Paul Taborsky

The Logic of Cultures

Three Structures of Philosophical Thought

Peter Lang

Berner Reihe philosophischer Studien

This book proposes to identify three long-term structures in causal reasoning — in particular, in terms of the relationship between cause and identity — that appear to be of value in categorizing and organizing various trends in philosophical thought.

Such conceptual schemes involve a host of philosophical dilemmas (such as the problem of relativism), which are examined in the first chapter. A number of naturalistic and transcendental approaches to this problem are also analysed.

In particular, the book attempts to construct a theoretical basis for Foucault's tripartite classification of epistemological structures in European thought.

The final chapter attempts to buttress the above schema by extending the analysis from cause and identity to growth, change, and stability, critiquing certain ideas of Foucault and Heidegger, as well as examining the contemporary thought of process philosophy and complexity theory.

The author was born in 1964 in Toronto. In 1991 he obtained a degree in philosophy at the University of Toronto, with a concentration in the history of philosophy. He presently teaches in the English department of Centennial College in Toronto, Canada.

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Diese Reihe versammelt Arbeiten, die im Umfeld des Instituts für Philosophie der Universität Bern entstanden und sich entsprechend der hier weiten Ausrichtung mit sehr unterschiedlichen Thematiken und Denkern verschiedener Observanz auseinandersetzen. Dabei orientieren sich die Autorinnen und Autoren an den Standards von Klarheit und Kohärenz und stellen ihre Beiträge in den Dienst der Sache.

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To Heather, Angelina, and my parents

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Introduction

Plurality and Causality

It is surely no exaggeration to say that in our contemporary era we have become accustomed to the idea of plurality and contextuality, and take its intuitive reasonableness for granted, much as an earlier age did not. As the Indologist J.F. Staal has written, 'In popular culture and among many natural and social scientists, doubts have arisen with respect to the universality of logical principles.'[1] Even formal logic itself, once the bastion and model of universality, has fallen to plurality, much as its cousin geometry (the earlier model of deductive rationality) did in the nineteenth century. Logic now presents us with a vast array of 'logics': Relevance logics, linear logic, arrow logic, temporal logics, modal logics, logics of 'this, that and the other'. The plurality of logics is now, 'a fact of modern scientific culture'[2]. As for relativism in general, some analytical philosophers oppose, but their logic, though impeccable, is unconvincing, and seemingly too abstract, too easy. Relativism is indeed self-refuting; yet it can be intuitively compelling. This leaves us with a dilemma — a logically sound argument that has little persuasive force.

Why is it compelling? It might be said that logical and philosophical arguments do not destroy the fact of culture; but culture on its own hardly implies that thought is relative. One can look for universals in culture, as Staal does.

1 Staal, (1988), p.2. For a discussion of this attitude within contemporary academic philosophy, in the analytic, continental, and historical traditions, see K. Mulligan, P. Simons, & B. Smith, (2006). See also Koster (2001), discussed on p. 31 et seq. below.

2 Cleave, (1991), p. v

Relativism has been traced back to Protagoras in the 5th century B.C.; it is surely as old as Skepticism. But what of the more substantial idea that thought, in addition to being context dependant, can be structured into certain kinds of rule or pattern governed frameworks, that apply across entire cultures or periods of time, and may reveal themselves historically? This seems to be a uniquely modern idea. Various studies, somewhat tentative and largely empirical like those of Kuhn, or more expansive and theoretical, like Foucault, have of course become very familiar. Aside from Thomas Kuhn and Michael Foucault, there are many other thinkers who have explored similar ideas: the French philosopher Bachelard, the linguist Benjamin Whorf, the anthropologist Ruth Benedict, and the Neo-Kantian philosopher Ernst Cassirer, all put forth ideas centering on incommensurable conceptual schemes in the 1930s.

