ON THE POSSIBILITY OF A CAUSAL THEORY OF EXTRASENSORY PERCEPTUAL KNOWLEDGE

PETER A. FRENCH

Philosophers viewing the discoveries of parapsychological research are confronted with a seemingly unending array of intriguing issues. Many of the great concerns of philosophy find reflection in the theoretical aspects of parapsychology. In my book, *Philosophers in Wonderland*, I argue that the very conceptual groundwork of shared certainties on which our scientific researches, not to mention our daily more mundane endeavors, are based is shaken by many of the purported findings of parapsychology. Nevertheless, there are certain areas of concern where neither philosophers nor parapsychologists seem to have provided much help for one another. In fact, popular though faulty philosophical theories have inflicted a distorted vision of their own subject matter on parapsychologists too willing to accept the standard epistemological "line." I am, in particular, concerned with the proper way to treat extrasensory perceptual knowledge claims—claims to know something made by subjects on the basis of ESP experience. I shall suggest that the popular account of what it is to know something is not plausible, nor is the equally popular account of what is known when someone does know something, and I shall provide reasons to support a rather nontraditional view on both issues. My hope is that adoption of the epistemological position of this paper will lead to an avoidance of the predilection of both parapsychologists and their critics to characterize ESP as a variety of guesswork and consequently as no reliable source of knowledge.

One of the truly great problems that is peculiar to the enterprise of philosophy is that of trying to determine what knowledge is. The problem can be traced to the very origins of reflective thought. Plato, for example, gives the question a thorough examination in what is probably his greatest philosophical dialogue, the *Theaetetus*. In that work, he discusses a certain solution to the problem that has, in a

new guise, in years since been widely accepted: to know something is to have a justified true belief about that something. Plato, of course, did not recommend this theory. Plato held that knowledge involves no kind of belief at all. The Platonic alternative has been thought, however, to be less than useful by most modern epistemologists. The "knowledge as justified true belief" theory (hereafter "JTB") in this century found clear statement in the words of A. J. Ayer. He writes: "The necessary and sufficient conditions for knowing that something is the case are first that what one is said to know be true, secondly that one be sure of it and thirdly that one should have the right to be sure."[1] Ayer goes on to talk of the ways the "right to be sure" is earned, but that will not be of importance at this time.

Let us, for reasons of clarity, state JTB somewhat schematically as: S knows that P if and only if (1) P is true; (2) S believes or is sure that P (is true); and (3) S is justified in believing (has the right to be sure) that P (is true).

On this interpretation of what knowledge is, the door on ESP as a knowledge source is slammed abruptly shut. Purported ESP cases cannot, it is often argued, satisfy condition (3). It is generally maintained that the holding of a belief that P is true cannot be justified if the only claim the subject can make in support of his having that belief is a feeling that P has to be so. Conceptual analyses of ESP have, by and large, identified it with guesswork and are supported in so doing by the JTB. Antony Flew's[2] masterful criticism of Rhine's accounts of ESP is a clear case in point. Unfortunately, many of those sincerely interested in the possibility that ESP might be a source of knowledge, including Rhine, have adopted some version of the JTB and have thereby fallen into the conceptual quagmire of trying to equate what can only be called guesswork with good reasons to believe that P is true. It is most disappointing that defenders of parapsychology have generally felt so bound to the JTB that a frontal attack could not have been mounted on those critics of parapsychology who have argued that its subject matter is but the phenomenon of lucky guessing. The moral is that as long as one holds JTB, ESP can be treated as nothing but guesswork.

Recent literature in epistemology, however, provides evidence that the death blow has been dealt to the JTB—not, interestingly, by the Platonists who have always told us it was a circular theory—but by American analytic philosophers such as Edmund Gettier,[3] who has showed us that the conditions for knowledge set by JTB can be met when we would not want to say of someone that he knows that P.

I do not want to spend time recreating Gettier's examples. Quite the contrary, I shall grant that Gettier has administered the *coup de grace* to the JTB and will leave it to others to bury it once and for all in that "boot hill" reserved for old and fondly cherished theories. However, something must be offered in its stead. I propose to defend a version of what has been aptly called the "causal theory of knowledge." The stake in doing so, for our purposes, is that, in my view, that theory will accommodate the attempts to treat ESP as a knowledge source without leading us into an endless battle over what conditions are necessary to justify a belief.

