

Talking about structures: the 'transcendental' argument^{*}

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Very final version, October 2005
Published in *Revue de philosophie économique* 12 (2005), pp. 3-17.

^{*} The core of this paper was written while I was visiting the Cognitive Science Laboratory at the University of Trento, which also provided financial support during my stay. I would like to thank members of the audience at the INEM 2002 Conference in Stirling, Alex Viskovatoff, David Tyfield, the editors of the *Revue*, an anonymous referee, and especially Tony Lawson, whose comments on a previous draft prevented me from making some severe mistakes in interpreting his position. Of course all the remaining errors are mine.

Abstract:

A distinctive feature of the Critical Realist approach is its reliance on the so-called 'transcendental argument' for the existence of social structures. Focusing on Tony Lawson's version of the argument, this paper aims at showing that it is unsatisfactory and concludes that Critical Realists should dispense with it.

Introduction

In just a few years 'ontological analysis' has become a remarkably fashionable activity in economic methodology.¹ This may be surprising for those trained in the empiricist tradition, for Popper and the logical positivists were supposed to have killed metaphysics a long time ago. It becomes less surprising however once this phenomenon is put in a wider context. In the social sciences – outside economics, that is – empiricism is not the dominant doctrine anymore (if it ever was), and a lot of so-called 'theory' in sociology and other disciplines can be described without much distortion as engaged in metaphysical debates about the nature of social reality. Since the seventies, metaphysics has been rehabilitated in mainstream analytical philosophy too; and much philosophy of science devoted to investigating 'the foundations of (physics, biology, etc.)' in a way simply examines the ontology of various parts of science (how would the world be like if we assumed that, say, Quantum Mechanics were true?).

One of the remarkable aspects of the renaissance of metaphysics is the lack of agreement on its methodology, or how 'good' metaphysics should be done. So it would be nice if philosophers of economics, who are relatively new to this business, could pause for a second to reflect on such preliminary matters. This is even more pressing, I believe, if one intends to use ontological discourse as a critical weapon against some (parts of) economic science. Most metaphysics in analytical philosophy takes science (or philosopher's view of science) as providing an approximately valid picture of reality and issues mostly *conditional* ontological claims (given what physics tells us about the physical world, and after some philosophical hair-splitting, we can conclude that...). But ontologists in economics have more ambitious plans: they often

¹ See e.g. Mäki (ed. 2001), Davis (2003), Part III of Davis, Marciano and Runde (eds. 2004).

want to reform economics, and aren't afraid to put forward *unconditional* claims about the way the world is.

I find this boldness dangerous. Whenever strong factual assertions are derived by means of ontological analysis, we must be careful and check where the assertions come from. This systematic checking can't be done in a single paper, of course, because different ontological analyses follow different strategies and different routes. Here I will just give an example of the sort of suspicious criticism that in my view is in order, focusing on a central element of Critical Realism, a movement that has been at the forefront of the ontological revival in economic methodology.

Critical realists make use of a 'transcendental argument' to establish the existence of social causal structures; then, they proceed to criticise neoclassical economics for using methods of investigation that implicitly presuppose the non-existence of such structures. In this paper I criticise their use of 'transcendental reasoning' in the first phase of their attack against neoclassical economics. Of course this is not to be read as a general critique of ontology, a development that in many ways I welcome; and neither as an endorsement of neoclassical economics or whatever is implied by it. It is just an example of the sort of critical attitude that in my view would improve ontological discussion. In order not to be overly negative, at the beginning and the end of the paper I provide some examples of alternative ways to achieve similar results as those claimed by Critical Realism, but via different (less controversial) routes.

Causal structures and transcendental reasoning

A 'structure' is a set of entities and the relations holding between them. There may be several kinds of structure: purely abstract structures (set-theoretical, for example), concrete physical structures (the walls of my house, and the way they hold each other), conventional structures (the pawns on the chequerboard, and the strategic relations between them in a game of chess), and so on. When the relations between entities are causal in character, we shall talk of 'causal structures'. Whereas the existence of generic structures is uncontroversial (it is almost tautological, or at least a commonsensical platitude for everyone but the idealist) the existence of causal structures is more problematic, because of the conceptual problems stemming from the notion of causation.