The idea of 'paradigms' or '*epistemes*' in Foucault's terms, would seem to be something of a *leitmotiv* of our own thought since roughly 1960, but if we cast a glance back, we see that its history is somewhat deeper, the idea more persistent. It is not true that this idea belongs solely to our own age. Benedict[3] used terms for her particular paradigms borrowed from Nietzsche. The *Lebensphilosophie* of Dilthey, the positivism of Comte, the historicism of Herder, and of course the thought of Hegel, show that this kind of idea has deeper roots than might first appear. Perhaps one can look further back, even to Vico in the early eighteenth century. Yet Vico states that we can have a science of history because history is made — is this the same idea of culture that has been espoused by contemporary historicists? Rather today (and this would seem to hold for the 19th century as well) culture appears as more of a ground than as an artefact. When we say today that culture or cultural phenomena are constructed, though the language would seem to mirror that of Vico, the thought would appear not to. We construct culture, but not as a craftsman constructs an object, but more in the way that a traffic jam is constructed — it is simply emergent out of surrounding conditions. We

3 Benedict, (1934).

when talk of culture nowadays, we often mean this ground, as much as that which arises out of it. Thus Vico's thought may not quite be parallel to our own.

Of course, nineteenth century historicism had a developmental aspect that has now been largely abandoned. Yet that may be an inessential variation, in the way that there are realist and non-realist interpretations of the idea of possible worlds, yet which share the same logical structure.

According to Foucault, and perhaps others, historicism in general (and any development of the idea of conceptual schemes such as paradigms would seem to imply at least a minimal version of historicism) has been a feature of modern thought since the early nineteenth century[4]. Yet this claim must be made carefully — it includes the temporal expression 'since' and refers to a period of time — the nineteenth century, and so would seem to be in danger of being subject to the very contextualization that it proposes. Indeed Foucault seems to be liable to such an accusation — does not his 'archaeology', which divides Western thought into (at least) three distinct periods, thus share something with the very historicism he criticizes? Thus it is apparent that the exploration of such ideas requires some care.

In the history of philosophy one encounters diverse interpretations of fundamental ideas, interpretations that seem to have little more than a kind of family resemblance. Ideas such as those of causality (cause as exemplar or form, cause as habitual correlation, cause as ontological dependence), organization (hierarchy, self-reference, self-organization), or varying interpretations of modal concepts such as possibility and necessity. The sociologist David Riesman[5] has catalogued similar groups of ideas in the study of social phenomena; for instance, varying notions of social independence, work, responsibility, and social integration. Some distinctions seem internal to the structure of the concepts involved — for example, the varying notions of the verb 'to be': To exist, to be something, to be

4 See for example 'Different Spaces' in Foucault (1998), p. 175.

5 Riesman, (1961)

true, to be at a certain place, the grammatical copula — these could be said to be present in some respect or another in every analysis of this verb. On the other hand, one could wonder why certain interpretations of this verb prevail over others at any one time or place[6].

I would like to explore several families of concepts which display such structure. The concepts that I will look at are causality, modality, organization, change, and a number of sociological ideas explored by Riesman. The large-scale groupings of structure form three paradigms that I will call the 'Symbolic', the 'Causal', and the 'Existential/environmental', organized around a graphical interpretation of nodes, relations, and levels. This graphical interpretation shows how these three paradigms are related to each other, in addition to showing their internal structure. Fundamentally it is causality, or rather a specific interpretation of causality, that structures each paradigm.

Han, in her study of Foucault[7], describes what she calls a 'Heideggerian path' out of the interpretative problems encountered by Foucault in his exploration of the problem of historical a priori, which Foucault seemingly hinted at or invoked, but did not explore fully. Foucault chose to remain in a largely Kantian and / or 'post-Kantian' framework, from whence he borrowed the problem. The present study, although only briefly touching on Heidegger, and not always concerned with Foucault, could perhaps be said to proceed upon such lines, as the structures I explore have to do explicitly with ontological concepts and relations. In this respect, too, it borrows something from Riesman, who searched for the foundations of the three 'character-types' of his study (which are partially the inspiration for my own analysis, although it has nothing to do with either character or psychology) in population growth. Growth and change, as we know, are philosophical concepts. They surely belong to the same family of ideas that includes causality, modality, and the like. In this respect,

6 See for example Kahn, (1976)

7 Han, (2002)

although no more definite than his conclusions, there may be an ontological dimension to be found in Riesman's work.

