

Between Deduction and Dialectics: David Harvey on Knowledge

Trevor Barnes

On the one hand, I develop a general theory, but on the other, I need to feel this rootedness in something going on in my own backyard.

Harvey 2000d: 94

Twentieth-century philosophy is littered with change-of-heart philosophers, philosophers who start their intellectual life believing in one idea, but end it believing in something quite different. Ludwig Wittgenstein is a paradigm example. Although writing much of his doctoral dissertation at first behind the lines and later on the front while serving in the Austrian artillery during the First World War (Monk 1990: chs. 6 and 7), his two Cambridge University examiners, Bertrand Russell and G. E. Moore, judged Wittgenstein's thesis 'a work of genius' (quoted in Monk 1990: 272).¹ Published in 1918 as *Tractatus Logico-Philosophicus* (1961), his dissertation provided a seemingly definitive justification of logical positivism. Framing it as the picture theory of meaning, Wittgenstein argued that meaningful propositions possess the same form as facts of the world. In contrast, propositions about other propositions, such as those found in philosophy, were, according to him, without sense, they were senseless. And statements that went beyond the latter, including propositions found in moral philosophy, metaphysics and aesthetics, were not merely senseless but nonsense. So confident was Wittgenstein that he had written the last word in philosophy that he abandoned the discipline for the next ten years, becoming a primary-school teacher in Trattenbach, rural Austria, albeit not without complaints from both parents and students (Monk 1990: ch. 9).² It was perhaps just as well, then, that in 1929 Wittgenstein returned to philosophy. In an unlikely epiphanal moment on a train journey to Swansea accompanied by the Italian Cambridge economist Piero Sraffa, Wittgenstein realized he could not keep the senseless and the nonsense out of philosophy. In Norman

Malcolm's (1958: 69) account of Wittgenstein's Pauline experience in that railway carriage, 'Sraffa made a gesture familiar to Neapolitans and meaning something like disgust or contempt, by brushing the underneath of his chin with the outward sweep of the fingertips of one hand.' That moment was pivotal. It made Wittgenstein realize that meaningful propositions came in all shapes and sizes, and could not be restricted to the prison house of the picture theory of meaning. So began Wittgenstein's later philosophy turning on ordinary language, culminating in the posthumous publication of *Philosophical Investigations* in 1953, and the seeming renunciation of his previous staggering 'work of genius'.³

In interviews, and in his autobiographical essay, David Harvey (1997a, 2000d, 2002b) has never identified his own train-to-Swansea epiphanal moment,⁴ but like Wittgenstein, he made a dramatic intellectual about-face sometime in the late 1960s and early 1970s. There is a break between Harvey's early work concerned with applying formal natural scientific methods to geographical questions, and exemplified by his celebration of the hypothetico-deductive method in *Explanation in Geography* (1969a), and his later work that applies dialectical materialism and associated with a move to Marxism found first in *Social Justice and the City* (1973a). In this chapter, I am concerned with the nature of that epistemological break. I am interested in how the early Harvey differs from the later one, what might explain such difference, and whether connections exist between the two halves of Harvey's intellectual life.

The same general questions are raised about Wittgenstein. How they have been addressed, I will argue, is useful for understanding the parallel issue for Harvey. The usual interpretation of Wittgenstein is of an epistemological rupture, a disjunction between the earlier *Tractatus* and the later *Philosophical Investigations*. Allan Janik and Stephen Toulmin in their book *Wittgenstein's Vienna* (1973), however, were the first to offer a more complex interpretation, arguing that while there were differences there were also significant continuities between Wittgenstein's early and late philosophies. They suggest the purpose of the *Tractatus* was not to rule out philosophical questions, or those of morality, metaphysics and aesthetics, but to point to their unreserved importance, and then taken up in a different form in *Philosophical Investigations*. Janik and Toulmin are able to offer this more complex rendering because of their particular sensibility towards knowledge. They are less interested in knowledge as a series of disembodied ideas, and clever moves in logical space, than in knowledge stemming from lives lived in the materiality and contingency of real places like *fin-de-siècle* Vienna where Wittgenstein grew up. For Janik and Toulmin the particular combination of people, things and ideas in Vienna at that end-of-century

moment that coalesced around issues of moral belief, metaphysical speculation about the nature of reality, and judgements about aesthetic form, left a deep impression on Wittgenstein, shaping a lifetime intellectual agenda. By following an historical and sociological approach to knowledge, Janik and Toulmin find and trace connections not apparent from examining only Wittgenstein's texts that by themselves appear radically at odds. This will also be my approach in understanding the break in Harvey's work. As far as possible, I will try to read his intellectual trajectory as found in his various texts against the context of a set of historical, sociological and especially geographical factors.

The chapter is divided into four sections. First, I discuss briefly the idea of intellectual rupture, and set it within the context of the wider and now burgeoning literature of the sociology of scientific knowledge. This is followed in the rest of the chapter by a grounded interpretation of David Harvey's writings on knowledge from their beginning in the mid-1960s (he completes his PhD at Cambridge University in 1962) through to the present, but focusing especially on the late sixties and early seventies when the break occurs. In the second section, I review his work on the natural scientific explanatory model, setting it alongside the period he was at Cambridge as a student, and later at Bristol as a lecturer. In the third section, I turn to his writings on Marxism and dialectical materialism, reading them in relation particularly to his move to Baltimore in 1969. The last section serves as an extended conclusion, and makes the argument implicit in the epigraph that Harvey's different general theories of knowledge in part reflect his rootedness in different geographies, in his different 'backyards'. But this is no simple relation. There is a tension between his ambition to realize the general and his aspiration to remain at the local making the relation complex and messy. It is a life lived, as was Wittgenstein's, and contains ruptures and continuities.