The JTB demanded that if S knows that P, S must be able, at the time that "S knows that P" is true, to state his reasons, or his grounds, for believing that P. The causal theory (hereafter C) will make no such strong demand on S. What then will be a reasonable formulation of C? I adopt a version first formulated by Alvin Goldman[4] as a working definition: C = S knows that P if and only if the fact P is causally connected in an "appropriate" way with S's believing P. "Appropriately causal processes" usually are limited to perception, memory, or some demonstrable causal chains[5] or some combination of perception, memory, or a causal chain.

I make no pretense of the fact that this formulation is far from precise. Some might prefer a restatement of C to: C_1 = One cannot know that P (a sentence expressing P) is true, unless P must be used in a causal explanation of anyone's knowing that P is true. (This version admits a Platonic account of mathematical knowledge, but I will not discuss its virtues, etc. *vis à vis* C.) In order to indicate the value of adopting C or C_1 by parapsychologists, I first will have to clarify what it is that is known, what can be substituted for P in C or C_1, and second, I will offer some reasons for believing that the kinds of processes allowable as causally "appropriate" sources of knowledge do not *prima facie* exclude ESP.

Too little attention has been paid by epistemologists to the content, signified by "P," of a standard knowledge claim. Specifying what can stand in place of P in genuine cases provides further though indirect support for a causal account of knowledge. "P" is usually taken to represent a proposition. When we say we know something, what we know has been generally assumed to be propositional. "Proposition" is a technical term—meaning different things to different philosophers. Indeed, there is much dispute in the literature of the philosophies of logic and of language as to what a proposition actually is. A simple way, for our purposes, to understand what a proposition is, will be to hold that whatever a person is asserting

when he utters a declarative sentence is a proposition. Some philosophers are fond of saying that propositions are what such sentences are about or what they state. P in our statement of C, then, would be a symbolic replacement for a sentence or a significant part of a sentence, a sentence token, that is either true or false. But this traditional view of the content of knowledge obscures a very important distinction, and hence is misleading in the examination of knowledge claims.

Suppose that there are two sentence tokens ("a" and "b") that in different ways express the same proposition, e.g., His cat is on the mat, John Brown's pet is on the mat. Anyone, it would seem, who knows "a" must also know "b" and vice versa, because "a" and "b" express the same proposition (P). There is no limit to the way we could expand this example. We may suppose that the same proposition can be expressed by 10 or 20 or 1000 different sentence tokens. The standard theory is committed to the position that if anyone knows one of those sentence tokens to be true he knows them all to be true. It might be an entertaining diversion at this stage to set about the task of providing exemplifications that clearly contradict the expected results: cases in which someone can truthfully be said only to know that one or some of the sentence tokens are true while being quite ignorant of the truth value of the others. I will not embark on such an enterprise, but I do believe it to be fruitful to do so. We can expect, however, that the subject of our supposed case would be regarded by traditional epistemologists as really not knowing the sentence token he purports to know. This argument would likely turn on the notion of justification. The subject simply could not be justified in claiming to know "a," if he could not truthfully make an equal claim about "b" through "n." This would amount to providing a necessary condition of knowing: it must be true of the knower that he knows all sentence tokens of the proposition he knows.

If we use the device of stating the same proposition in what grammarians call "cleft sentences," a very important element of what one can be said to know will be revealed. Consider the sentence Pa, "John murdered Bill." It can be rendered in cleft sentences: Pa_1 "It was John who murdered Bill." Pa_2 "It was Bill who was murdered by John." Pa_3 "What John did to Bill was murder him." We can represent these cleft sentences similarly as: Pa_4 "*John* murdered Bill." Pa_5 "John murdered *Bill*." Pa_6 "John *murdered* Bill." (where underlining or italics is used to show stress or intonation). Pa_1-Pa_3 differ in terms of what philosophers of language call presupposition. (Pa_4-Pa_6 differ in a like manner.) In effect, what is asserted in each member of the triads

of cleft sentences is different, and what is presupposed is different. The assertive content of Pa_1 is different from that of Pa_3 even though they both express the same proposition, Pa.

In order to refer to these differences, I shall adopt a technical term originally borrowed from genetics, chemistry and physics by Fred Dretske.[6] I shall refer to Pa_1-Pa_6 as "propositional allomorphs" of Pa. In chemistry an allomorph is any variety of a substance that has more than one crystalline form but always the same chemical constitution. For our purposes here we will define a proposition as allomorphic if it has or can have more than one assertive content even though it has the same propositional content, and we shall refer to the various cleft sentences that express the different assertive contents of a proposition as its allomorphs.

