiority. Readers, on the other hand, always entertain doubts. They tend to ask questions, such as: Why is this better than others? Does it help produce more accurate results? Does it help us tell more interesting stories? Does it provide better explanations? How does it compare to other methods? What are the noticeable differences between (a) and (b)? What are the limitations? What are their strengths? Do they provide suitable adjustments to changeable situations? Do they lead to more reliable data?

[18] I follow, here, Quine's argument that the test of a good system of logic is the extent to which it functions as a way for scientists to 'see the world'. And although I do not share the criteria he lists as the determining factors in comparing systems, I agree with him that the litmus test is how well it works; V. W. Quine, *Philosophy of Logic* (Englewood Cliffs, NJ: Prentice-Hall, 1970).

the latter cannot be kept separate from 'conviction and critique',[19] and that methodological change is more often than not linked with socio-political visions and transformation.[20]

The Arch of Social Epistemology and the Glimpse of a Post-Disciplinary World

If the role of social science is to make a difference to the way we live and how we are governed,[21] the role of social epistemology has been to aid social scientists in this endeavour by devising premises, concepts and explanatory models. And in the same way that theorists' diagnoses of social phenomena diverge, there exists dissent in social epistemology as to which method, which theory and which variable(s) might be the most fruitful and reliable in scientific inquiries. Social sciences entail fields with fuzzy boundaries, contested thinking and contested methodologies.

This does not mean that testable propositions are scarce. Nor does it imply that judgement, reflexive criticism and reason cannot serve to highlight those methods of social knowledge which are insightful and promising. Once the very first seeds of a theory are planted, scholars tend to build an arch from which they can travel.[22] Initially, this is an imperceptible process. But as thematic applications of the theory increase, one can discern the spur towards innovation, dynamism and inspiring engagements. This continues until the limitations of a theory become apparent. When this happens, its adherents obtain cold feet. For example, in his *Essays on Truth and Reality* (1914), Bradley defended what has been termed the coherence theory of truth, which is the assumption of the existence of an internal consistency between one's perception of an object and the object itself.[23] In the theory of language this gave rise to the semantic theory of truth, which was wonderfully articulated by Carnap, Tarski and the work of the logical

[19] I borrow this from Paul Ricoeur, *Critique and Conviction* (Cambridge: Polity Press, 1998).

[20] Pierre Bourdieu's work exemplifies this. His 'thinking tools' had a broader socio-political purpose, namely, to unravel truth and to 'liberate' individuals and society from the hegemonic social forces. See, *inter alia*, *Science of Science and Reflexivity*, trans. R. Nice (Cambridge: Polity, 2004); *Interventions 1961–2001* (Marseilles: Agone, 2002); *Acts of Resistance: Against the New Myths of Our Time*, trans. R. Nice (Cambridge: Polity, 1998).

[21] Steven Seidman, *Contested Knowledge: Social Theory Today* (Oxford: Blackwell, 2008), p. xi.

[22] Thomas S. Kuhn's notion of a paradigm or 'a disciplinary matrix' captures the same idea. Kuhn defined paradigms as 'the entire constellation of beliefs, values, techniques and so on shared by the members of a given community'; *The Structure of Scientific Revolutions*, 2nd edn (Chicago, IL: University of Chicago Press, 1970 [1962]), p. 173.

[23] Oxford: Clarendon Press, 1914.

positivists in the 1930s. Carnap's publication of *Introduction to Semantics* in 1942 crystallised the semantic theory of truth.[24] A few decades later, Paul Feyerabend criticised the theory of truth espoused by Carnap.[25] The assumed correspondence of observation sentences with sensations in the world led Feyerabend to call into question the idea that the meaning of sentences is stable and invariant because it reflects an empirical content. Accordingly, he defended the possibility of the existence of rival, yet incommensurable, theories and argued that the positivist paradigm cannot really explain why the scientific community makes certain theory choices.

In the philosophy of language, the Swiss linguist, Ferdinand de Saussure (1857–1913), had shown that the relation between a word and its content in the world is arbitrary.[26] Language was seen to be a system of signs mediated by relations of difference between the signifier and the signified. Signs do not correspond to the essential properties of things/objects. As Saussure noted, 'any subject in order to be discussed must have a reasonable basis'.[27] As Hawkes observes,

> there exists no necessary 'fitness' in the link between the sound-image, or signifier 'tree', the concept, or signified that it involves, and the actual physical tree growing in the earth. In other words, the word 'tree' has no 'natural' or 'tree-like' qualities, and there is no appeal open to a 'reality' beyond the structure of the language in order to underwrite it.[28]

Influenced by the Saussure's conception of language, just after World War II, Levi-Strauss, the French anthropologist, made structural linguistics the premise of social thinking.[29] Russian and Eastern European linguists such as Todorov and Jakobson, as well as French poststructuralists, explored further the productive power of language in creating meanings as well as in justifying and thus legitimising the status quo.[30] Notions

[24] Cambridge: Harvard University Press, 1942.
[25] Paul Feyerabend, *Against Method: Outline of an Anarchistic Theory of Knowledge* (London: New Left Books, 1975).
[26] Ferdinand de Saussure, *Course in General Linguistics* (Glasgow: Fontana/Collins, 1977 [1916]).
[27] Ferdinand de Saussure, *Cours de Linguistique Generale*, trans. Wade Baskin, (New York, 1959), p. 73, cited in Terence Hawkes, *Structuralism and Semiotics* (London: Methuen and Co., 1977), p. 27.
[28] Ibid., p. 27.
[29] Claude Levi-Strauss, *Structural Anthropology* (Harmondsworth: Penguin Books, 1972).
[30] On this, see Claude Levi-Strauss, *The Savage Mind* (London: Weidenfeld and Nicolson, 1966). For the application of poststructuralism and postmodernism in research design, see Carol Grbich, *New Approaches in Social Research* (London: Sage, 2004).