Overview: Three Patterns of Causal Interaction

> Everything caused abides in, proceeds from, and returns to, its cause.
>
> Proclus, *Elements of Theology*, prop. 35.

> Being is a simultaneous possession of coming into existence, going out of existence, and permanence.
>
> Umasvati Acarya, *Tattvarthadigama Sutra*. (V, 30.)

> With the object of making clear and explicit two purely logical, and hence formal, concepts of nature and history — by which I mean not two different domains of reality, but the same reality seen from two different points of view — I myself have attempted to formulate the fundamental logical problem of classifying the sciences according to their methods […]
>
> Heinrich Rickert, *Science and History*.

I would like to propose a tripartite scheme for the analysis of knowledge. These schemes may be called paradigms after the manner of Thomas Kuhn, *epistemes* or 'regimes of knowledge' after the manner of Foucault, or even 'styles of reasoning' after the manner of Ian Hacking[8] — but I will not enter into the question of the most appropri-

8 See Hacking (2002), chapters 11 & 12. Hacking borrows the term from the historian of science A.C. Crombie. The concept was explored in the 1930s by the Polish scientist Ludwik Fleck, and in the 1920s by Herman Nohl (for the contributions of Nohl, see G. Gabriel (2004)). The concept of style seems to be part of a transition from a contentual, intuitive, and largely psychological understanding of paradigms (as in Hegel or Dilthey) to a more structural one, and so is itself an example of a move away from nineteenth century

ate characterization or label here. In fact, the whole issue of the contextuality of knowledge and the structures which can be used to capture or embody this — or better, these — contexualities (for contextualists are always pluralists in some way or another) is an old question, including such well-known ancestors such as Nietzschian 'perspective' and Heideggerian '*Dasein*' as well as more recent and categorical approaches like Kuhn's paradigms. At any rate, I would like to put aside these questions for the time being (they will be treated in more detail in the following section). Likewise the question as to whether these 'paradigms' or schemes actually exist — agnostically, one can regard the following as having merely descriptive value, for the time being. To proceed: The fundamental modalities within which these paradigms will been seen to operate are these: Causality, being, order, modality (possibility and necessity) and growth/change. I will examine each area separately.

The first paradigm which I will analyse is called the Symbolic paradigm. In this paradigm causality is monic; that is, every effect is correlated with a single cause[9]. A disease has a unique disease agent, a book has an original exemplar, an idea a unique provenance, and a being a single structure. The name 'Symbolic' is here borrowed from J. Huizinga, who explored the symbolic thinking of the later Middle Ages (and implicitly of the Middle Ages in general) in France and Holland, in his book The Autumn of the Middle Ages.

Here, as can be seen, I am taking causality in a fairly broad sense, to mean any sort of determination or dependence of one thing

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psychologism to the formalism of the twentieth century.

9 In fact it may be more accurate to say that an effect must have a finite, limited number of causes, rather than simply a single cause. Likewise, it might be more accurate to characterize multiplicity of causes and effects as stipulating an unlimited or unbounded number, not simply more than one. This will be brought up below (p. 128 et seq.). However, I will stay with my initial formulation here; talk of limited and unlimited causes and effects is subject to ambiguity. 'Monic' and 'multiple' may not be exactly accurate, but at least are clearly cardinal notions, which is how I want limitedness to be understood here.

upon another, and not simply the causality associated with temporal succession, or of efficient causality.

