1 Causation in the Realism Project

Ingarden’s theory of causation, which makes up the uncompleted third volume of his magnum opus *Der Streit um die Existenz der Welt*, is embedded in the general context of that work’s project, which is to elicit and elucidate the mode of existence of the real world, with a view to refuting Husserl’s transcendental idealism and upholding realism about the real world. Before considering the details of Ingarden’s account of causation it is worth indicating its position and role in this context.

Husserl’s phenomenology postulated a fundamental duality, a radical distinction between two or more realms of being: pure consciousness, and the rest, including besides ideal platonic objects, and unrealized possibilities, the real world of space, time, matter and causation. For present purposes we concentrate only on the real world, leaving platonic objects and pure possibilities aside. The transcendental procedure consists in directing attention not at the world itself but at the acts by which and through which it is given, the transcendental reduction being a way to avoid begging existence questions. The idea is to find the cognitive foundation for the belief that the real world exists. But Husserl’s transcendentalism, coupled with his views about the primacy of pure consciousness, meant that he came to deny the autonomy and fundamentality of the real world and considered it dependent in some way on consciousness. This is idealism, of whatever stripe.

Ingarden by contrast not only denied the truth of idealism, but held that the way to settle the question of the nature of the relationship between the world and consciousness was to consider the nature of the world itself and the nature of consciousness itself, and to see how they stand to one another. One very obvious thought is that our knowledge of the real world is mediated by causation: things and events in the real world around us impinge on our bodies, notably on our senses, and cause us to perceive and experience some of what is there and going on around us. To investigate the nature of causation is therefore crucial for Ingarden’s project of justifying realism, not only because causation is a vital and prominent factor of nature, but because of its role in connecting consciousness with its objects, and contributing therefore to a solid refutation of idealism.
Ingarden’s ontological scheme is one of the most elaborate and thoroughly crafted in modern philosophy. In his terminology, ontology is concerned with the essences of objects, while metaphysics considers the question which of the kinds of objects so described in fact exist. Ontological questions thus take conceptual priority over metaphysical ones. This is indeed in line with the eidetic phenomenology of Husserl’s pre-transcendental period, but there is a twist in Ingarden. Our knowledge of essences does not exist in a vacuum. We do not simply excognitate essences out of nowhere, but we take up what is given to us in experience, conceptualise it through language, reflect on it, and investigate it scientifically. The language we employ fits our experience but that experience may not reveal things to us as they really are: we may need to critically scrutinise the relationship between experience and world. Since there is no external court of appeal, the procedure is one of testing correction from the inside. Hence it is important to allow knowledge of the external world to feed back and adjust, corroborate or correct the conceptual scheme through which it is cognised.

This is a motivation for Ingarden’s according a certain primacy to what he calls material ontology. For Ingarden, any (putative) object can be treated ontologically from three different points of view: the existential-ontological, the formal-ontological, and the material-ontological. The first is concerned with the mode of existence of being of the object in question. Like Aristotle, Ingarden considers there to be several modes of being (modi essendi), which are mutually exclusive, and such that no object can transition from one mode to another. For example God, a number, a tree and a perception all have different modes of being. Ontologists can agree about what mode of being a putative object has while disagreeing about the metaphysical question of whether it exists. A theist and an atheist can agree what God is but disagree about His existence; a platonist and an anti-platonist can likewise agree about what abstract objects are but disagree about whether there are any. Modes of being are anatomised by Ingarden into ontological factors or what he calls existential moments, which are fundamental features dividing objects according to their nature, the consistent combinations of these factors generating the different modes of being. Prominent among such existential moments are different forms of dependence and independence. Ingarden is wise though not original in considering an object’s existence not to be a property of it.

Formal ontology deals with different forms that objects may take, for example the difference between a substance enduring through time, a process unfolding in time, an abstract entity outside time, and an object of thought. Again, an object’s form is not a property of it. It is as it were too basic to be an object’s property, but is more like its category in a broadly aristotelian sense.
Personally I do not find Ingarden’s conception of form as anything like as clear or helpful as that of Husserl, who contrasted formal ontology with what he called regional ontologies, and which distinction I still find it useful to apply today. The notion of category by contrast is highly apt, so perhaps it would have been more helpful if Ingarden had chosen ‘category’ instead of ‘form’, or had distinguished the two notions. Fortunately the formal-ontological question is relatively peripheral to our concern with causation. Causation, in Ingarden’s view, pertains directly to objects that are in time and either spread out over time, such as processes and states, or which happen instantaneously, what Ingarden calls events. While I do not approve of Ingarden’s restriction of the term ‘event’ to happenings without temporal extension, I shall acquiesce in it for this paper, and follow him in using the term ‘process’ to include happenings such as football matches or car journeys which would normally be described as ‘events’. To cover all of events, states and processes I shall co-opt W. E. Johnson’s useful word ‘occurrent’. Apart from events, all occurrents have temporal parts or phases. Events in Ingarden’s sense may be construed as the temporal boundaries at the beginnings and endings of extended occurrents (33).\(^1\) The main point is that the terms of the causal relation do not include substances or other objects that endure (continuants), and on that I think Ingarden was right, recent revivals of the idea of agent- or continuant-causation notwithstanding.