On Rationality, Intellectual Breaks, and the Sociology of Scientific Knowledge

I have never conceived of geography . . . as a fixed field of study . . .
but [one that] should be changed according to individual and collective needs, wants, and desires.

Harvey 2002b: 164

In the standard rationalist account that in the past dominated discussions of epistemology, and in some quarters still does, there is nothing messy

about knowledge. It is straightforward. Knowledge is acquired through rational inquiry ensuring commensurability and progress. Rational knowledge is brought under a common set of rules that allows comparison and thereby resolution of conflict and discrepancy (commensurability), and is cumulative in that new knowledge advances old knowledge (progress). For example, Isaac Newton famously said in a letter to his rival Robert Hooke, 'If I have seen farther it is by standing on the shoulders of Giants' (quoted by Gleick 2003: 98). Newton's metaphor speaks to both attributes of rationalism. Because of its rational foundation, Newton assumes his knowledge is a continuation of, that is, commensurate with, his predecessors (the 'Giants'), such as Copernicus, Kepler and Galileo. The iron rod of rationalism makes stable the human tower which Newton thinks he stands atop. Without rationality, it would be a Tower of Babel. Further, the elevated position afforded by rationality allows Newton to gain greater knowledge – 'to see further' – than his predecessors. It is progress.

Once a researcher embarks on rational inquiry, as on a conveyor belt, s/he is led inexorably and smoothly to new and improved knowledge. No breaks, no hesitations, no reversals. Sometimes researchers are misled, and engage in irrational inquiry, such as Newton in his secret experiments with alchemy (Gleick 2003). But in those cases, sociological reasons can be found to explain the error.

Against this rationalist view of commensurability and progress that makes knowledge acquisition appear a technical exercise to be completed by people in white coats, there has emerged over the last forty years a radical alternative associated with writings in the sociology of scientific knowledge. Arguing against commensurability, and the idea of progress, this body of work emphasizes the gaps and fissures, the blind alleys and dead ends, the points where rationality does not hold up, and is augmented by additional contingent factors. As Richards (1987: 201) writes, there has emerged 'a new respect for scientists, not as impersonal automata, but simply as human individuals participating in a culture common to all'. This alternative approach is not slick or heroic or triumphal – Mary Hesse (1980: 30) says it has been 'a notorious black spot for fatal accidents' – but it begins to make sense of apparent intellectual about-faces of the kind that David Harvey (and Ludwig Wittgenstein) appear to have made.

The literature of the sociology of scientific knowledge is vast and sprawling, and there is no single agreed-upon approach (Hess 1997). Three points from that literature are useful for my purposes. First, openings, breaches and cracks are normal in intellectual inquiry. Kuhn's (1962) work made the critical difference here. Disputing both commensurability because of the value-laden nature of theory, and progress because different approaches are

incommensurable (they are like Gestalt shifts), Kuhn thought science was propelled by a series of intellectual revolutions, 'paradigm changes', each of which formed distinct, separate and partly incomparable worlds of inquiry. While Kuhn saw such revolutions as large scale and occurring infrequently, and while he later backtracked on the radical nature of his position, the damage to the rationalist model of unbridled progress was done. Kuhn opened the door to conceiving intellectual change as messy, hesitant, fractured and unresolved. Harvey's switch from logical deduction to Marxian dialectics, therefore, is not an irrational raving, akin to Newton attempting to transmute base metals into gold, but just the kind of break that we should expect. It is how intellectual inquiry is done.

Second, scientific practices are connected to changing social practices. The social, though, is not present in rationalist accounts. Humans there, to use Hilary Putnam's (1981: 7) image, are presented as isolated 'brains in vats', disembodied, and disembedded from society. In the sociology of science view, however, knowledge never arrives from pure brainpower. It is the outcome of grounded practice. Scientists are not faceless organs of scientific rationality, but real people with particular kinds of socially defined bodies, histories, skills and interests. Furthermore, those characteristics make a difference to the kind of knowledge produced. For example, that Harvey grew up during the Second World War, went to Cambridge University during the late 1950s and early 1960s, and was at Bristol University for much of the 1960s, shaped the writing of *Explanation in Geography*. The book was not a bolt out of the blue, nor the distillation of a pure form of rationality measured drop by drop on to the page, but arose in large part from the social practices of Harvey living at a particular time and place. That said, Harvey and his texts are never fully translucent, completely determined products. Lives and books are complicated, possessing their own agency, always resisting any final definitive statement. One must be open to individual creativity, contingency and even inscrutability. There is no single methodological template to achieve such an end, but exemplars exist such as Shapin's (1994) work on Robert Boyle or Janik and Toulmin's (1973) and Monk's (1990) on Wittgenstein. These authors negotiate successfully social context and individual biography, determination and contingency, the transparent and the opaque

Finally, sociologists of scientific knowledge stress that acquiring and disseminating knowledge is a local activity, and in contrast with the supposed universality suggested by the rationalist account. Joseph Rouse (1987: 72) says scientific knowledge stems from scientists moving 'from one local knowledge to another rather than from universal theories to their particular instantiations'. 'Local knowledge' takes a variety of connotations,

however (Barnes 2000). My emphases are the geographical ones of place, and movement across space. Both have received increasing prominence from both sociologists of science (Shapin 1998a) and geographers (Livingstone 2003) who argue that they are active components shaping the very nature of knowledge produced. Places are conceived not as hermetically sealed sites, static and self-contained, but porous, dynamic and open-ended, defined as much by their relationships with other places and spaces as by internal characteristics (Massey and Thrift 2003; Barnes 2004). Given this broad conception, I will suggest that for Harvey places like Cambridge and Bristol, or Baltimore and Paris, become for him at different periods crucial ‘truth spots’, to use Thomas Gieryn’s (2002) term, in working out his theories of knowledge. By this term, I mean places in which particular languages of explanation and validation are accepted as the ‘truth’ and acted on accordingly. In making my wider argument, I am not asserting place determinism, however. Places and their relation with other spaces are only one influence along with others that produce knowledge (but which are ignored by rationalism that presumes the ‘view from nowhere’ (Shapin 1998a; Livingstone 2003).