In the Symbolic system, being is multi-partite. That is, being exists on (at least) two levels. To be more precise, and to connect with the previous modality, causes and effects exist on different levels. It doesn't matter what these levels are, as long as it is understood that they are separate. That is, a cause and effect must be different sorts of things, at least, in so far as they co-exist in the cause and effect relation. In addition, we will see that in the Symbolic scheme the realm of effects and the realm of causes have unique differences that truly mark them out as separate realms.

Here, order is dominated by hierarchy. That this must be so is easy to see once one realizes that being is multi-partite and that causality is monic. Hierarchy does not mean simply the existence of order, and that there are levels of order, but there are in addition unique upper bounds. The order involved here can be compared to an upper semi-lattice; or to the tree of Porphyry.

In the Symbolic paradigm, growth is non-existent or inconsequential. Change of any lasting consequence does not occur. What changes that do occur may be either cyclic, like the seasons, which reoccur in a set pattern again and again (and thus do not constitute real change) or haphazard and of no causal consequence. Thus growth or change here is static, or perhaps cyclic, or existent yet inconsequential. All of these come under the rubric of the Symbolic system.

The 'Principle of Plenitude', as it has been called by Arthur Lovejoy, is the principle that no genuine possibility remains unrealized. In other words, anything that can be said to be possible in some form or another must, according to this principle, eventually occur. This was found to be operative, according to Lovejoy, in Plato's principle of the Demiurge (in the Timeaus) 'who could not be envious and who therefore translated all possibilities of being into actuality'. This interpretation of modality has been called the 'statistical' or less anachronistically the 'temporal-frequency' model of modality by

Knuuttila[10] in his study of medieval modal theories, as it is an extensional theory that translates possibility into temporal terms. Knuuttila also finds this interpretation in Russell and Diodorus Cronus. We will see that the statistical model of modal terms fits quite naturally in the Symbolic system.

The second paradigm is called the Causal paradigm. As might be guessed, the central feature of this paradigm is causality, understood in a way to be explained below, but largely in concordance with the ordinary meaning of the word.

Causality here is also monic; that is, for every event there is a single (principal) cause. Being, however, is also monic, in that cause and effect are entities of the same kind. There are no levels of being. A lightning strike and the fire it causes are similar kinds of things, in the sense that one does not necessarily belong to a different category of being as the other. Both are material entities of a sort and neither is ontologically 'higher' than the other.

Order is linear, as might be imagined. As causality is monic, and being is monic as well, there is no room in this scheme for the one-many relations of a hierarchy. This also leads to the stratifications of hierarchy often being understood here as self-reference. For example, the familiar idea of microcosm and macrocosm is a hierarchical view, for the microcosm is said to be reflection or embodiment of the macrocosm on a more restricted scale. On the other hand, a painting which contains a smaller version of itself within it, as in certain engravings of Escher, is thought of as being self-referential. Self-reference is something incomprehensible in the Symbolic system. Although the structures of self-reference and hierarchy are essentially the same, the interpretations differ.

Growth in the Causal system is true growth. There must be some sort of growth, for a linear system cannot go back on itself, nor can it be bounded by an upper bound. The origin in this case is not a bound,

10 The term 'statistical' in this context in fact goes back to Oskar Becker in the 1930s.

(like the top or upper element in a upper semi-lattice) but a starting point, which regresses further and further as the system grows or progresses. Even a literally linear order like the natural numbers grows in this way.

As we move from the Symbolic system to the Causal, and thence to the Environmental/Existential, the so-called principle of plenitude holds less and less sway, and gradually non-actualized possibilities are introduced, and corresponding concepts for the sum of such unrealized potentiality take root. In the Causal system, such unrealized possibilities have their root or fundament indicated by the concept of potency. Such potencies or capacities need not always be realized, in particular cases, and can be blocked or hindered under certain circumstances. Alternatively, one can conceive of such realization as being dependant upon certain necessary conditions. Nevertheless, an unrealized capacity is still a capacity.