The third kind of ontology is material ontology, which is concerned with the actual nature or constitution of objects, of whatever form (category). This is the investigation of an object’s kind, its properties, and the relationships in which it stands to other things. Taken seriously and thoroughly, it leads from ontology into science: indeed in my view there is no discernible boundary separating material-ontological from scientific questions. Consider for example a fundamental particle such as the Higgs boson. It is not as if, before its discovery, there were antecedent intuitions about what it was, apart from predictions based on scientific theories. The material-ontological questions and the empirical scientific questions are not separable. It is because material ontology furnishes us with the examples and actual qualities that feed into ontology more generally that Ingarden regards it as the most basic part of the discipline. Matters of form and of existential mode are more abstract and therefore more familiar to ontology generally, but they require a basis in experience and existence. So, causation, which is a fundamental feature of material reality, is important to Ingarden for that reason as well as for its role in mediating between world and mind.

Ingarden is relentlessly ontological in his pursuit of the notion of causation, and criticises those who think causation is analysable in terms of logically necessary or sufficient conditions, which apply in mathematics and so are not inherently causal (13), or in terms of logical

\(^1\) References to Ingarden’s book *Über die kausale Struktur der realen Welt* are by page number in the running text.
consequence or laws of nature (59). Rather, if something “governs” the goings-on in the world it cannot be anything without efficacy such as a mere law, but must be something that laws describe. In this respect Ingarden was well ahead of the ontological turn which analytic metaphysics took after his death; indeed he had never deserted ontology when others around him, whether in the phenomenological or the analytical tradition, did so. His refutation of radical determinism for example is based on its ontological absurdity, not on the more standardly mentioned questions of prediction or predictability, which are epistemological.

3 Causal Structure for its Own Sake

While the strategic role of causality in Ingarden’s overall metaphysical project is thus clear, his assiduousness in pursuing its analysis and ramifications goes beyond this. Over a remarkable span of more than 400 pages – this in an uncompleted text, published posthumously and breaking off in mid-sentence – he investigates in minute detail and with immense patience the variety and limits of the possible types of causality, and in particular the plethora of ways they consort and fit together. The volume title, On the Causal Structure of the Real World, says it all. Causality is indeed for Ingarden, to use John Mackie’s felicitous phrase, the cement of the universe, that which unifies the world despite the plurality of relatively independent things (2, 139), but that leaves a lot open as to how it does so. Ingarden spares neither effort nor ink in ferreting out the different metaphysically possible ways in which types of causal connection may or may not contribute to the nature of the physical world as a whole. This inevitably brings him into contact with empirical and theoretical cosmology, which he is not reluctant to discuss. But it is fair to say that most of his discussion takes place at the level of ontology, that is, in his own terms, those investigations concerning what is possible, rather than what is factual (the study of which is metaphysics as he uses that term). One intriguing and rarely posed modal-ontological question that Ingarden mentions in passing (but does not even attempt to answer) is whether causality is a contingent or an essential feature of any real world (117).

The sheer extent and detail of Ingarden’s investigations preclude anything but a cursory treatment, so in this essay I shall restrict myself to indicating the overall nature of Ingarden’s account, and discussing those aspects which I consider worth discussing from the general point of view of the metaphysics of causality. This is of course a topic which despite over two thousand years of discussion and controversy is by no means wrapped up, and it is fair to say that Ingarden’s contribution, despite its extent, minuteness and care, likewise fails to wrap it up.
4 Conditions on Causation

Ingarden begins by laying out certain general strictures on what counts as a causal relation. Firstly, causation is a two-placed relation (6), and only occurrents (can) stand in causal relations. That is, continuants themselves are neither causes nor effects. This reflects the shift away from object or continuant causation that was instigated by Hume, and Ingarden sees no reason to return to a pre-Humean position. Since I agree fully with him in this, I see no point in going further in considering continuant causation here. The kinds of occurrent involved can be events or groups of events, processes or groups of processes, or a mixture of events and processes (28). There can be causality between concurrent processes, as when the flow of falling water turns a turbine and generates electricity (31). Also causation pertains not to occurrent types, but to tokens. The same types of events can be now cause, now effect, as when a changing electromagnetic field moves an electric device, or a moving electrical device creates an electromagnetic field (12).