The Deductive David Harvey

I doubt if anything satisfactory will emerge in the way of general theory until the year 2000 AD or so.

Harvey 1969b: 63

After 486 pages of dense and unadorned philosophical exposition, *Explanation in Geography* rallies at its end with a call for practical action. It is not exactly a charge to mount the barricades, but, within the context of a 1960s English provincial university (*Explanation* was written at Bristol University), it perhaps came to the same thing. Harvey exhorts us ‘to pin up on our study walls . . . the slogan . . . “By our theories you shall know us”’ (Harvey 1969a: 486).

The type of theory for which Harvey hopes geographers will be known is the natural scientific kind, or at least the kind that philosophers of science think natural scientists pursue. Much of *Explanation* is about taking classic statements in the philosophy of science made by people like Richard Braithwaite, Rudolph Carnap, Carl Hempel and Earnest Nagel (see the disproportional amount of space each respectively occupies in *Explanation*’s index), and showing they are relevant to geography. The focus on geography is crucial. *Explanation* represents Harvey’s commitment to the discipline,

which continues throughout his later books.⁵ *Explanation* is about geography *tout court*, human as much as physical, and was written less to change the world than to change the discipline. The problem with the discipline for Harvey is not the questions geographers ask, but the methodology they use to answer them. No one is spared, not even the person Harvey considers one of the greatest twentieth-century geographers, Carl Sauer. At the end of his long essay in *Models in Geography* (1967a) Harvey retheorizes Sauer's historical writings on evolution and landscape change, reinscribing them in the form of 'a synoptic model system' (1967a: 596).⁶ Harvey (1967a: 597) says about his attempt to modernize Sauer:

We are not dressing up a simple elegant statement in scientific jargon, but genuinely trying to lay bare elements in reality which for too long have remained hidden from our gaze . . . An understanding of the principles and potential of model building may not be a 'sufficient' condition for a *Renaissance* in geographic research; but that we can be certain without such an understanding the 'necessary' conditions for that *Renaissance* will not be fulfilled.

So, what are those necessary conditions? They revolve around the deployment of scientific theory (Harvey 1967b), bringing into play traditional philosophy of science including its ideas about laws, logic, the hypothetico-deductive method and verification. Let me draw out some general features.

Perhaps the most important is that it is theoretical. As a theme, it dominates both Harvey's early papers as well as *Explanation*. He writes, 'Theory transforms the hallmark of a discipline . . . It provides systematic general statements which may be employed in explaining, understanding, describing, and interpreting events' (Harvey 1969a: 75). The keyword is 'explaining'. For Harvey (1967b: 211), 'the quest for an explanation is the quest for theory'. That is why he wanted to update Carl Sauer. Only theory could 'lay bare elements in reality which for too long have remained hidden from our gaze'.

Of course, not any old theory will do. It must be scientific, and it is defined by him by four features. First, by mathematics, and represented in *Explanation* by the more than 100-page review of pure mathematics, geometry and probability ('Part IV'). 'Theory ultimately requires the use of mathematical languages', he writes (Harvey 1969a: 76). Second, by a set of precisely defined terms and concepts with clear inference rules connecting them (Harvey 1972f: 33). The precision is important because, as Harvey (1969b: 64) says, 'The one thing we cannot afford . . . is . . . intellectual laziness which regards it as unnecessary and foolish to try to eliminate vagueness and ambiguity in our conceptual apparatus.' And clear infer-

ence rules are necessary because they ‘ensure the complete certainty as to the *logical* validity of the conclusion’ (original emphasis, Harvey 1969a: 9). Third, by clear rules of verification. On the one hand, there is the abstract calculus of theory, couched in precisely defined concepts, the relationships among which are defined by formal logic. On the other, there is a messy, irregular world represented by measurement and empirical observation. The task of verification is to assess the relation between the observed empirical world and the abstract theoretical world. This is never easy, but if the rules are successfully applied, explanation is achieved. ‘Explanation is regarded as a formal connection . . . between factual statements and more general “theoretical” statements’ (Harvey 1969a: 10). And fourth, by rationality. Harvey (1969a: 19) writes, ‘This book [*Explanation*] is concerned with rational explanation’, and this then enables achievement of its other ends like progress, objectivity and universality. These four features turn mere speculations into scientific theories. They represent a foolproof method. Follow them, Harvey says, and success is guaranteed. No wonder he wanted his slogan pinned to the wall. Like all believers, he was intent on spreading the word.

But there were other reasons as well, and ones which go to the sociology of knowledge. Central is the wider context in which Harvey carried out his work. It is unclear how aware Harvey was at the time of its role. After all, his epistemological position, as he says in *Explanation*, ‘ignores explanation as an *activity*, as a *process*’ (original emphases, Harvey 1969a: 9). That is, it ignores scientific practice, including presumably Harvey’s own. But my argument is that wider forces bearing on Harvey cannot be ignored, and were as important in shaping his work as his own ferocious energy, singular concentration and painstaking brilliance.