The last system is the Existential/Environmental. Here, unlike the previous two paradigms, causality is multi-partite. That is, an effect may, in fact must, be seen as having many causes. So, a (particular instance of) disease could be seen as the result of innumerable factors in the environment; or from being at certain time in a certain place; of an effect of one's constitution; of socio-economic factors leading to exposure, and so on, in fact all of these together, with no one particular cause predominating.

Being is, like in the Symbolic system, multi-partite; Cause and effect are on different levels. As causes are in some sense associated with the 'environment', taken as a totality, this totality is an entity of a different order than simple entities themselves. This conception of being lends itself to a kind of extreme individualism or singularism ('individualism' has many connotations that I do not wish to invoke here, so the term 'singularism', or perhaps 'ontological nominalism' might be more appropriate. The idea is that entities are radically unrelated and independent.) This is so, because no nexus of relations that connect any entity to the surrounding environment is equal to any other. In other words, the 'circumstances' that give rise to or engender

any effect or entity are unique. This is in fact part of the meaning of 'environment' — a whole that contains its parts only contingently; and not necessarily, the way 12 might be seen as containing 7 and 5, or animal as containing bird and reptile (these are obviously 'Platonic' readings, for the purposes of examples only!). In some sense the environment is 'emergent' out of all its elements. An accident is never the sum totality of all its circumstances — say, for example, the light just turning green, the taxi happening to be speeding, the driver of the car in question having not slept well the previous night — while all of these together are in this system considered to be equally and severally the cause of the accident, in this sort of reasoning one usually concedes that given all of the above, one still could not say that the accident had to happen given all of these, that they determined it entirely. For in order to conclude to this, given the environmental conception, we would have to take into account all surrounding circumstances, no matter how trivial, no matter how remote, even were it to be, in the by now clichéd example, of a butterfly off the coast of Madagascar flapping its wings on a certain morning. For on the environmental conception, restricting causality to several is as reductionist as restricting it to one, and so only a totality of causes necessarily determines an effect, i.e. the totality of all causes and all entities. But the whole necessarily is beyond our grasp, for in this system, unlike the Symbolic system, there is no upper bound to the chain of causes and effects, as we are dealing with an inverse-hierarchy. The lower levels are more concrete and graspable in comparison with the ones above, which recede ever upward and away from events. Universals, natural concepts in the Symbolic system, exist here in a shadowy form, as the environment determines all, but is itself dependant and less ontologically real than the elements which it contains. Thus there is always an element of chance or contingency in any relation between the grasped environment and an element, because the grasped environment is always incomplete and falls short of the whole.

We will see that it is easy to focus on this nexal uniqueness and attribute it to the entity itself; that is, to say that each entity, as unique

as a moment in time, is the sole cause of this uniqueness. This is the 'existential' aspect of the Existential/Environmental system, but it is only an apparent aspect that constantly pulls in a certain direction, but disappears with analysis, as we shall see. Thus, this system is only apparently existential; that is, the uniqueness of each entity in fact derives from the environment within which it exists, which is ultimately the universe as a whole, and not from the entity itself. This is the environmental side of this particular paradigm. This dual nature of the Existential/Environmental system: On the one hand pulling in the direction of the individual in its nexal uniqueness and its absolute difference from any other element; in the other, towards the surrounding environment which surrounds and causes it. The butterfly flapping its wings is like no other butterfly — it is this butterfly and no other, and its importance is reflected in its capacity to bring about unforeseen and potentially momentous consequences that cannot be neglected by even those on the other side of the world from it. Yet, the butterfly is really only a butterfly, less important in itself than in what it causes and what arises from it, and anyways we know it flaps its winds only in response to the surrounding air.

We will see as well that complexity and ideas relating in general to emergence and non-reductionism have a natural fit with these ideas.

Order here is 'branching', as in the Symbolic system. It forms a kind of inverse hierarchy, with a particular entity at the bottom, and the causes which connect with it at the top, and so on for those causes.