There has recently been a true revival in philosophy of science of the notions of causal structure, causal mechanism, and causation in general. Causation has been approached from at least two different angles – from the perspective of explanation, and from intervention. The first approach moves from an analysis of what scientists do when they explain. According to some accounts of explanation, to explain a type of event (or regularity between events) is to point to a structure that has the capacity of *generating* events (or regularities) of that kind. One of the foremost goals of science, then, would be the discovery of such causal structures and the event-regularities they can bring about. Such a thesis, however intuitively plausible, stands in stark opposition with an old and prestigious philosophical tradition, Humean empiricism. Humean empiricists restrict their ontology to regularities between actual events. To explain, for them, is to set an event in the context of a wider regularity – it is to show that a particular *x* belongs to a more general pattern *X*. Much of the appeal of the radical empiricist view derived from some conceptual difficulties with the commonsensical notion of causation, and in particular with its apparent reliance on ‘dubious’ concepts like necessity, power, counterfactuals, etc. Conversely, much of the appeal of the new accounts of causal explanation comes from successful or at least promising attempts to solve such problems, as well as from the difficulty with which the Humean programme deals with some deep intuitions we all have about explanation. Some regularities are explanatory, whereas others are not. Barometer’s readings are associated with storms, but do not explain them. As David Hendry famously pointed out, there is a tight correlation between the level of prices in the UK and the cumulative amount of rain in Scotland, but no one tries to explain one by means of the other.²

The second approach moves from a desideratum: science is not just for representing the world, but also for changing it. Again this argument exploits some weak points of Humeanism. Some associations cannot be used for intervention – they are not good ‘levers’ to control reality. Since other associations can be used for such purposes, the Humean is called to explicate the difference between these two kinds of regularity (which is hard to do, in purely Humean terms). The causal view has a very intuitive way of accounting for such a difference, by distinguishing between spurious and causal relations between events or types of events.

² Cf. Hendry (1980).

These two approaches belong to what we may call the 'received approach' to causation.³ Neither of them, of course, aims at proving the existence of the particular causal structures described by a given scientific theory or discipline. That is the business of science. By philosophical means, we can only conclude that *if* a given theory (say, electrodynamics) is genuinely explanatory, then it must describe some causal structures; or that *if* it can be used successfully to intervene, then it must capture some causal mechanisms.

Critical realists seem at first sight more ambitious, for they rely on two 'transcendental arguments' to prove the very existence of causal structures. The first argument, however, falls squarely within the 'received' approach: moving from the apparent success of experimental practice in sciences like physics, and the capacity to use experimental knowledge in order to intervene and explain physical phenomena in the 'outside world', critical realists conclude that such a success is best explained by the existence of causal structures.⁴ For experimental physics to work, causal structures must exist. But it works. Therefore they exist. The existence claim is supported by scientific success, and by what such success consists of.

Such an argument clearly has limited scope: it cannot be used in the context of disciplines, like the social sciences, that make limited (and controversial) use of the experimental method. And also it cannot really take off if the disciplines in question – the social sciences once again – are widely considered of rather limited success. For this reason, critical realists have devised a completely separate argument aimed at proving the existence of *social* structures.

The transcendental argument for social structures originates from Roy Bhaskar's *The Possibility of Naturalism* (1979, especially Ch. 2, section 3). Bhaskar introduces the argument briefly in the context of his discussion of the long-standing debate on individualism vs. social holism. Here is his formulation:

[...] conscious human activity, consists in work on given objects and cannot be conceived as occurring in their absence. A moment's reflection shows why this must be so. For all activity presupposes the prior existence of social forms. Thus consider saying, making and doing as characteristic modalities of

³ See for instance Salmon (1984), and Cartwright (1979).

⁴ The argument was first introduced by Bhaskar, but has since been used in various similar forms by philosophers of science like Ian Hacking, Nancy Cartwright, and others.

human agency. People cannot communicate except by utilizing existing media, produce except by applying themselves to materials which are already formed, or act save in some other context. Speech requires language; making materials; actions conditions; agency resources; activity rules. Even spontaneity has as its necessary condition the pre-existence of a social form with (or by means of) which the spontaneous act is performed. Thus if [as previously argued] the social cannot be reduced to (and is not the product of) the individual, it is equally clear that society is a necessary condition for any intentional human act at all (Bhaskar, 1979, pp. 42-3).