Cambridge University of the late 1950s and early 1960s forms the immediate intellectual context for the deductive David Harvey. It was during exactly that period that the ‘terrible twins’ of British geography, Dick Chorley and Peter Haggett, were together in the Department of Geography (Chorley joined in 1958 and stayed for the remainder of his career, while Haggett joined a year earlier, staying until 1966 when he moved to Bristol as Professor of Urban and Regional Geography, and joining Harvey who was hired there in 1961). Chorley and Haggett were responsible for first-year laboratory teaching, where they introduced quantitative analysis ‘to do with statistical methods, matrices, set theory, trend surface analysis, and network analysis’ (Chorley 1995: 361). Harvey as a graduate student was the course’s first demonstrator, i.e. teaching assistant. Also important at Cambridge (Harvey 2002b: 165) was a young lecturer, a historical demographer, Tony Wrigley, who introduced Harvey to Auguste Comte’s positivism, and

more generally to nineteenth-century thought including Marx's.⁷ Wrigley's philosophical approach and Haggett and Chorley's emphasis on 'scientific methods' were then 'enmeshed' by Harvey in his 1962 doctoral dissertation, 'Aspects of agricultural and rural change in Kent, 1815–1900' (2002b: 165).

The broader point is that the Department of Geography at Cambridge during the period Harvey was a student, and later a young lecturer at Bristol, was a 'truth spot'. That is, it was one of an initially small number of sites in Europe and North America, and which by the mid-1960s included Bristol, where geographical practices were remade in the likeness of natural science in a movement dubbed 'the quantitative revolution' (Barnes 2001, 2004). That revolution was to move the discipline from the dark ages of its ideographic past to the dazzling promise of a nomothetic future. As a young, bright, ambitious student interested in ideas, Harvey inevitably was caught up in the change even though it went against the grain of his 'strong "Arts" background' (Harvey 1969a: v). Indeed, it may have been that Arts background that made him move away from his earlier sometimes fumbling attempts at quantitative analysis to the later philosophical and discursive treatment found in *Explanation*.⁸ Whatever the precise reason, being at Cambridge during the late fifties and early sixties made a difference.

It made a difference in other ways too. The general intellectual culture of his student cohort was highly critical of Britain's social rigidity and traditionalism, and desirous of modernization. Clearly, this was not confined only to Cambridge. The dissatisfaction was found widely, reflected in writings, for example, of 'the angry young men' such as John Osborne and Alan Sillitoe. Harvey (2002b: 164) writes:

Mine was the generation that spawned the *Footlights Review* that became *That Was The Week That Was* – a television show that mercilessly ridiculed the ruling class as well as almost everything else that might be regarded as 'traditional' in British life. Cambridge was populated by an intellectual elite, and if something was seriously wrong with the state of Britain (and many thought there was), then this elite was surely in a position to do something about it. The modernization of Britain was firmly on the agenda, and a new structure of knowledge and power was needed to accomplish that task.

Explanation did not attempt single-handedly to modernize Britain. But it provided a 'new structure of knowledge' to a hitherto unbending and conservative discipline, geography, which like Britain in the late 1950s and early 1960s was in desperate need of shaking off the confining shackles of its past and modernizing. Harvey, as part of that Cambridge intellectual elite, was 'in a position to do something about it', which he did. As he says,

there was 'the idea that we could break out of tradition . . . There was a modern geography waiting to be constructed and we were the ones who could do it' (pers. comm.).

That idea of the modern is important. It connects to his later interest in modernity, and fascination with its sites of emergence such as Paris. It is also bears on his politics. In this earlier period, that politics turned on what he calls 'socialist modernization . . . backed by technological efficiency' (Harvey 2002: 165). Exactly the same politics lay behind the election in 1964 of the British Labour Party under Harold Wilson, partly resting on the catchphrase 'the white heat of the technological revolution' (an expression coined by Wilson the previous year). Increased technological efficiency, rational planning and progressive social change would unfold in a new Britain, a modern Britain, which broke the old conservative order. Specifically, the Labour Party at both local and national level moved quickly towards rational planning and progressive social ends. The National Economic Plan inaugurated in 1965 contained an explicit mandate to counter regional inequality by setting up Regional Economic Councils with the power to engage in physical and social planning (and lay behind the emergence of the Regional Studies Association established in 1967).

Within this context, *Explanation* was the kind of book that we might expect to emerge. While it is not a 'how-to' planning book, it drew its spirit in part from the wider changes in political and planning ethos that swept Britain during the 1960s. As Harvey (2002b: 166) says now: 'For those of us involved in geography [during the 1960s], rational planning (national, regional, environmental, and urban) backed by "scientific" methods of enquiry seemed to be the path to take.' *Explanation* was Harvey's contribution to those 'scientific methods of enquiry'. While not overtly political, it is nevertheless a thoroughly political text. It was Harvey's contribution to modernizing Britain, and associated politics.

The early Harvey, like the early Wittgenstein, put forward and justified a theory of knowledge based upon some form of positivism. My argument is that the epistemologies both men put forward are not the precipitates of rationality, the rationalist view, but are integrally connected to the social, cultural and political contexts, including the places in which they lived. That said, Harvey and Wittgenstein are not mere dupes of their context. Harvey's dissertation on the hop industry in Kent, for example, was historical, resting not on quantitative methods but on qualitative ones, in this case an entire summer spent in the archives devoted to reading nineteenth-century local newspapers (Harvey 2002b: 156). Gravity models and Lösch are mentioned, but the thesis is certainly no mirror of Haggett's (1965) *Locational Analysis* (see Harvey's 1963 paper that derives from the thesis). Harvey asserted his

own agency, and was not some 'place-holder'. Indeed, he says now that the dissertation 'underlies' his later Marxist writings about 'the circulation of capital and the spatial and temporal dynamics of global and local relations' (Harvey 2002: 159). The point is that linking lives lived and intellectual production is messy and complex (never effortless as supposed by rationalism). This is amply demonstrated in Harvey's second life to which I now turn.

The Dialectical David Harvey

We reach out dialectically (rather than inward deductively) to probe uncharted seas from a few seemingly secure islands of concepts.