Next, Ingarden distinguishes between immediate and mediate causation (33). When I operate a light switch and turn a light on, the motion of my finger operating the switch is not the immediate cause of the light going on: that is the flow of electricity in the circuit in which the light is contained: it is this flow which is set going by my action, which closes the circuit and allows the potential difference provided by the power supply to cause a current to flow in the circuit and so instigate the process (whatever it is – Ingarden was thinking of bulbs with incandescent filaments but there are now many more possibilities) that results in the emission of light (37).

He also distinguishes, as one must, between a triggering or tipping occurrent which activates a new process on the one hand and the pre-existing circumstances and conditions which render such a triggering possible and let the new process begin, or alter or stop a currently ongoing process (76).

Narrowing his attention to this triggering event or process and immediate causation only, Ingarden lays down five conditions to be fulfilled by a causal relation between a cause C and an effect E. A causal relation obtains between a certain occurrent individual C and another E if and only if

1. C ≠ E
2. Both C and E are actual or real (wirklich)
3. Each of C and E is either an event or a process or a phase of a process.
4. C actually conditions (bedingt) E, but E does not condition C in the same way
5. The occurrence of E is simultaneous with that of C.
The first of these conditions is wholly uncontroversial. The second sounds harmless but actually is not: it has bite in Ingarden’s system, of which more below. The third is uncontroversial provided we reject agent- or continuant-causation. Even if we accepted continuant causation, there would still be a question as to the nature of occurrent-causation, which is what Ingarden is focussed on. So we shall treat the third condition as unproblematic. The fourth condition is problematic in as much as the idea of one occurrent conditioning another (assuming this is something other than causation) is unclear. Probably the way to think of it is this. When one occurrent causes another, the cause does two things: (a) it makes the effect happen or exist, or brings it about (13); (b) it determines, at least in part, what the effect is like, what its properties are (135). Both of these are fairly unproblematic, in so far as anything at all about causation is unproblematic. A cause is what prompts or triggers an effect: this prompting or triggering, which as we typically requires other antecedent conditions to be in place before it can be effective (75), is what is meant by saying that one occurrent makes another one happen. Similarly the nature of the cause may determine the nature of the effect: a heavy ball dropped into wet sand will make a round impression, whereas a cube of the same weight will make an impression with one or more corners.

The relation between cause and effect, asymmetric though it is, may allow inferences from the nature of the effect to the nature of the cause. Forensic investigations are full of this kind of reasoning. A murder victim’s injuries which result from the dastardly event allow a pathologist to infer how death was inflicted. The skid marks at the site of a road traffic accident enable investigators to infer something of the vehicle’s speed and handling leading up to it. So in this epistemic sense at least, effects at least partially “determine” causes. We of course know that, in the sense we (and Ingarden) are groping for, effects do not determine causes, because determining is what causes precisely do to effects, and not vice versa. So there remains a residue of triviality or circularity about the fourth condition, which is hard to dispel.

That brings us to the fifth condition, that a cause and its effect are simultaneous. It merits a section to itself.

5 Cause and Effect as Simultaneous

Ingarden is well aware that this is likely to prove the most controversial aspect of his account of causality, since he notes that the majority opinion among philosophers and scientists is that causes precede their effects (37). It’s true that in the Critique of Pure Reason Kant had given an example of a lead ball sitting on a cushion and causing a dent in it, when cause and effect are in his view simultaneous (A203/B248). But even Kant sought a way out of this by noting that, dynamically,
when the ball is placed on the cushion, the cushion is caused to bend by the ball, whereas no dent of
the cushion causes a motion, let alone the existence, of the ball. As precedents for his view that
cause and effect are simultaneous, Ingarden mentions, besides Kant, Sigwart, Ducasse and Gawecki
(57).