It is apparent that Bhaskar is concerned in particular with the issue of the (ir)reducibility of social to individual behaviour (and vice versa). In this book he does not provide a detailed articulation of the argument, nor an extensive discussion of its status and significance. It is also notable that Bhaskar does not use the term 'structure' in this passage, although the term has become very common in later critical realist writings. In *Economics and Reality* (1997), Tony Lawson provides one of the clearest presentations to date of the critical realist transcendental derivation of social structures from human agency. The argument, as reformulated by Lawson, goes as follows (1997, pp.30-31; some repetitions and quotations have been omitted):

An interesting question to pursue, [...] is what is implied by the reality of people making choices? [...] [T]he possibility of choice presupposes not only that events could have been different, but also that agents have some conception of what they are doing and wanting to achieve in their activity. [...] And intentionality, in turn, is bound up with knowledgeability. For human beings must have some knowledge at least of the conditions that render their intended acts feasible. In turn, again, knowledge presupposes a degree of endurance in the objects of knowledge sufficient to facilitate their coming to be known. Now if, as widely reported, scientifically significant event regularities do not often occur in the social realm (or at least are yet to be uncovered), the enduring objects of knowledge that condition actual human practices must lie at a different level, at that of the structures which govern, but are irreducible to events, including human activities. [...] But it does not yet follow that there are structures which can be said to be clearly *social*. Now if the term social is to designate anything specific here, it must be a dependency on intentional human agency. [...] [I]n determining the

real possibility of social science we must acknowledge that science employs not only a perceptual, but also a causal, criterion for the ascription of reality to a posited object. [...] Entities which cannot be observed directly can be known to exist through the perception of their consequences at the level of actual events and states of affairs. [...]

Once we accept the property of depending upon human agency as criterial for the social, and acknowledge the causal criterion for ascribing reality, it is easy enough to see that identifiable social structures do exist. Items such as (societal) rules, relations and positions clearly depend on human agency as well as condition our everyday (physical) activities. The human (intentional) activities of speaking, writing, driving on public roadways, cashing cheques, playing games, giving lectures, and so forth, would be impossible without such social material conditions as rules of grammar, the highway code, banking systems, rules of play, teacher-student relationships, etc. All are structures which pre-exist and make a difference to (facilitate as well as constrain) related human activities. [...]

To repeat, if it is the dependency of such structures upon human agency that marks them out as being social, it is their ability, in turn, to make a difference to (to enable as well as to constrain) physical states, or actions, that (just as with non-perceivable objects in the natural realm such as gravitation and magnetic fields) establishes that they are real.

The argument starts from choice and ends up with social structures. The extraction of a big rabbit from such a small hat is quite extraordinary, and deserves attention.

Before we begin to analyse the argument, however, it is important to clarify its status and function.⁵ The basic form of a transcendental argument is the following:

Without X, Y would be impossible (first premise);

But Y is the case (second premise);

Therefore X must be the case (conclusion).

We all make use of such arguments, but the first thinker to elevate transcendental reasoning to philosophical fame was of course Immanuel Kant. For Kant, the

⁵ I should make clear that I am not concerned here with exegetical issues, and in particular I shall not discuss whether Lawson provides a faithful interpretation of Bhaskar's ideas. For my purposes, it suffices that Lawson's argument be a plausible (and in my view much clearer) interpretation of Bhaskar's original.

characteristic feature of a transcendental argument (as opposed to other kinds of inference) was its *necessity*: in a transcendental argument, once the second premise has been accepted the conclusion must follow necessarily. This technical meaning of 'transcendental argument' survives in contemporary philosophy, in the work of philosophers like Davidson, Searle, and Putnam who have revived this form of reasoning after a period of relative oblivion.⁶ But it is important to stress that this is *not* the meaning that Lawson gives to this term. A 'transcendental argument', for him,

[...] is a special kind of reasoning of which abduction or retrodution is the genus. Retrodution moves from specific phenomena of experience to underlying specific causes, transcendental reasoning moves from generalised features of experience to philosophical ontologies. Both are fallible.⁷

Notice that according to Lawson's terminology the 'transcendental' *inference* itself is fallible, not merely the premises it moves from. Like in any other abduction, the conclusion of 'transcendental' arguments according to Lawson are just plausible, or highly probable, or more likely than alternative conclusions, given the premises.⁸

Lawson's transcendental argument is neatly divided in two parts: first, the derivation of the existence of structures⁹ from human agency; secondly, the proof that (some of) such structures are genuinely social.