Harvey 1985a: xvi

Harvey (2002b: 167) submitted the manuscript of *Explanation* to Edward Arnold publishers in 1968. It was not the year to write a book about the virtues of rational conduct and the beneficence of science and technology, however. That year the world was convulsed by a sometimes savage irrationality, and skewered by a sometimes malevolent science and technology. Martin Luther King was assassinated in a Nashville motel in April, there was almost a revolution in Paris in May (as well as in other cities around the world during the same year), in June Robert Kennedy was shot, killed by Sirhan Sirhan at the Democratic Party Convention in California, and throughout 1968 science and technology in the form of B-52 bombers, helicopter gunships and agent orange were used by the US military to worsen the lot of people in Vietnam rather than to improve it.

In 1969, Harvey moved to Johns Hopkins University in Baltimore. It was a crucial relocation. The decision to join Hopkins Department of Geography and Environmental Engineering even now seems slightly eccentric, if not inscrutable, given the Department's main research specialty was waste management. It was also perhaps not the best place to become a Marxist, which is what Harvey did shortly after arriving. During the 1950s, George Carter, the Chair of the then Department of Geography at Hopkins, turned in his colleague Owen Lattimore to Senator Joseph McCarthy who immediately put him on his list of 205 names of Communist Party members (Harvey 1983).

As Harvey shifted towards Marxism after arriving in Baltimore, he became increasingly critical of his earlier work. In a wickedly funny reply to Stephen Gale's (1972) review of *Explanation* in the uprightly serious *Geographical Analysis*, Harvey (1972e: 323) said he was at a 'disadvantage' because he had 'never read' his own book and furthermore had 'no inten-

tion of doing so now'. What he was reading was Marx. The pivotal essay also appearing in 1972 and reprinted as the opening chapter in the 'Socialist formulations' section of *Social Justice and the City* was 'Revolutionary and counter-revolutionary theory and the problem of ghetto formation' (Harvey 1972c, 1972i). Even now, it is an extraordinary read. Harvey finds there his writing voice – pungent, passionate, precise and persuasive – which then rarely deserts him. There are no more 'technical blemishes' (Harvey 1969a: v), no more straining for positivist objectivity and political disinterestedness.

On the one hand, the 1972 essay appears as a repudiation of *Explanation*, and his earlier conception of theory and method (also see Harvey 1989b: 212–13). In a now well-known paragraph, Harvey (1972c: 6) wrote:

[Geography's] quantitative revolution has run its course and diminishing marginal returns are apparently setting in as . . . [it] serve[s] to tell us less and less about anything of great relevance . . . There is a clear disparity between the sophisticated theoretical and methodological framework which we are using and our ability to say anything really meaningful about events as they unfold around us . . . In short, our paradigm is not coping well.

On the other hand, and implied by the last sentence, the essay points to a different approach, a new paradigm. But this is a more radical conception of paradigm than envisioned by Kuhn (1962), who thought that basic terms like theory, or law, or verification, would retain their meaning, as well as forms of scientific reasoning such as deductive logic. Harvey's idea, however, is more an alteration in what Ian Hacking (2002) calls a 'style of reasoning'. Fundamental concepts like theory, or reasoning, or even explanation are different in different styles. Harvey's purpose in his essay is to present a new style of reasoning, a Marxist one, that revises basic explanatory terms like theory, and introduces a new method, dialectical materialism.

In particular, Harvey's aim was to create 'revolutionary theory', a theory 'validated through revolutionary practice' (Harvey 1972i: 40). Unlike his previous approach in which theory is verified by formally connecting logic and empirical evidence, revolutionary theory is verified by bringing a new (revolutionary) world into being (see also Harvey 1973a: 12). Revolutionary theory changes social practices such that they call forth the reality that the theory anticipates. For example, a revolutionary theory of the ghetto provides both a set of new categories to uncover the social relations that produce the ghetto, and a set of revolutionary practices that eliminate ghettos altogether. The theory is validated by being 'productive', by changing social practices to bring about a ghetto-less world. Perhaps because

of this conception, Harvey subsequently had a difficult time ‘testing’ his theories empirically. Many of his ‘proofs’ are not couched in terms of classical verification, or even use data or evidence that Harvey has collected.⁹ Instead, his ‘proofs’ are a ghostly presence, the ghost not of the past but of a future not yet realized but desired. The issue of validation for him, therefore, is less one of truth or falsity than finding theoretical knowledge that changes the world for the better.

Informing this different conception of theory is a different style of reasoning, dialectical materialism. It is briefly mentioned in the 1972 article (1972c: 7), is elaborated in the last chapter of *Social Justice*, and then runs throughout his subsequent writings. Dialectic is defined as an opposition that propels change. In broad terms, it involves the forces of flux, flow and process butting up against what Harvey calls ‘permanences’ – structures, organizations, institutional dogma (1996a: 7–8). For a time permanencies resist the forces of flow, but not forever. Sooner or later, resistance is overcome, and flux takes hold until new permanencies arise. And new permanencies must arise because life in a world of continual flux is impossible (1996a: 7). Materialism is important because the dialectic plays out in the world of material and social relations, the economy. Those relations for a period are organized into ‘permanencies’, such as feudalism or capitalism, but over time even they are eroded by forces of flow, manifest, for example, as intermittent socio-economic crises. In particular, the dialectic embodied in material and social relations generates opposition, undermining permanency, taking the form under capitalism, say, of working-class revolution, or in geography of revolutionary theory.

This is a very abstract rendering. But it rarely takes this form in Harvey’s writings. His best-known representation of dialectical materialism is his geographical theory of capital accumulation (1985a: ch. 1). Capital is always on the move, ready to make an extra buck, intent to annihilate space by time. But in order to make that move, to earn that extra buck, to annihilate space, capital first needs to be fixed in place, set within a ‘structured coherence’ of a particular location. Here is the dialectic: a tension between spatial flow and spatial fixity that then impels the changing geography of capitalism.