Growth here is in fact the opposite — decline. For here there are no stable laws nor regularities; every law may be revised by future information, which corresponds to future expansion of the environment. Propositions established in such a system must be non-monotonic. On the other hand a kind of growth does in fact occur, a growth in the extent of the boundaries of the environment. As time flows and new information is processed, (or as new events emerge which may interact with entities within a particular environment) the environment expands to take in the new data or entities. Thus there is a kind of growth here, coupled with a kind of decline, if one wants to interpret non-monoticity as decline. Thus, despite there being no

stable causal patterns, there is nevertheless structure to this paradigm. It cannot be called chaotic.

The various aspects of these three structures can be summed up in the table below:

	Being	*Causality*	*Modality*	*Order*	*Growth and Change*
Symbolic	Multiple	Monic	Statistical	Hierarchical	Cyclic, Static, or Inconse-quential
Causal	Monic	Monic	Potential	Linear	Linear
Existen-tial/ Environ-mental	Multiple	Multiple	Syn-chronic; Diachronic	Inverse-hierarchical	Declining; Non-monotonic

1. What is a paradigm?

Paradigms are clearly long term aspects of ordering and structuring knowledge that determine, and (or) are determined by, thinking and existence 'in general'. Now I would like to call the above schemata structural schemata. As can be seen, they are based on certain structural interrelations between a small number of fairly traditional philosophical categories. I have focused on these because I believe them to be of significance in determining what appear to me to be recurrent long term patterns in philosophical endeavour.

By no means does this analysis purport to explain every and all distinctions that can be made philosophically. There are many standard philosophical outlooks that do not come under the scope of this analysis. Many of these later are perennial viewpoints that are related to the basic 'problems of philosophy', yet do not warrant consideration as paradigm precisely because of their perennially – they are properly to be called philosophical rather than structural, paradigmatic, or 'stylistic' (Hacking). For example, naïve realism, 'idealism' (many varieties), skepticism, 'empiricism' (many varieties), are among these perennial standpoints which I will call 'outlooks' (perhaps 'tendencies' will do for the more nebulous terms that are mentioned in single quotes above). Then there are more specific schools of thought or points of view, such as logical positivism, ascriptivism, physicalism, less general and confined to this or that place or period of time: I will sometimes, somewhat inaccurately, use the term 'outlook' for these kinds of thought as well; they are not exactly outlooks, but in virtue of their lack of generality, the are clearly not paradigms, though they may be the product of paradigms.

It is not easy, initially, to isolate what exactly separates paradigms from outlooks in the above sense, but clearly paradigms must possess both a kind of universality of applicability and at the same time a kind of historicity, or at least some sort of limitation to this

very universality. As regards universality, clearly paradigms must be capable of being valid over extended periods of times and background conditions, to extend beyond the 'surface structure' of various beliefs and commitments. Also, needless to say, paradigms must be able to determine a fairly broad spectrum of philosophical beliefs and issues, across traditional disciplinary boundaries. Yet, unlike outlooks such as 'naïve realism' or 'anti-realism' or 'nominalism', paradigms must obviously possess certain limitations. Outlooks such as the ones described above can pretty clearly be adopted by anyone at any time given certain criteria of reasonableness. It is open to anyone at any time to be a naïve realist, a nominalist, or radical skeptic, at least potentially, no matter how unreasonable such a position may be given the debate at hand or the current intellectual situation. The very viability, the supposed perenniality, of philosophical debate depends on this. But paradigms are surely different, in that they encapsulate not a philosophical position or outlook, but something that bears some relation to the very background conditions that outlooks do not bear. That is, there is some sort of dependence between a paradigm and the circumstances that surround it, or under which it appears. One is not free to adopt this or that paradigm at any time as one pleases; rather paradigms in some sense determine what is thought. By this I don't mean sociological factors – the lone nominalist surrounded by realists might feel compelled to switch sides; yet an outmoded paradigm is no longer even a point of view, but an anachronism or an irrelevancy (which sometimes ends up being interpreted 'philosophically' and gains a new life thereby, but nevertheless a diminished one).