The argument: part 1

The whole argument stems from the claim that

[1] Human beings make choices.

This, we are told, is a fact of human life and part of our commonsensical understanding of the world. (Critical realists are keen to stress that obviously we do

⁶ See Sterne (ed. 2000) for a recent collection of papers devoted to transcendental reasoning.

⁷ Personal communication.

⁸ Lawson follows decades of philosophical scepticism towards Kantian and neo-Kantian attempts to give transcendental necessity some kind of respectability. But see Tyfield (forthcoming) for an attempt to rescue transcendental reasoning that goes in the opposite direction.

⁹ Although Lawson is not particularly explicit on this subject, in the course of the book he characterises structures as enduring and complex systems of entities (or parts of entities),

not *always* choose, but we certainly have the capacity to do so, and such capacity is also often exercised.) Let us take the main assumption for granted, then. Lawson moves on to argue that

[2] Things could have been different, since “any agent could always have done otherwise” (allegedly from [1]),

[3] “Agents have some conception of what they are doing and wanting to achieve in their activity” (allegedly from [1]).

For Lawson [2] and [3] are *analytic* to the idea of choice. Step [3] could in fact be reformulated more concisely as

[3'] Agents have beliefs and desires.

Since [2] does not play any role in the rest of the transcendental argument (although it is important in the context of the critical realist position in general), we can ignore it for the sake of our analysis. The fourth step then is:

[4] “Human beings must have some knowledge at least of the conditions that render their intended acts feasible”. (Allegedly from [3].)

Step [4] cannot follow from [3'], as the latter merely states that human beings must have formed some desires and beliefs about the situation, and knowledge is more than mere belief. As we shall see very soon, [4] is crucial for the transcendental argument, so in order to retain it we must modify the previous steps in one way or another. An obvious way is to assume not only that human beings make choices, but that their choices are most often efficacious. Then, step [4] would follow ‘transcendentally’, as a condition of possibility (or the most plausible explanation) of the fact that human beings make the right decisions most of the time. So let us reformulate the first premise as follows:

[1'] Human beings make choices, and these are usually efficacious.

The fifth step is:

together with the relations that hold between them, in line with the standard definition given at

[5] In order to be known, objects must have some degree of endurance
(transcendental derivation from [4]).

Such a statement is rather weak. Suppose that every day for a week I see my colleague John Dupré walking past my office exactly at 1 PM. Is such a series of events, and the entities involved, 'endurable enough'? Trivially, yes, for it might allow me to intercept him today, and ask him an important question. But this clearly does not bring us any closer to the conclusion that enduring *structures* exist. There are a thousand ways of explaining this (perhaps very fragile) regularity, some of which may appeal to enduring structures, some to transitory structures, and others to no structures at all.

The next steps are more revealing of what critical realists are aiming at:

[6] "Scientifically significant event regularities do not often occur in the social realm (or at least are yet to be uncovered)" (inductively from empirical observation).

[7] "The enduring objects of knowledge that condition actual human practices must lie at a different level, at that of the structures which govern, but are irreducible to events, including human activities" (allegedly from [1'], [5] and [6]).

Notice that our modified premise [1'], that human actions are efficacious, is crucial to derive [7]. It is not clear, however, why we should accept the dichotomy between *scientifically significant* regularities and structures. The argument moves from 'everyday' choice, not from *scientific* activity. Certainly in everyday life we can perform reasonably well, and for a long time, without knowing the underlying causal structure of reality, neither explicitly nor tacitly. Take Russell's chicken: its running towards the farmer certainly served it well in terms of finding food, until the day the farmer came and killed it.¹⁰ Or take my uncle's investments in the stock market: on average he does not too badly by simply following rules of thumb based on the superficial fluctuations of the FTSE index. And his being caught in the 1998 stock market crash is entirely consistent with his taking *mostly* efficacious decisions. I'm stressing here the hopelessly vague formulation of premise [1'] because there lies the problem with the derivation of step [7]. But anything stronger than [1'] – that is,

the beginning of this paper (see e.g. Lawson, 1997, p. 21 for some terminology).

any premise specifying exactly which actions are successful, in what way, and to what degree – will lose its status of ‘generalised feature of experience’, and therefore will not be viable as a premise of the transcendental argument.