Because its allomorphs all express the same proposition they must have the same logical consequences. If we are concerned about what they entail, whether or not they are true, etc., what is the case for one allomorph must be the case for them all. That is, it cannot be the case that Pa_1 is true and Pa_2 false or that Pa_2 implies P_b and Pa_3 implies not-P_b. Logic is not concerned with assertive content and hence when we deal from the logical point of view with allomorphs their differences are treated as insignificant; indeed, they are transparent. When, however, we put an allomorph of a proposition in a sentence that makes a knowledge claim, the allomorphic differences rise to the fore; they become opaque. It matters greatly whether the subject is claiming to know that it was John who murdered Bill or that it was Bill who was murdered by John. Entirely different sorts of things follow from possession of knowledge in the one case than do in the other. The first case presupposes that Bill has been murdered and makes the claim that John is the villain. The second assumes John to be a murderer and identifies his victim, or one of his victims. In the first case, we all know, let us say, or we will all stipulate that Bill is the victim, but who killed him? John. One of us advances the knowledge claim expressed by Pa_1 (and also incidently by Pa_4). In the second case we are not interested in who did it, we want to know to whom it was done: Bill.

S knows that P or S knows P is an incomplete representation of the content of a knowledge claim. P must be re-interpreted as some allomorph of P. In effect, knowing is sensitive to propositional allomorphic differences. The person that knows Pa_1 (It was John who murdered Bill) knows something different from the person who knows Pa_2 (It was Bill who was murdered by John) in one important respect, even granting that logically they both know the same proposi-

tion to be true. The sense of my position rests on the way we would establish that someone did know a certain allomorph to be the case but not another. Surely the evidence a person has for believing that it was John who murdered Bill will usually take for granted that it was Bill who was murdered and that he was *murdered.* In some cases, the evidence in support of the claim to know Pa_1 will be so very good that the knower will be warranted in saying that he also knows Pa_2 and Pa_3. But that need not usually or even often be the case. It may take quite different sorts of evidentiary data to support a knowledge claim in the case of each of the different allomorphs of a proposition. The point is that coming to know other allomorphs is not guaranteed by knowing one, and it certainly is not built into knowing one allomorph.

When we know something, what we know is not a proposition, or, more cautiously, not usually a proposition. It is a propositional allomorph, the sufficient support for which is not necessarily sufficient to support a claim to know another allomorph of the same proposition. Drawing this distinction between allomorphs of the same proposition invites a number of important conclusions. Most obviously, all allomorphically sensitive verbs take causal analyses. It is always appropriate to inquire about the causal path by which the subject came to known an allomorph, and consequently it is likely that the discovery that different causal processes may result in the knowing of different allomorphs of the same proposition will be made. I would not, however, wish to suggest that each allomorph is knowable by one and only one causal process. The same allomorph may be known through different processes. For example, the propositional allomorph "It was John Wilkes Booth who assassinated Lincoln" may be known by me through a combination of memory, perception of words on a page or a drawing, etc., and inference, while a member of the audience at Ford's Theatre on that fateful evening might have come to know the same allomorph primarily by perception of the actual event. More important, however, a failure to see that knowledge is not *per se* propositional but allomorphic tends to force epistemologists into systematic disregard of alternative avenues of coming to know. Researchers must take care to establish what allomorph of what proposition a subject is claiming to know. The fact that he could not have, as far as we are aware, evidence to support a knowledge claim regarding the proposition seen from the logical point of view is not *prima facie* reason to dismiss his claim. The subject of an ESP experiment, if he knows anything at all, knows an allomorph of a proposition. Our first query must be to discover which

allomorph and then to examine the possible causal routes by which knowledge of that allomorph may be acquired.