Hacking, referring to the usage of the paradigm-like concept 'style of reasoning' by the historian and philosopher of science A.C. Crombie, says that such styles of reasoning are concerned with 'how we find out, not what we find out'[1]. This seems broadly correct. Classical philosophical outlooks such as naïve realism or idealism or even functionalism are indeed usually concerned with what is (or is not), rather than with methodology. And 'how' does indeed seem

1 Hacking (2002), pp. 178 et seq.

linked with determining conditions and limits to universality, historicist or otherwise. One thinks of, for example, Lakatos' 'research programs', or in fact, of Kuhn's paradigms themselves, which are traced to the methodological activities of small groups of scientists.

Yet pragmatism, conceived of by Pierce, yet also associated with thinkers of the past such as Protagoras and Dharmakirti (the 7th century Buddhist logician), is as much concerned with 'how' as with 'what'. As well, there are such epistemological/methodological outlooks such as instrumentalism, and logical positivism which surely have something about the classical nature of an outlook, yet are clearly how rather than what oriented. And surely the age-old ever recurring position of skepticism has something of the nature of both. It is as much about what is or isn't as it is about how one goes about determining to answer such questions. In the other direction, Foucault's *epistemes*, the 'Classical', modern, and pre-classical, seem rather 'what' oriented rather than methodological in nature. And Foucault is clearly aware of the difference between his epistemic structures and the usual classical labels and schools of philosophy, which he attempts to abjure or avoid in his study *The Order of Things.*

Hacking has criticisms of Crombie's characterization of style too, and after discussing another candidate for style, (the 'thought collectives' of Ludwik Fleck) concludes that the 'necessary conditions' for a style of reasoning are determinate types of: a) objects, b) evidence, c) sentences (i.e. ways of being able to be true or false), d) laws (or at minimum 'modalities'), e) possibilities. A style is concerned with all of these, and introduces new kinds of these entities. Thus style for Hacking is at least as concerned with the what as with the how, for all of these categories seem as much concerned with what exists as with how one determines what exists, or to quote Hacking,

> Each style of reasoning has its own existence debate, as illustrated, because the style introduces a new type of object, individuated by means of the style, and not previously noticeable among the things that exist.[2]

2 Hacking (2002), p. 189.

Categories b) and c) would appear to be largely methodological in character. What counts as evidence, and what kind of sentence can be true or false, are rather 'how' kind of questions, while a) and e) seem to be about what as much as how. For example, determining what counts as an object could be a kind of methodological procedure if one takes this to mean what should count as the focus of an observation. On the other hand, one can take a) to be about existence as much as about focus. And Indeed Hacking takes it so, as he says that 'Every style of reasoning is associated with an ontological debate about a new type of object'. At least, Hacking plays on the ambiguity of the term 'object', meaning both focus of inquiry or thought, on the one hand, and entity, on the other. In fact there is ambiguity surrounding all the items on his list, and he obviously means his list to be taken both about methodology and about ontology, about 'how' as well as 'what'.

Hacking then goes on to characterize the contemporary realism-antirealism debate as such a style, (or rather the 'by-product' of a style), while noting that debates about mind versus matter and 'questions of global idealism' are not styles (and are presumably to be classed as 'outlooks', in the terminology used here).

Now how does this help us with the question raised above, that is, the degree to which paradigms or styles are both limited or determined and limit or determine thinking, while outlooks do not. That is, paradigms have a certain relationship with their environment that outlooks do not, as the later are free to be taken up whenever and in whatever circumstances one pleases, given of course standards of reasonableness and logical considerations such as consistency, freedom from contradiction, and so on.