Ingarden’s reasons for holding that cause and effect have to be simultaneous are based on
two assumptions. One is that time is continuous. He assumes this throughout his treatment, and
though he does occasionally wonder about the possibility of discrete time, he does not do so at length,
taking it more or less for granted that, since physics treats natural processes using dynamical
equations under the assumption that time is continuous, it is reasonably safe to assume that it is
(41–3). We will come back to this assumption later, for now take it is read. If now causes precede
their effects, that means, under the assumption of continuity of time, that a cause must cease a finite
time before its effect commences. If not, if a cause ceases after the beginning of an effect, then they
are simultaneous, at least in part, after all. If the last moment of a cause coincides with the first
moment of an effect, they are still simultaneous at that moment. So consider the case where they are
not, and there is an interval, no matter how short, between the end of the cause and the beginning of
the effect. How then can this gap be bridged? If there is a process which the causes sets off which
bridges the gap and itself sets off the effect, then the putative cause is not immediate after all. So let
us exclude that case, leaving a proper gap between cause and effect. Here Ingarden’s second
assumption comes into play, namely that a cause cannot be latent for a time before bringing its
effect into existence: there can be no temporal gap without a mechanism transmitting cause to effect
(51) otherwise we have impossibility or mystery (45). That excludes anything other than that a
cause and its immediate effect overlap by at least one moment, and so are at least partly
simultaneous.

Mathematically speaking, there are two kinds of case which Ingarden does not consider but
which would allow cause to precede effect without leaving a yawning gap between them. The first
is if the cause has a last moment and the effect does not, but adjoins it without a break. The second
is the other way around: the cause has no last moment but the effect has a first moment, adjoining
the effect. In other words, the temporal intervals which cause and effect occupy are such that one is
open at the extremity abutting the other, where the other is closed, in either the form

\[ C : \ldots t \cdots : E \]

or the form

\[ C : \ldots : E \]

to adapt mathematical notation in the obvious way (we are leaving it open if or how the cause starts
and if or how the effect ends). Whatever the physical or indeed metaphysical plausibility of such
possibilities, they are at least logico-mathematically possible, and we need a reason from Ingarden as to why we should exclude them. Now in Ingarden’s metaphysics there is indeed a reason why this case does not apply. Cause and effect are both required by Ingarden to be actual or operative \((\textit{wirklich})\): this was the second condition we mentioned above. But according to Ingarden, only things in the present are actual: anything that is past is \textit{post-actual}, which is a different mode of being, while anything future is \textit{empirically possible}, and that too is a different mode of being. Hence if cause precedes effect, at most one of them can be actual; either the cause, in which case the effect is not actual but empirically possible, or the effect, in which case the cause is post-actual. But the requirement that both cause and effect be actual in this very narrow sense of being now-present strikes me as question-begging, or at least questionable. That cause and effect should both be \textit{wirklich} strikes one as plausible, but only because being \textit{wirklich} here contrasts with something like being merely possible or being unreal or abstract like a number. Both cause and effect can be \textit{wirklich} at some time or other without them having to be so together. So Ingarden’s requirement still appears to be insufficiently justified.

If time is discrete, then Ingarden’s argument likewise fails, since a cause may occupy a series of discrete instants up to a certain one and the effect may commence immediately in the next instant, there being a next one under the assumption of discreteness, so the problem of the gap does not arise. We are assuming again that his requirement that cause and effect both be actual at the same time is question-begging. It is true that there was perhaps less reason when Ingarden was writing to doubt the continuity of time, a question which even now is unsettled. But it is surprising that, with his commitment to investigate the possibilities before deciding which is in fact the case, Ingarden should have been so cavalier in dismissing the possibility of discrete time, which may pose difficulties of its own, but not necessarily ones which are more taxing that those surrounding the conception of time as continuous.

What can be said to remain of Ingarden’s argument when these difficulties are taken into account is a general challenge, to anyone who thinks there might in certain cases be a temporal gap between cause and effect, to explain how this gap is bridged so that we can legitimately call the first event the cause of the second, rather than just one more or less closely preceding it. That challenge, even if it can be met, is a legitimate one.