I have not, however, provided adequate argumentation that all allomorphically sensitive contexts are causal. To try to do so would be well beyond the purview of this paper. I do, however, want to indicate a good reason for thinking that they are. Propositional allomorphs must be about something, they must have some worldly counterpart that they describe. When one nominalizes propositional allomorphs, different noun phrases are obtained that refer to them as "allomorphic events."[7] Events, it would seem, may divide into their allomorphs just as propositions do. Dretske writes: "To refer to an event is to refer to something which occurs at a particular time, in a particular place, in a particular manner. A reference to the allomorphs of this event is a reference, not to the event which occurs at that time, in that place, and in that manner, but to its occurring at that time, in that place or in that manner."[8] For example: Lincoln's assassination's occurring at 10:00 p.m. on April 14, 1865 is not identical to Lincoln's assassination occurring in Ford's Theatre, nor are either of those identical to Lincoln's assassination's occurring by gunshot. This is not to say that each of these is a different event. There is the one event of Lincoln's assassination. He obviously was not assassinated more than once. It will matter in significant ways, as already suggested, which propositional allomorph is embedded in a knowledge claim and hence which allomorphic event is the cause of the subject's having a belief. The truth of the sentence "S knows that John murdered Bob" depends on which allomorph of "John murdered Bob" is being used in the sentence and then whether or not the corresponding allomorphic event caused S (in some appropriate way) to believe that propositional allomorph to be the case. The truth, then, of a knowledge claim is dependent on a causal relation between an allomorph event and a subject's belief regarding a propositional allomorph. The question for the researcher is which allomorphic event is causing S to have the belief. The various allomorphs of an event have different causal efficacy. "John's *murdering* Bob" leads to his eventual prosecution and life prison sentence. "John's murdering *Bob*" leads to the widowhood of Bob's wife. The fact that John *murdered* Bob is not what made his wife a widow—she would have been a widow had John accidentally killed Bob or killed him in war. John's murdering *Bob* is what made her a widow, that caused her unhappiness, not John's murdering. If a subject claims to know that John murdered Bob, the researcher has to discover whether it is *John's* murdering Bob or John's *murdering*

Bob or John's murdering *Bob* that is the cause of the subject's belief. Unless he does that he cannot determine not only what the subject claims to know, but whether or not the subject actually could know that. Changing the propositional allomorph in a knowledge claim context is tantamount to changing the causal claim being made about the subject.

I want now to say a few words in an attempt to make somewhat clearer the causal theory of knowledge that I am recommending and have assumed in the above before applying the foregoing to ESP knowledge claims. There are, as many of you are aware, a number of recent philosophical discussions of the notion of "cause." Since Hume so convincingly showed that our notion of cause has no corresponding impression, which meant for Hume that we could not find any cause *per se* in the empirical world, philosophers have sought to provide an acceptable alternative account of the idea of causation. Surely the idea of cause is at the very backbone of our conception of ourselves as persons (agents), let alone of our doing any kind of science. Three theories or definitions of what a cause is have current popularity. I will mention two of them but not discuss them. I will defend a third account. I will not, I hope, overburden you with argumentation for my view because it is not crucial to the argument of this paper. I do think that researchers, however, must settle the issue of what a cause is in order to fully understand knowledge claims.

Very briefly, John Stuart Mill[9] might have argued that X is a cause of E if and only if X and E actually occur and X is sufficient (*ceteris paribus*) for E. Ernest Nagel[10] argues for the competing definition, that X is a cause of E if and only if X and E actually occur and X is (*ceteris paribus*) necessary for E. Ingenious arguments, however, have been put forth to show the inadequacies of both of these definitions. Interestingly, both can be shown to lead to the same unacceptable consequence that "If fire causes some smoke, then Antarctica's being cold also causes some smoke."[11] There are also, as might be suspected, grave difficulties with the parenthetical *ceteris paribus* clause.

The causal view that I am suggesting is adopted in part from J. L. Mackie's analysis of statements that assert a singular causal sequence.[12] If X is a cause of E then X is an insufficient but necessary part of a condition that is unnecessary but sufficient for E at that time. In order to explain this definition let the event in question be Lincoln's assassination. Imagine that A stands for the political beliefs of John Wilkes Booth, that B stands for the play being presented at Ford's Theatre that attracted Lincoln's interest, C the lack of pro-

tection extended to Lincoln, D the location of the Presidential box, etc. (represented by F). In a rough fashion, we may say that the conjunction of the conditions A–F is a "minimal sufficient condition" of Lincoln's assassination. There certainly are a number of other conceivable "minimal sufficient conditions" that might have resulted in Lincoln's assassination. G will stand for the disjunction of all other conceivable sets of minimal sufficient conditions; then "ABCDEF or G" is the necessary and sufficient condition of Lincoln's assassination. No conjunct of "ABCDEF" and none of the conjuncts of all of the disjuncts of G is a sufficient condition, but each is what Mackie called an INUS condition[13] of Lincoln's assassination. If any conjunct of "ABCDEF" were also a conjunct of every disjunct of G then that condition itself would be a necessary condition for the assassination. "A was the cause of Lincoln's assassination" we should understand as the conjunctive assertion that: 1) A is at least an INUS condition of the assassination; 2) A was present at the time of the assassination; 3) All conditions other than A in a set containing A that comprise a minimal sufficient condition of the assassination were also present; 4) every disjunct of G that does not contain A as a conjunct was not present at the time of Lincoln's assassination. When we say that for S to know that P it must be the case that the allomorphic event Pa_n caused the belief that P in S, we are saying that the allomorphic event Pa_n is at least an INUS condition of S's having the belief that P, that that allomorphic event was present, etc. (conditions 1–4). In other words, a knowledge claim is an assertion about the existence of certain condition(s) at the time the subject has a belief. If the condition(s) was not present, the subject cannot be truthfully said to know. The program for researchers would then be to clarify what propositional allomorph is the object of the knowledge claim and verify that the corresponding allomorphic event was present and was an insufficient but necessary part of a set of minimal conditions that is unnecessary but sufficient for the presence of the belief that the propositional allomorph is the case.