The dialectic also bears on theorizing and knowledge. Revolutionary theorizing relies on a dialectic creating a tension between stable concepts that enable us to understand the capitalist world in which we live, and a set of as yet unformed ones that anticipate a better world that has still not arrived. This partly explains Harvey’s fascination with bat-like words, oxymoronic terms, that assert and deny at the same time – ‘concrete abstraction’, ‘creative destruction’, ‘symbolic capital’. They are a means to bridge the world

in which we live and the world in which we want to live. In his paper about ghetto-formation, his revolutionary theory was the means both to explain ghettos as they exist under capitalist urbanization – a theory that was solid and stable – and to envisage and bring about future cities in which ghettos do not exist – a theory that was labile and pliable in its imaginings.

Practising dialectics is enormously difficult, and Harvey would probably say that he has not always succeeded (he says he sometimes finds himself ‘longing for the easy simplicities of faith of the Pentecostals, the certitudes of positivism, or the absolute of dogmatic Marxism’: 1996a: 3). Further, as I will suggest below, the dividing line between deduction and dialectics in Harvey’s work is not always hard and fast; there are continuities as well as disjunctions. To understand this complex relationship between his different knowledges, as with Wittgenstein, it is necessary to read that relation against Harvey’s life, and the places in which it is lived.

Coming to America was critical. Specifically, Harvey’s move from Bristol to Baltimore was formative. Baltimore ‘had gone up in flames’ the year before Harvey (2002: 169) arrived. Civil rights issues were paramount, and made literally concrete to Harvey when he slept on the pavement outside the Black Panthers’ Baltimore headquarters to protect that organization from potential violence following the police killing of its leader, Fred Hampton, in December 1969 (Harvey 2002b: 170). The Vietnam War was reaching new crescendos of violence (President Nixon’s secret campaign to bomb Cambodia began in 1969), sparking widespread university campus protest resulting in the killing of four students at Kent State University in May 1970. Yeats seemed to have got it right. ‘Things fall apart’, and ‘Mere anarchy is loosed upon the world.’ If ever there was a period when flux and instability reigned, it was then. Even the Beatles, whose inspiration Harvey (1969a: ix) acknowledges in *Explanation*, broke up.

Perhaps this is where the other side of the dialectic enters. To make sense of the ‘blooming, buzzing, confusion’ of his new home, living on the ‘fall line’ (Harvey 2002b: 150), living during the Fall, Harvey turned to Marx who provides a set of categories, a theory, to make sense of it all. This doesn’t explain why Marx, though, because there were alternatives. In geography, there was the behavioural perspective that by the early 1970s was morphing into the humanistic approach including phenomenology, existentialism and symbolic interactionism (Ley and Samuels 1978), and even within radical geography, anarchism and various forms of non-Marxist socialism were on offer.

The ‘Why Marx?’ question is probably another ‘inscrutable’ case, overdetermined. There are contextual factors, though, which partially explain. Radical geography was beginning in the United States. The first issue of

Antipode: A Radical Journal of Geography was published at Clark University, Worcester, Massachusetts, in the same year Harvey started at Hopkins. Harvey was a frequent visitor to Clark, and presented his 'Revolutionary and counter-revolutionary' paper at a special session at the 1971 Boston AAG organized by Dick Peet who taught at Clark (Peet 2002). Again this does not explain exactly why Marx. In fact, Peet (2002) says it was Harvey who introduced him to Marx.

I was quite friendly with David Harvey at the time, and I'd become editor of *Antipode* in 1970, and David had been here already a couple of times by that time . . . Anyway, he said to me, 'You've got to read Marx'. And I said, 'But I've tried and I've failed a couple of times already', and he said, 'I don't care'. He said, 'Don't read *Capital*. Get a book on Marx and read it'. And so, in the early 1970s, I started reading Marx, and bit-by-bit I put together an overall theoretical perspective on Marxian structural-type theory.¹⁰

There were also his colleagues and graduate students at Johns Hopkins, many of whom were interested in Marx (for a full listing see Harvey 2002b: 168–73). In an interview with the *New Left Review* Harvey says:

[T]he initiative came from graduate students who wanted to read *Capital* – Dick Walker was one of them – and I was the faculty member who helped organize it. I wasn't a Marxist at the time, and knew very little of Marx . . . The reading group was a wonderful experience, but I was in no position to instruct anybody. As a group, we were the blind leading the blind. That made it all the more rewarding.

(Harvey 2000d: 80)

Again, while Harvey's graduate students undoubtedly influenced him, it seems unlikely they were *the* determining force. After all, Tony Wrigley introduced Harvey to Marx when Harvey was still a student.

Another factor is clearly political. At some point, Harvey realized that *Explanation* failed as a political text.¹¹ The positivism it advocated was unable to achieve his political goals, which were thrown into sharp relief by the events of 1968, and later by his own move to Baltimore. In order to cope, a more radical, a more explicitly political, line was needed. Marx. Only Marx provided 'secure islands of concepts' to 'reach out' into the troubled waters that surrounded Harvey, making sense of what was going on, and providing the possibility for propitious political change (Harvey 1985a: xvi).

Perhaps no water was more troubled for Harvey than his newly adopted

city of Baltimore. 'The travails of Baltimore have formed the backdrop to my theorizing', he writes (Harvey 2002b: 170). Baltimore is a constant in Harvey's Marxist theorizing from his beginning work on revolutionary theory through to his millennial writing on utopias (Harvey 2000a: ch. 8). 'A city deeply troubled by social unrest and impoverishment' (2002b: 169), Baltimore for Harvey functioned in a similar way to Manchester for Engels. The comparison is especially germane given that Harvey's initial empirical work along with his first US graduate student, Lata Chatterjee, drew upon Engels in understanding the dynamics of Baltimore's housing markets (Chatterjee and Harvey 1974). Furthermore, even Harvey's paper on revolutionary theory and its use of dialectical materialism was in part a working out of his project to understand Baltimore. Subsequently, Baltimore was the site in which he developed other of his theoretical ideas, for example about postmodern nostalgia and aestheticization of place (1989b), gentrification and redevelopment (1992a), and the foibles of capitalist urban planning (2000a). In fact, it is an interesting experiment to think how Harvey's theorizing would have been different had he stayed in Bristol, or moved elsewhere in the United States.