6 Putative Types of Causation

Causation obtains between occurrents, and there are several kinds of these, namely temporally unextended events, temporally extended processes, and temporally extended states (\textit{Zustände}). The
last are in a somewhat different case than the other two, since Ingarden takes it to be evident that a state is always the state of something or some things, namely a continuant or several continuants (94), whereas while processes and events have their ultimate ontological fundament in continuants (420) they need not be of these. A body may remain at the same temperature for a time, or continue in the same state of inertial motion. Two bodies may remain the same distance apart. Such states begin and end with unextended events, which are changes in or among the continuants in question. Such changes require explanation on Ingarden’s view, whereas the mere persistence of a state without change does not: Ingarden ascribes this to a kind of primordial inertia of things (116). He regards it as possible that a process may continue homogeneously or a continuant continue to exist without change, and that the alteration for process or continuant (and its state) as time goes by is one merely of “actuality” (Wirklichkeit) and not of form or material nature (72). This means he sees the passage of time as an existential transition, and therefore independent of causation, which is not an existential category. So it appears in principle possible for the world as a whole to continue for a period wholly unchanged, which entails an absolutist or substantivalist theory of time, and the rejection of a relationist or Leibnizian account of time.

Processes may have an internal dynamic whereby they alter in some of their parameters (it might be wrong to speak of change, which always requires a substrate). When they do so alter, this must have a cause and this cause must be modifying the process. The first moment at which the cause operates (which by Ingarden’s view is also the first moment on which the effect takes place) is in each case an event. So even if a cause sets off a process, as for example when hitting a golf ball with a gold club sets the ball in flight, and even if, at a level of temporal granularity which exposes an apparently instantaneous change as a rapid process, as here, we have one process (the golf club distorting the gold ball) setting off another (the gold ball internally restituting its shape and consequently flying off away from the impinging club), there will be a series of events in which causes and effects run along in parallel without losing their paired simultaneity. As a result, Ingarden concentrates for the most part on event–event causation, leaving other cases to themselves. It is worth repeating here to forestall misunderstanding that by ‘event’ Ingarden stipulatively understands a happening with no temporal extension or thickness.

For any cause–event pair of events A–B, Ingarden considers two ranges (Bereiche, 210). The first is the range of occurrents that can be mediate or immediate causes of the event B, which will include A. He calls this the range of causes, RC(B). Secondly there is the range of occurrents that can be the mediate or immediate effects of the event A. He calls this the range of effects, RF(A). (The reason for our change of letters from ‘C’ and ‘E’ to ‘A’ and ‘B’ will become apparent. Writing in German, Ingarden did not have the clash of ‘E’s between ‘event’ and ‘effect’ that we have in
English.) For any given event E then, we may consider what kind of ranges RC(E) and RF(E) the event E may have. For each range, there are three theoretical possibilities: it is empty; it contains all relevant occurrents; or it contains some but not all relevant occurrents. By ‘relevant’ we mean ‘preceding or simultaneous’ for RC, the range of causes, and ‘succeeding or simultaneous’ for RF, the range of effects. Adopting and adapting Ingarden’s own notation, we use ‘o’ to signify that a range is empty, ‘M’ that it is maximal, and ‘n’ to indicate that it is non-empty but non-maximal.

There are then in theory nine possible different kinds of event with regard to ranges. Putting subscripts after the event letter to represent range of causes and ranges of effects respectively before and after a slash, these are:

- $E_{o/o}$
- $E_{o/n}$
- $E_{o/M}$
- $E_{n/o}$
- $E_{n/n}$
- $E_{M/o}$
- $E_{M/n}$
- $E_{M/M}$

The first represents an event with no causes or effects, the second an event with no causes but some effects, the third an event with no causes but everything not before it as effects, and so on.

Of these possibilities, Ingarden ultimately rejects any containing an ‘M’. The idea of any event having everything before it as its cause and/or everything after it as an effect is one which Ingarden considers flies in the face the evidence that there are causal systems which are relatively isolated from one another (102), that is to say, which have no or insignificant common causes or effects. It does seem for example as though some minute causal chain of events in one part of the universe and another one vastly far from it will have no causes or effects in common. Ingarden’s principal argument is against what he calls radical determinism (224 ff.), which is the view – as he sees it – that all events are of the form $E_{M/M}$. This is the picture of a Laplacian universe where everything proceeds in lockstep, each phase of the total universe determined by all those before it and determining all those after it. That such a universe leaves no room for free will is the least of its problems. Rather it contradicts our experience of relative causal independence even in the physical world. Rejecting this extreme form of determinism does not entail rejecting all forms of determinism and opting for indeterminism (226), and in fact Ingarden is sympathetic to more moderate versions of local determinism.