This may appear a very complicated way of saying that we need to discover that a particular allomorphic event was the cause of a belief by focusing on the conditions present at the time the subject came to have that belief. In large measure that is what I am recommending, but the INUS condition account of "cause" allows us to avoid concern over identifying the allomorphic event as the sole condition for the belief. It need only be a necessary part of a set of conditions which taken as a whole are sufficient for having the belief. Perhaps alone it is not sufficient to generate the belief. I would like to suggest how

that might be the case, but I am afraid the example would take us further afield. Instead, let it suffice to say that in many cases the allomorphic event's occurrence will not in itself constitute a minimal condition of the belief, that other conditions will be necessary conjuncts to it, and that producing insufficient evidence that the set was present will lead people to unjustly criticize the subject's knowledge claim.

We need only comment on the idea of "appropriate" causal "ways" used in our original definition of the causal theory of knowledge. Traditionally, as earlier mentioned, perception has been credited as such a "way." Perception is itself a causal notion, in that understanding what it is to say "X sees something" involves identifying the presence of the object as at least an INUS condition of the having of the visual image. Memory is another "way." Our account of what it is to know allows, however, that any other process productive of a minimal set of conditions for a belief to be present can result in a justifiable knowledge claim. The onus on the researcher of a knowledge claim lies not on eliciting from the subject his reasons or grounds for making the claim but on reconstructing the situation in terms of the conditions present at the time the subject claimed to know some propositional allomorph to be the case. I do not exclude the possibility that the knowledge of the propositional allomorph may be derived for the subject inferentially, though I have not discussed such routes. I would, however, insist that some non-inferential causal claim must be discoverable in every true inferential knowledge claim. In other words, some causal process must be identifiable in the path from the occurrence of the allomorphic event to the true claim of the subject to know that the corresponding propositional allomorph is the case.

My conclusion shall be an attempt to apply the foregoing analysis to the problem of whether ESP is a knowledge source. Two points stand out: (1) that nothing in my analysis of a knowledge claim excludes ESP as an appropriate causal process; (2) that my account opens, I hope, important doors to seeing how ESP cases should be treated. I am not a parapsychologist. I do not do research with ESP subjects. I cannot, then, provide data for your consideration. What I hope to do, however, is to suggest what kind of data ought to be collected and how it ought to be collated. The fact that there is a disparity between what I suggest and the famous examples of such data gathering in the past[14] may hopefully indicate why I think the account herein could provide the philosophical basis for further investigation.

In the first place, to my knowledge, no parapsychology researcher

has cared much about the content of the ESP claim he is recording. Unless he does have such a concern, however, as I have shown, he is a captive of the misconception that all knowledge is propositional. When attention is paid to propositional allomorphic differences, the researcher will be able to draw distinctions between what the subject is actually claiming to know and what is merely assumed or presuppositional about his claim. The fact that the subject may have poor grounds for his presupposition is irrelevant to an evaluation of his knowledge claim. Secondly, heeding allomorphic distinctions all but forces the researcher to investigate the allomorphic differences in events. This, I suppose, amounts to coming to see the world in many different ways. When we regard events not as one dimensional but as "aspectional" we have a significant clue as to how the belief that Pa can arise despite the fact that the subject would not assent to or would be uncomfortable with ascribing to himself the belief that, e.g., Pa_2. The explanation is the causal one: the allomorph of event P referred to by Pa_1 and not that referred to by Pa_2 was a cause of the subject's belief. Finally, by treating "cause" as "at least an INUS condition that was present" we overcome the difficulty of showing that a single stimulus or condition had to be present for a subject to know something. Parapsychologists ought to concentrate on discerning the contents of the set of conditions sufficient for a knowledge claim to be justified and then investigate whether or not they were actually present. Statistical summaries of hits and misses cannot in the end supplant such an investigation. In fact, the old idea that such statistical data is relevant is a grand illusion that ultimately works against the parapsychologist's goals. At best such data suggests the identification with guesswork. As I have maintained, the notions of guesswork and knowledge are disparate. The best one can get with a guess is a correct one. A correct guess is not knowledge. On the other hand, if there are actual cases of ESP, we want to be able to say that ESP is knowledge. I do not pretend to have the data necessary to establish that ESP is a causal process of the appropriate sort: that it can be identified in actual cases with the presence (perhaps even the creation) of a set of minimal sufficient conditions for a belief that a certain propositional allomorph is the case. My hope in writing this paper is to interest serious parapsychologists in the investigation of "conditions research" in order to broaden the accepted list of "appropriate" ways by which persons come to know things. At the very least such investigations will not be open to the criticism of making a mountain out of a molehill, knowledge out of lucky guessing, justification of knowledge claims out of statistical