such as language games, floating signifiers, discursive configurations and deconstruction smashed the glass ceiling of neutrality in social scientific research and revealed the power dynamics underpinning the production of knowledge. Interruption, the rebellion against logocentrims, the subversion of hierarchical binary oppositions, the empowerment of marginalised voices all featured centrally in the works of Foucault, Derrida, Lyotard, Baudrillard, Poulantzas, Culler, Fanon and Said.[31] The linguistic turn in social epistemology was immensely fruitful. Steiner[32] commented on the creative capacities of language by stating that: 'every act of speech has a potential of invention, a capacity to initiate, sketch, or construct "anti-matter". In fact, this poiesis or dialectic of counter-statement is even more complex, because the "reality" which we oppose or set aside is itself very largely a linguistic product'. Chomsky's contributions highlighted the correlation between the structure of the human mind and the structure of language,[33] while Derrida further accentuated the creative function of language; he commented on actuality and coined the term artifactuality in order to highlight the fact that reality is made and communicated through fictional devices.[34] In some respects, this work echoed Gaston Bachelard's ideas expressed in his *New Scientific Spirit*.[35] In this book, Bachelard showed that a new instrument, the telescope, could change how people perceived the world. By creating an epistemological rupture, it would thus give rise to a new scientific world view. For Bachelard, the telescope became part of a phenomenotechnique, and in the light of the discussion here, a Tennyson's arch. But even before Bachelard, in 1725 the Italian Jurist Giambattista Vico had published his thoughts on the ability of human beings to construct myths and social institutions – essentially the world around them. In his book which was entitled *The New Science*, Vico referred to the existence of a 'mental language' which enables human

[31] Frantz Fanon, *The Wretched of the Earth* (New York: Grove Press, 1968); Edward Said, *Culture and Imperialism* (New York: Vintage, 1994); *Orientalism* (New York: Vintage, 1978), Homi Bhabha, *The Location of Culture* (New York: Routledge, 1994); Jonathan Culler, *Structuralist Poetics* (Abingdon: Routledge and Kegan Paul, 1975).

[32] George Steiner, *After Babel: Aspects of Language and Translation* (London: Oxford University Press, 1975), p. 228.

[33] Noam Chomsky, *Syntactic Structures* (The Hague: Mouton, 1957); *Language and the Mind* (New York and London: Harcourt Brace, 1968).

[34] 'The Deconstruction of Actuality: An Interview with Jacques Derrida', 68 *Radical Philosophy*, 1994, pp. 28–41, at p. 28.

[35] Boston, MA: Beacon Press, 1985, trans. A. Goldhammer.

beings to create structures, meanings and things – a sapienza poetica (poetic wisdom).[36]

Writing in the early twentieth century, Dilthey (1833–1911) and Mannheim (1893–1947) travelled in a somewhat different direction. Dilthey believed that there exists a distinctive world view characterising each historical epoch and suggested a method that would allow researchers to make sense of different epochs in history.[37] Both Dilthey and Mannheim were thus interested in drawing a typology of worldview.[38] Their sensitivity to the social and cultural context and an awareness of how differences of context may impact upon the construction of meaning and thus of understanding have been at the heart of the hermeneutic turn. Fact-finding and statistical correlations, which are presumed to de-subjectivise research and to turn researchers into dispassionate observers of social phenomena, were sidelined in order to leave room for the intrusion of the researcher into their subject matter so that they could 'live into' an evolving social situation and discover the mind set of social actors. An 'interpretive understanding' (verstehen) celebrated a quasi-subjective approach to social reality. Phenomenology, existentialism and hermeneutics thus inverted the assumption that researchers discover truths and facts about social phenomena by remaining detached and externalised. They highlighted the need for the 'qualitative relatedness' of the researcher with the persons, the facts and the recorded data. By so doing, they reignited the call towards dynamic social research in the 1930s.[39] Dilthey's student, Martin Heidegger, and Heidegger's student, Has-Georg Gadamer, developed the philosophical perspective of hermeneutics.

Gadamer, who has been the most notable exponent of hermeneutics,[40] premised his theory on the dialogic communication and the reciprocal

[36] Harmondsworth: Penguin Classics, 1999.

[37] See Don Martindale, *The Nature and Types of Sociological Theory* (Boston, MA: The Riverside Press, 1960), ch. 1.

[38] Ibid., pp. 414–18.

[39] John J. Hader and Eduard C. Lindeman, *Dynamic Social Research* (London: Kegan Paul, Trench, Trubner and Co. Ltd, 1933), p. 111.

[40] See his *Truth and Method* (London: Sheed and Ward, 1975). John Dewey had laid down a foundation for hermeneutics; see his *The Quest for Certainty* and in particular his chapter on the 'Naturalisation of Intelligence'. Gadamer's hermeneutics must be distinguished from Bhaskar's 'hermeneutic moment' which essentially refers to his belief that social actors' conceptual schemes and understandings are only a part of social reality. There exist real things in the world independent of our knowledge of them (ontological realism) and it is the blending of the latter with the awareness that human knowledge about them is historically and socially shaped that led to what he called transcendental realism; R. Bhaskar, *A Realist Theory of Science*, 2nd edn (Sussex: Harvester Press, 1978). Compare also Anthony