We have reached the end of the first part of the transcendental argument: the ‘derivation’ of the existence of structures. The argument could be presented much more concisely as follows:

- (a) (some of) our actions are efficacious;
- (b) therefore they must be based on knowledge;
- (c) such knowledge cannot be of regularities (for there are too few);
- (d) therefore it must be of structures.

Is such an argument credible? I have questioned the derivation of steps (c) and (d), which cannot be supported by the previous steps, unless the type of actions in (a) are specified more precisely. But (b) is also doubtful, in my view. Surely we can think of different explanations of our success: we might think for example at some cunning evolutionary adaptation that allows us to deal efficiently with our everyday business. Action could then be guided by our genes, or memes, it could be based on routines, and so on.¹¹ In order to buy the ‘transcendental’ argument, we need to add more flesh, for as it stands it is just too vague to be really convincing. In fact, the second half of the argument is devoted to just that: the illustration of concrete examples of structures, the knowledge of which we exploit in our decision making. The problem, as we shall see, is that in doing that we shift to another, much more specific level of discourse, and abandon the ‘generalised features of experience’ we started from. Let us see how it works.

The argument: part 2

The second half is officially concerned with the character of the structures the knowledge of which guides our action, and in particular with their being social in kind. After having defined ‘social’ as dependent on human agency and intentionality,

¹⁰ The original story is in Russell (1912), p. 98.

¹¹ A referee suggested that some knowledge, perhaps of the tacit kind, could be said to be involved in such mechanisms. My feeling is that we are just stretching the meaning of the word ‘knowledge’ here; but at any rate this wouldn’t be the sort of knowledge that could be used to make conscious, autonomous choices. And given that agency is the starting point of the transcendental argument, this stretched interpretation of ‘knowledge’ should be ruled out.

Lawson reminds us that we can gather information about structures by looking at what they contribute to bring about, namely observable events and states of affair. Here are the last three steps in the transcendental argument:

[8] The existence of structures can be detected by observing their effects.

[9] Human beings speak, write, drive on public roadways, cash cheques, play games, give lectures, and so forth (inductively from observation).

[10] The above human (intentional) activities would be impossible without such social material conditions as rules of grammar, the highway code, banking systems, rules of play, teacher-student relationships, etc. (from [9]).

[11] Identifiable social structures exist, *QED* (from [10]).

Clearly the derivation of [11] from [10] relies on the tacit assumption that the items in the list of 'social material conditions' are genuine 'causal structures'. And the derivation of [10] relies on the absence of any other *plausible* explanations of the activities listed in [9]. It is important to stress the word 'plausible' here: there are in fact other *possible* explanations of the above activities.¹² For example, we may drive on the left only because such behaviour has evolved in Britain, without there being a social norm or a legal rule that prescribes it. Simply, those who drive on the right happen to die faster. Or, even more unlikely, we might all be driving on the left by mere chance. Of course a 'structural' explanation in terms of rule following is more plausible, in the light of the evidence. So far so good, one might say: have we not said that 'transcendental' reasoning is just abductive reasoning written large? Yes, but the above abductive inferences do not move from 'generalised features of experience'; hence, they cannot be transcendental.

This is not mere terminological quibble; on the contrary, this point reflects a more general problem of strategy in talking about structures. The transcendental argument aims at supporting some general theses of 'philosophical ontology' – that is why it moves from generalised features of experience like choice, intentionality, etc. But such features are too thin a basis to construct any interesting inference. This is clear

¹² Let us notice, by the way, that the above list is quite heterogeneous. The conditions of possibility of speech, for example, may be quite different from those of cashing cheques or driving on public roadways.

once we notice the pivotal role played by the assumption that our choices are efficacious, and that such efficacy can be best explained by positing structures. This assumption, vaguely stated, has no bite: there are too many things that we can plausibly do without knowledge of structures. But once made more precise, we get out of the realm of 'generalised features of experience', to enter the realm of *specific* phenomena, particular things that call for an explanation. Here Lawson introduces his list of particular phenomena [9] that are best explained by means of structures. Step [10] has merely the function of pointing out: 'These are the most plausible explanations of the activities in [9], and look, they appeal to social structures!'. The existence of social structures, in other words, is not transcendently deduced from agency (because it cannot), but supported by means of specific explanations. But this is not the job of philosophy, or something that can be achieved by means of transcendental inferences. It is the business of science, of good social science. In fact, in presenting his list of phenomena and social material conditions, Lawson is implicitly asking us to endorse a specific kind of social science – and to repudiate other possible explanations of these phenomena.