summary reports. Someone, of course, once remarked that making a mountain of a molehill was no mean task, that it calls for all sorts of inventiveness and sometimes sheer magic. My proposal if taken as a guide will not render research any less of a task, but magic, mystery and the like will be ruled out of order from the start. Magicians know that there is a causal account for each and every trick in their repertoire.

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[5] Goldman has carefully constructed a number of causal chains to provide examples. See *Ibid.*
[6] Dretske, Fred I., "Referring to Events," *Midwest Studies in Philosophy* Volume II, February, 1977 and "The Content of Knowledge" to appear in a collection of the papers read to the Philosophy Colloquium, University of Western Ontario, 1972.
[7] I also borrow this term from Dretske. See "Referring to Events."
[8] *Ibid.*
[9] Mill, John Stuart, *System of Logic* Book III, Chapter V, 1879.
[10] Nagel, Ernest, *The Structure of Science* (Harcourt, Brace and World, 1961), pp. 559–560.
[11] See Sosa, Ernest, *Causation and Conditionals* (Oxford University Press, 1975), pp. 2–3.
[12] Mackie, J. L., "Causes and Conditions," *American Philosophical Quarterly* Vol. 2, 1965, pp. 245–264.
[13] *Ibid.*
[14] I have in mind, most obviously, the well-known work of J. B. Rhine and that of S. G. Soal.

DISCUSSION

DOMMEYER: I think I know, Dr. French, what you mean by allomorphs of a proposition, but I wonder, for one thing, why these allomorphs are not themselves propositions; in which case, these propositions would have allomorphs and the resulting propositions more allomorphs, and you'd run off into an infinite regress. Another thing I wondered, too, is how you know, given the truth of the proposition, that the allomorphs are true, unless you have a very logical implication with respect to these allomorphs coming from the original propositions. So I'm really puzzled about the nature of these allomorphs. First, it seems to be they run off into an infinite regress; and second, the question of their truth is raised for me. And, also, I wonder if you would ever get false allomorphs. Could an allomorphic

fact cause a false allomorph? In which case, belief in it would clearly not be knowledge. These are some things that have occurred to me in light of your paper. I'm probably confused here, but I need clarification of that confusion.

FRENCH: I'll try to take those one at a time. In regard to the first question: "Why these allomorphs are not themselves propositions," what I'm doing is taking the notion of proposition as that which is expressed by a person when he states something in a standard way. There is no logical difference between allomorphs when one wants to talk about entailment, implication, etc. All the allomorphs of the same proposition will have the same logical outcome. I'm borrowing the term "allomorph" from chemistry; the same crystalline structure will be there but taking different forms. I find it useful for logical reasons to talk about propositions, but then when we're talking about the nature of what somebody is saying, it is useful to make the allomorphic distinctions. No, we're not going to reduce this to an infinite regress, although I would admit there are "N" number of possible allomorphs in a proposition. I'm not attempting to delimit that. I think that the notion of allomorphs would be useful not only in epistemology but in such things as moral philosophies—when one talks about advice. Advice-giving is causal in a sense, and allomorphic differences would arise there. When I tell someone to do something—exactly which allomorphic proposition am I telling him or am I expressing or asserting, etc? But again, the logical consequences are always going to be the same for every allomorphic proposition, so I don't think this gets into an infinite regress. I can't recall the second question.

DOMMEYER: False allomorphs.

FRENCH: Oh, yes. So far as the proposition is false, the allomorph would be false.

DOMMEYER: What about the allomorphic event that causes an allomorph, the causation that one might say is true—hallucinations, false propositions, false beliefs are a cause too.