In addition to the before/after ranges Ingarden divides the ranges of each event into internal and external. So for example if a person dies after being struck by a car, that is an external cause, it has its origins outside the person, whereas if she dies from a tumour that is an internal cause. The person’s death has internal effects, such as the cessation of brain activity, and external ones, such as the relatives’ grieving. The distinction internal/external makes good sense for material continuants; whether it makes equal sense for processes and their stages is not quite so clear. This additional division means the types of event as to range are multiplied again by nine, according as the internal or external ranges are o, n or M in type. That gives a total of 81 combinatorially possible types of
event (213); for example an event of type $E_{on/m}$ would be one with no internal causes, some external causes, some internal effects and all later external events as effects. Much the largest part of Ingarden’s treatise is taken up with considering which of these 81 types of event are possible, which are likely to occur, and how different types may combine together to give causal patterns or structures of various kinds. This incurs a level of detail which we cannot pursue here, and which at times borders on the pedantically obsessive if one is of one temperament, or the admirably detailed if one is of another. To cut short a story of several hundred pages, while Ingarden does consider the possibility of an original event or a final event (this before expressions like ‘Big Bang’ and ‘Big Crunch’ became popular), the vast majority of events turn out to be of the $E_{on/m}$ variety, with the occasional single ‘o’ thrown in one or both sides. For example a cause may have more than one effect, but one part of the tree of effects leading from it may peter out. Not all events have to have effects. In the end of the original 81 combinatorially possible types of event, after consideration, only eight are left according to Ingarden, and all have at least one ‘n’ in their index. But it is the type $E_{nn/m}$ which is, so to speak, mainstream causality.

7 Some Problems for Ingarden’s Theory of Causality

Ingarden believes what he calls the causal principle, namely that every event has a cause (142), either internal or external, or both, so events of the form $E_{oo/xy}$ are excluded. He is aware that quantum mechanics may seem to go against this, but prefers to consider the interpretation of quantum indeterminacy as an epistemological rather than an ontological matter (143, 151). However the occurrence of apparently spontaneous events such as the fission of an unstable nucleus have nothing to do with observation or with limitations of knowledge. Of course there are interpretations of quantum mechanics which are deterministic, so it is not a done deal that Ingarden is wrong, but appearances are so far against him.

More crucially for Ingarden’s account, he does not take sufficient notice of the special theory of relativity, according to which simultaneity is not an absolute global notion. Of course Ingarden is aware of the theory and its relevance for simultaneity, but he puts off discussing it (230) and in the end never gets round to doing so. This is a pity, because it leads him to employ concepts such as that of a world-present (Weltgegenwart, 232) which, if construed absolutely, are illegitimate from a relativistic standpoint. Further it would inevitably lead to a revisitation of his proposed simultaneity of cause and effect. Where one event causes another event distant from it – and in the end, any two non-overlapping events are more or less distant from one another – there has to be a positive time-lapse between the cause and the effect, because causation cannot operate at
supraluminal velocity. No doubt Ingarden would say that in such cases there is a mediating process, for example the propagation of a signal such as a photon or wave, from one place to another. In fact, if we take the limiting inertial frame given by “riding on” the photon or wave, the cause and effect indeed are simultaneous, since for a photon travelling in a vacuum time does not elapse, and if we take another inertial frame such as a body with mass must inhabit, the photon/wave does leave, travel/propagate and arrive in a finite time, the length of which is relative to the frame. These considerations are therefore not necessarily inimical to Ingarden’s position.

Another phenomenon which Ingarden would no doubt have welcomed is the occurrence of the collapse of entangled systems with significant size, since it appears that a local cause at one end of the system, collapsing a system’s quantum superposition into one of its eigenstates, results in an instantaneous change at the system’s other end. This would be action at a spatial distance, not at a temporal distance, as Ingarden thought impossible. The standard physicists’ reply to this “spooky action at a distance” is that there is no supralimunical causation, since there is no possibility of using the collapse to carry information from the proximal to the distal event. All the same, it does look as though the local cause has both an immediate local and an immediate distal effect. I defer to physicists on whether or not this is a decent description of the situation.

8 Conclusion

It is clear that Ingarden’s discussion of causation and the causal structure of the world cannot be considered the final word on many of the questions he raises. Nevertheless his astuteness and systematicity as an ontologist mean they are valuable and insightful in many ways, even where they are controversial. Volume III of Der Streit um die Existenz der Welt constitutes one of the most sustained investigations of the nature and ramifications of causality in recent philosophy, in which there are matters of detail going beyond any other discussion. It is to be hoped that future theories of causality will take more notice of this epic work.

Reference

Roman Ingarden, Über die kausale Struktur der realen Welt. Der Streit um die Existenz der Welt III. Original German manuscript prepared for publication by Friedrich Kümmel. Tübingen: Max Niemeyer Verlag, 1974.