My argument so far, in a nutshell, has been the following: the first part of the transcendental argument is insufficient to prove its conclusion. So why does it sound quite plausible after all? The force of the argument lies in the second part; but the second part is not a 'transcendental' argument, not even in Lawson's sense. Notice the difference between the critical realist and the received approach to causation outlined at the beginning of this paper. The argument from explanation moves from some genuinely universal (or 'generalised') features of explanatory practice, namely the fact that some laws of association are explanatory whereas others are not. And similarly the argument from manipulation moves from the universal fact that some associations can be used for intervention whereas others cannot (they are 'spurious'). In both cases particular examples are used to *illustrate*, not to *support*, the causal view. But this is possible because the fundamental premises of the argument (the concepts of explanation and intervention) are rich enough to deliver the goods. The concept of agency (or even effective agency) in contrast is not strong enough for the transcendental derivation of the existence of social structures.

Agency and intervention are of course related concepts. Indeed the intervention that matters for scientific purposes is just a special kind of agency (the agency of the policy-maker in the case of economics). But unlike the transcendental argument, the argument from intervention does not need to move from successful policy-making

(which is hardly a 'generalised feature' of economic science). What is nice about the argument from intervention is that it can be straightforwardly normative, starting from the assumption that policy is the goal we are aiming at, rather than something we do well in general. The point is that we have to *look* for causal structures, if they exist, in order to fulfil our goals.

I guess the problem with the received approach is, from the critical realist's point of view, that it does not *prove* the existence of social structures. It just tells you what kind of things should exist in order for social science to be explanatory or usable for policy-making, without guaranteeing that such things do in fact exist. (All explanation and intervention may have to be based on some more fundamental science like physics, after all.) But this is just the way it should be. To prove the existence of things is the job of good science, not of philosophy. The second part of the transcendental argument tries to do in a sketchy and easy way what should be done by means of a good deal of hard scientific work.

Conclusion

To sum up: the transcendental argument for social structures does not provide the goods it promises. The critical realists, moreover, dangerously suggest that our confidence in the existence of social structures is based on a grand philosophical argument, on a transcendental derivation from the category of 'choice', rather than on careful empirical investigation (as all good science should be).

The critical realists are not alone in talking about causal structures, tendencies, and powers. The Humean view of causation as regular association has been the target of systematic criticism, and several alternative conceptions have been explored which relate causation to counterfactuals, capacities and powers, transmission mechanisms, etc. A most distinctive character of the critical realist approach, which distinguishes it from other similar programmes, is its reliance on the transcendental argument. Other philosophers clearly distinguish their job (of defining the notion of causal structure and especially of causal relation) from the job of the scientist (of finding out what kind of structures exist, and their specific features).

The philosophical literature has made progress on two dimensions: on the purely conceptual side, by articulating the complex relations between the notion of cause and those of probabilistic dependence, counterfactual dependence, invariance,

robustness, manipulability, asymmetry, connection, necessity, time ordering, and so on. And on the epistemic dimension, by exploring the techniques that – in the appropriate circumstances – may be used to infer from data back to causal structures.¹³ This is truly ‘philosophical’ business: these are tasks that can be carried out purely by means of conceptual analysis, or by moving from ‘generalised features’ of our best (successful) scientific practice. With hindsight, the transcendental argument seems to have done more harm than good to the Critical Realists, by diverting attention from the really important issues. What it can achieve is pretty irrelevant, and the ‘proof’ of the existence of enduring social structures gives the false impression that most of the problems have already been solved. The transcendental argument is an idle wheel, and critical realists should dispense with it.

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¹³ Examples can be found in the work of Hubert Blalock, Pat Suppes, Herbert Simon, Nancy Cartwright, Clark Glymour, Richard Scheines and Peter Spirtes, John Dupré, Paul Humphreys, Kevin Hoover, Jim Woodward, and others. Excellent surveys and original contributions can be found in two recent books by Dan Hausman (1998) and Judea Pearl (2000).

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