FRENCH: If you want to talk about false beliefs being causes, there is no problem for my position. Insofar as epistemologists have no problem with that, I don't have any problem with that either. There is a problem—I'm not trying to hide it—the problem of illusion and so on, but I don't want to get into that problem.

THAKUR: I'm in general sympathy with the non-propositional

account of knowledge that you have in mind, because I believe some such account, if it were found to be a satisfactory one, would be useful. However, I do have a couple of comments to make. It is important to make sure that your propositional allomorphs don't in fact happen to be propositions themselves, because if they turn out to be the same, you wouldn't achieve the results you're after. You can't have a non-propositional account of knowledge if your propositional allomorphs are in fact propositions disguised or initially introduced under some other guise. I would like to put it to you in this way: if your propositional allomorphs are elements that can be doubted, disputed, believed, stated, etc., and can be translated, for instance, then since these are some of the very characteristics which make us adopt the terminology of propositions they would seem to share those features, and then your account won't be non-propositional. I would add just one comment to this: I thought you took a bit of extra mileage from Gettier's objections to the *Justified True Belief* account. Now a colleague of mine has read a paper where precisely that same treatment was given to some of the logical connectives used by Gettier, either/or, for instance. If you make them context dependent rather than seeing them as semantically fixed, then Gettier's objections fall to the ground and knowledge as *Justified True Belief* stands unrefuted. So, maybe, if you should be allowed to do this, perhaps that treatment should be allowed, too.

FRENCH: I don't know whether I can comment on the latter point. I'd be interested in seeing the paper. I find it very useful not to talk about propositions in terms of knowledge claims and related issues and to talk about propositions in terms of logic alone, for the reasons I've already given. I didn't think I was taking Gettier all that strongly, but perhaps I am. I'll have to give that some thought.

MAUSKOPF: I may return to perhaps a more simple level since I'm not a philosopher but an historian. I was particularly struck, as an historian, by your comments towards the end about the set of INUS conditions, by which we know something happened. I think this is the way most historians, whether we know it or not, intuitively think. We really think in terms of sets of conditions, the sum of which, I gather, you say may add up to the necessary and sufficient conditions but no one of which can be separated off. How would you apply this? What is your application of this to ESP knowledge? If I can just introduce the dirty word "proposition" once again, may I assert the proposition that the symbol on an ESP card (that I cannot see) is a circle. What would you, then, want to be able to do?

FRENCH: I would want to establish that that was an INUS condition—again, INUS being kind of a shortened way of saying an insufficient but necessary part of an unnecessary but sufficient condition. I'd first establish it was one of those conditions. Then the set of conditions that are minimal sufficient conditions for the occurrence of the belief or the knowledge claim would have to include it in that set. It may not be sufficient. If it's an INUS condition, it isn't in itself a sufficient condition. It's insufficient but a necessary part of a sufficient condition. So, having established that, we have the card as an INUS condition; we have a minimal sufficient set, and then we have to establish that indeed that set existed, was present at the time.

MAUSKOPF: Can I just pursue this for one minute? By the minimal conditions, then, do you mean—what shall I call them—experimental correlations for successful ESP, the guessing that parapsychologists have been searching for all these decades?

FRENCH: Well, if they have been searching, maybe they should continue. I'm not quite sure I understand your question.

MAUSKOPF: In other words, aside from the INUS condition, that is, of the circle on the card, what else do you mean? Do you mean essentially a theoretical framework that every science has, by which one can specify unforeseen conditions?

FRENCH: Specific conditions necessary for the production of that particular piece of information, and, hence, that set of conditions would in some way or other be drawing a causal path into the subject.

STANFORD: Toward the end of your talk, you brought up the topic of statistical methodology in parapsychology. I cannot claim, just from hearing your paper that I fully understood your discussion of that or other aspects, so the first thing for me to do is to try to get a clarification. You seemed to be criticizing the strongly statistical approach that parapsychologists make and, if I understood that correctly, the reason seemed to be that statistics (the way you interpreted it) are not giving us a real knowledge about ESP; that we, in effect, use statistics to put together such things as chance correspondences and genuine knowledge events or ESP, and we really do not stop and look at the event of knowing itself, because of our use of this statistical method. I can't help but feel a fondness for that notion, but it troubles me a great deal, because I think if we could do that, first of all, our research would cost a lot less, we might do away with our computers, we could do away with all error of measure-

ment, etc. What do you do with the problem or error of measurement, which is precisely why we use our statistics? What concrete suggestion do you have as to how we could abandon statistics and make reliable general statements?