We see that a new point has been raised here by Hacking, that of novelty, especially the idea that styles introduce objects 'not previously noticeable among things that exist'. Outlooks surely, by virtue of their very perennial nature, do not introduce novelties or call attention to things not previously noticed. The 'mind versus matter' debate and 'questions about global idealism' do not call our attention to new types of objects, but rather ask us to adjudicate familiar dilemmas and choose between familiar standpoints, within a tradi-

tional ontological landscape. And this equally true of the outlooks mentioned earlier here.

Hacking admits that styles have a relationship to their environment, but he seems unsure of what this is. He talks about some "brute conditions about people and their place in nature", and says that there could not be much to say about this. He talks about "Philosophical anthropology" in the style of Wittgenstein, and leaves it at that.

As well, it seems that just about anything can be a style for Hacking. He talks about the Laboratory style, the Postulational style, the mathematical style, the statistical style, and others. He wonders whether there are such styles as the historical, the legal, the mystic. Hacking says that the philosopher requires the historian, yet all the same, he appears to wish for a more philosophical analysis of styles, in contrast to Crombie's 'historical analysis', and says that he wishes to summon 'all the old gang: truth, reality, existence'. Yet the question of what is a style, what can be a style, and what enables styles to persist and endure remains open and elusive, and Hacking turns to another subject – the inescapable centrality of the roots of the Western vision of the objectivity of science — at the end of his essay.

Let us turn to another source, and one often mentioned by Hacking as a conscious influence on his thought, the French philosopher Foucault. We do not get direct answers to Hacking's wish for a philosophical dimension to the this inquiry, yet, despite this, Foucault's *epistemes* seem manifestly philosophical, rather than historical in character. Foucault, writing in another language and another idiom (not the idiom of twentieth-century Anglo-American analytic philosophy) does not directly engage with questions of 'truth, reality, or existence' in quite the same way as Hacking uses these words, but I would yet like to claim that his analysis has something rather philosophical in character nonetheless.

Foucault has been called both a structuralist and a post-structuralist. Structuralists (and perhaps post-structuralists) are concerned with language and in particular with the structure of language, with grammar. Not directly, but as a sort of methodology or even as an inspiration for analysis. The structuralist thinks that words

signify primarily by means of their relation to other words, and not directly in relation to an object in the world as realists of various persuasions might assume.

We can see this concern with words and structure even in the very title of one of Foucault's most important works – *Les mots et les choses*, (Word and things) the title of the original French edition, and *The Order of Things*, as the English edition is called.

To look back a bit, it was Thomas Kuhn, in his book *The Structure of Scientific Revolutions*, who is responsible for the word 'paradigm' and for the recent surge (in the English speaking world, at least) of interest in this topic, the topic of historically situated structures or styles, or frameworks, of thinking. Certainly Kuhn's term 'paradigm' has stuck and has become the catch-all phrase for these kinds of structures. However, there are many other familiar examples of such explorations. The writings of Paul Feyerabend, the work of Imre Lakatos in the history of mathematics, and of course of Foucault and Hacking have all become well known.

Hacking himself notes a plethora of recent work that mingle historical and philosophical approaches. These may not all quite be the same thing, nor come to the same conclusions nor use the same methodology. Lakatos, for example, was trying to respond to Kuhn by use of what he called 'research programmes', which were supposed to be commensurable with each other, in some way, rather than incommensurable, as in Kuhn. Hacking notes that the methodology and approach of his studies is quite different from that of one Jonathan Ree, who uses the work of Merleau-Ponty and other phenomenologists to study scientific objectivity in a project he calls 'philosophical history'. Hacking notes that he (Hacking) has no use for the idioms of phenomenology, despite the fact that his work is, very roughly, also concerned with the grounding, for lack of a better word, of scientific objectivity, or perhaps various kinds of this. Indeed, Hacking has at times called his investigations 'historical ontology'. Ree's work is explicitly phenomenological, while Hacking's is explicitly not so, yet Hacking can somehow find room despite this for a common project.