Scott Fitzgerald said, 'there are no second chances in America'. This is belied by David Harvey's life. Coming to America provided the impetus to a second theory of geographical knowledge based upon Marx and dialectical materialism. This move, I suggested, is linked to the larger social context in which Harvey was embedded, the places in which he lived and studied, and the spaces through which he moved. These are not all determining, making the shift inevitable and transparent. Harvey exercises his own agency, which adds contingency and complication. And this is certainly seen in the very relationship between the two halves of Harvey's knowledges.

David Harvey: Between Deduction and Dialectics

My long standing belief (indeed, what had my whole career as an academic geographer been about?) [is] that geographical knowledges are not outside theory and that the usual dichotomy between universality and general theory, on the one hand, and geographical particularity and incomparable specificity, on the other hand, is a false distinction.

Harvey 2002b: 183

It would be easy to conclude that David Harvey mark I and David Harvey mark II are not the same person: the first the committed positivist scientist,

the second the committed dialectical Marxist. But lives, even intellectual lives, are not like that. We carry around our geographies and histories. This is the import of the sociology of science and its concern with lives lived (and seen in Janik and Toulmin's 1973 book). We never begin from scratch, from a *tabula rasa*. Nor do we live outside our geographies and histories, behaving as rational automata following universal logic wherever it leads. Charles Darwin (1974: 68) might say that, 'my mind has become a kind of machine for grinding general laws out of a large collection of facts.' But the biographical evidence tells another story.

I have argued in this chapter that the story of Harvey's own life, his geography and history, is intermingled with his intellectual one. As a result, earlier themes and concerns re-emerge, palimpsest-like, in later work. We can take the ideas out of Harvey – which explains why he is concerned about becoming a 'globalized . . . viable commodity' (2002b: 160) – but we can't take Harvey out of his ideas.

While there are certainly sharp differences between the two Harveys, there are also continuities, for example his commitment to geography, to politics and, perhaps most germane here, to theory. Intellectual inquiry for him means theoretical inquiry. The origin of that inclination in large part derives from his early experiences in geography and its ideographic heritage that produced an intellectually stultifying discipline. He writes:

I entered academic geography in an era when the belief in uniqueness of place supposedly put the discipline 'outside of theory'. This exceptionalist claim became a matter of fierce debate in the 1960s and I, for one, have spent much of my academic life subsequently seeking to refute that proposition.

(Harvey: 1996a: 110)

This doesn't mean that Harvey is uninterested in particular places – his early work on the Kent hop industry, and later works on Baltimore and Paris, contradict such a contention. The point, though, is to understand and use that particularity for theoretical ends.

Harvey implies that the kind of theory he undertakes as his later self is different from his former self (this is the upshot of 'Revolutionary and counter-revolutionary theory' paper). But there is also leakage and slippage. Impulses in Harvey theory mark I slide over into Harvey theory mark II. While Harvey rids himself of some of the characteristics of natural scientific theorizing – its mathematical nature, or its concern with rigorous verification procedures – other elements from it reappear, and are not completely erased by his new approach. He offers something in between deduction and dialectics.

For example, he still wants to uphold clarity and rigour as theoretical goals. He says as a Marxist, 'ambiguity . . . is no basis for science' (1984a: 8), and 'I am overtly rather than subliminally concerned with rigorous theory building' (1985a: xiv). But how can these ends be squared with either his 'bat-like' vocabulary where ambiguity is part of the very constitution of concepts, or his revolutionary theory based upon an unrealized desire rather than a deductive logic of the present. Or again, he says, 'The intellectual task of geography . . . is the construction of a common language, of common frames of reference and theoretical understandings, within which conflicting rights and claims can be properly represented' (Harvey 1984a: 8). As a statement, this could have come out of *Explanation* rather than his 'historical materialist manifesto' (Harvey 1984a) where it is actually from. For it is an assertion of commensurability and against which Kuhn was reacting. But surely the dialectic is about the incommensurable, the clash of opposites that drive change, and which are not resolvable into 'common frames of reference'. Or yet again, Harvey (1987b: 376) says that his Marxism 'does not entail abandoning universal statements and observations'. Universals, though, by their very definition are outside of history and geography, timeless and placeless. That is why positivism pays them so much attention; they offer Archimedean assurance. However, Harvey's dialectical materialism, and the knowledge it produces, incorporates a varied and varying geography and history, forming part of the dialectic's very dynamic. It is not universal truths on the one hand, and geography and history on the other. They are thoroughly mixed up, as Harvey affirms in this section's epigraph. So, why avow universals?

In each of these cases, it is as if Harvey is speaking from both sides of his mouth, both as a Marxist and as a positivist. These are only a few examples, but they indicate points of tension, sites where inscriptions of an older Harvey lay cheek-by-jowl with the newer Harvey. My interpretation of such tensions is contextual; they are stretched taut by a life lived. Intellectual productions are not the precipitate of a purified rationality, but are infused by a muddled existence. Harvey can't vanquish his past or his geography (nor, I'm sure, would he want to). Yet, they leave their marks and crossings, creating disjunctions and continuities.

Wittgenstein led the most spartan of lives once he left his parents' palatial home in Vienna. His rooms at Trinity College, Cambridge, were furnished with only a mattress and a deck chair. He also eschewed the good life outside. After a friend in Ireland had gone to immense trouble in preparing for him an elaborate meal following an all-night journey, Wittgenstein berated his host, and said from now on they were to have only 'porridge for breakfast, vegetables from the garden for lunch, and a boiled

egg in the evening' (quoted in Shapin 1998b: 22). In spite of Wittgenstein's attempt to live the life of an ascetic, to carry out 'the duty of genius' (Monk 1990) unencumbered by the wider context in which he lived, that context, as Janik and Toulmin as well as Monk demonstrate, kept crashing down on him. It explains in part the breaks and continuity found in his various works; why they don't cohere into a seamless rational statement. Harvey has never pretended to live an ascetic life. Rather, as he makes clear, he lusts for life's texture, particularly geographical texture, whether in large North American cities, or in the rural areas in a developing country, or in his native Kent (a 'central obsession', Harvey 2002b: 156). I have argued in this chapter that Harvey's own life texture, his 'backyard', is caught up in his more general theorizing about knowledge, creating a palimpsest, which is not smooth, and where past writing sometimes shows through in present writing, creating dislocation and surprise, but which for all of that is no less powerful or compelling.

Acknowledgements

The chapter was improved immeasurably by comments from Keith Bassett, Noel Castree, Derek Gregory, Ron Johnston and Eric Sheppard. I thank them all. The charge of the editors was to write a critical chapter. I found that task enormously difficult given the influence of David Harvey on my own thought and critical sensibility, which began when I was a first-year undergraduate. In this sense, the editorial charge seemed almost a betrayal. My chapter is a tribute rather than a critique, taking the form of an intellectual biography embodied and placed.

Notes

- 1 In the examiner's report on Wittgenstein's dissertation, Moore wrote: 'It is my personal opinion that Mr Wittgenstein's thesis is a work of genius; but, be that as it may, it is certainly well up to the standard required for the Cambridge degree of Doctor of Philosophy' (quoted in Monk 1990: 272).
- 2 Wittgenstein boxed ears of students who were unable to learn especially algebra, and on one occasion pulled so hard on one girl's hair that clumps of it fell out (Monk 1990: 196).
- 3 Wittgenstein later said about the *Tractatus*, it 'was like a clock which doesn't tell the right time' (from 'Wittgenstein Miscellany' accessible at <http://www.flashq.org/wiggy2.htm>).

- 4 In an e-mail, Harvey (26 August 2003) said tongue-in-cheek that he had a 'boat-to-Baltimore' experience. The jukebox on the vessel that brought him to America got stuck on the Rolling Stones' song, 'I can't get no satisfaction'. So, according to Harvey, he disembarked at New York a committed Marxist. Even as a joke, the contrast with Brian Berry's experience on the same Transatlantic boat trip made fourteen years earlier is marked. Berry (1993: 435) studiously read August Lösch's *Economics of Location* while on board, becoming a committed spatial scientist by the time he arrived in New York harbour.
- 5 Harvey's *Justice, Nature and the Geography of Difference* (1996a) and *Spaces of Hope* (2000a) continue to set out an encyclopedic, Humboldt-like vision of geography (see Eagleton's (1997) funny but sometimes pitiless review of *Justice*, and also Harvey's (1998a), spirited defence and justification). In *Spaces of Hope*, Harvey (2000a: ch. 11) discusses favourably E. O. Wilson's idea of 'consilience', the idea that knowledge is unified, and ultimately commensurate. For Harvey geography is the discipline that brings everything together, that achieves consilience, and therefore requires our obligation and passion.
- 6 It is unlikely that Sauer would have approved of Harvey's reinscription. Sauer wrote in a letter to Campbell Pennington the year *Models in Geography* appeared: 'I am saddened by model builders and system builders and piddlers with formulas for imaginary universals' (letter to Campbell Pennington, 4 February 1967, quoted in Martin 1987: xv). Harvey says now that he is attracted to Sauer's work because of its 'anti-imperialism', and his sympathy for 'indigenous peoples as opposed to the colonisers.' As he put it in an e-mail, 'I would now more clearly see [Sauer] as a kind of patrician Burkean anti-imperialist' (Harvey, e-mail to author, 9 June 2004).
- 7 (26 May 2004) Tony Wrigley says that he was 'quite unconscious' and 'greatly surprised' that 'David Harvey should have been interested in and influenced by my work in the late 1950s and early 1960s'. Wrigley goes on to say, 'I was and remain interested primarily in a range of questions related to the occurrence of the industrial revolution in England, and became interested in the possibility of exploring the interactions between demographic and economic variables in the centuries preceding the conventional dating of the industrial revolutions. This, too, was a quantitative revolution of a sort . . . but both in substantive matters and in matters of technique is stands apart from the developments which have taken place in geography. Perhaps it was this very fact which David Harvey found interesting all those years ago.'
- 8 In the Preface to *Explanation* Harvey (1969a: v) talks about 'technical blemishes' in his quantitative work, 'the most celebrated published example being a regression equation estimated the wrong way around – I did not realise that if X was regressed on Y it yielded a different result from Y regressed on X'. He also says attending a National Science Foundation spatial statistics conference at Evanston in 1964 was 'traumatic' (1969a: viii).
- 9 For example, Richard Dennis (1987: 311) complains that with respect to data Harvey's essay on Paris in *Consciousness and the Urban Experience* (1985a) 'operates on the academic equivalent of secondary and tertiary circuits of capital, trading and speculating on the labours of others'.
- 10 Taped interview with the author in 2002.

- 11 The political disenchantment with positivism may have come before *Explanation* was even published. In a letter to the author (8 June 2004), Keith Bassett who went to Bristol in the late 1960s following an MA at Penn State, remembers going around to Harvey's Bristol flat and seeing 'the floor . . . strewn with final drafts of various chapters of *Explanation*. He already seemed to be losing interest, particularly with the final chapters on systems.' That said, Bassett 'can't remember any overt Marxist utterances [by Harvey] in this period'.