FRENCH: I'm not suggesting the total abandonment of statistics. What I am suggesting is that the assumption that statistics somehow replace conditions research leads to having an account not of knowledge, but of guessing. Though there is no equation between guessing and knowledge in my account, I wouldn't want to suggest that one do away totally with it, but I am suggesting alternative methods of research. Again, I'm not a researcher in parapsychology, but we're talking about knowledge claims in general. It seems to me that statistics would play a somewhat minor role, if you wanted to know whether or not someone knew something in history, for example or something of that sort.

LESHAN: I'd like to differentiate the end of your paper from the main body of it. At the end you say that this program will reduce and remove the mystery and magic from the field. You know, I'd really hate to see that happen more than we've done it already. We have already removed so much of this that, like modern philosophy, I feel it's so dry that the slightest wind is about to blow it away; there's practically nothing left. You go on a little bit more and say, quite rightly: "It's no mean task to make a mountain out of a molehill." But I would point out that we, in this field, have been engaged successfully in a harder task—that since we gave up the name of "psychic researchers," and called ourselves "parapsychologists," we've been very successful in making a molehill out of a mountain, and that's harder!

KORNWACHS: I will give some impressions on your paper. I do not think your theory is too complicated; it's too simple, for its purpose. I have two objections. The contents of propositions depend not only on the possible classes of allomorphic events, but also on the contextual interpretation of the receiver, so the boundary conditions must be considered, because they influence the interpretation of given propositions, such as a wish or a warning, etc. That holds both for normal cognitive processes as for knowledge given by ESP. And my second objection is that the causality definition seems to me a very formal one, so I'm suspecting that you're going on to interchange the formal conditions of causality with the underlying reality of events which are claimed to be connected by causality.

FRENCH: I think what you talk about in your first comment, I subsume under the notion of presupposition. With your latter comment, I would agree, but I don't want to get into that at this point.

PENELHUM: I do have a slightly more radical worry about your argument. It seems to me you share a certain assumption with the philosophers you began by criticizing. You criticize those who adopt the definition of knowledge as *Justified True Belief* by saying that this excludes certain types of explanation of ESP phenomena, because it introduces certain tacit assumptions about what can be a justified mode of believing. And then you go on to refine the notion of knowledge in ways designed to avoid this difficulty, but you still retain a causal definition of knowledge. Now this seems to me to have a very difficult consequence. That is, whatever causal conditions you finally end up by specifying, you cannot know that someone knows that P until you also know that his assertion, his belief, his state of mind, has been appropriately caused. Now this assumption seems to follow both from your view and from the views you criticized, and it seems to me awkward in the case of ESP phenomena. What always interests me about ESP phenomena is that I frequently find myself wanting to say, "Manifestly this person knows that P, or knew that P, and the interesting question is: how on earth did *he come* to know that P?" It seems to me that you are going in a very difficult circle if you want to prevent anyone saying that he knew, until you have some knowledge of *how he came* to know. It seems to me that the interesting investigations often arise from the fact that we recognize knowledge without having any idea of its sources. On your view, it seems to me, we couldn't be sure it was knowledge until we knew what its sources were.

FRENCH: I'm not sure that that follows from my position, Terry, but I would say that indeed we wouldn't begin the research unless we had that belief that we knew. What I'm suggesting is the way we might go about establishing that indeed we do know. I agree with you wholeheartedly that anybody interested in whether somebody knows something, probably already has a pretty good indication that he does or he wouldn't look into it. I won't elaborate on it further at this point. I agree with you also in regard to the reading of the spectacular cases. I'm afraid that's what I do more than the others, as well.

BENDER: I am a practical parapsychologist and somewhat innocent about the problems you were just speaking of. May I just take your

example, "John murdered Bill," to draw your attention to practical experiences, not with statistical methods, but with qualitative ones.

Take the case of "John murdered Bill" as a criminal case. Bill is dead, but John is not yet known. The case is submitted to a sensitive—take Croiset, for example. Now Croiset should find John and give statements which help the police to find him. Now what happens is this: Croiset very probably immediately gets impressions. They are noted, they are tape-recorded and the police try to check them. Now, our experience shows that there are different types of statements. The first type is fantasy—unconsciously produced fantasy. Nothing is proven. With the second type, the statements of the sensitive don't help the police, but when John is found some statements are proved to have been paranormal. They had a link with the case, but they did not help. The third type is very rare, but it happens: the statements of the sensitive lead to the finding of John. Full success. Now in the fourth type the statements of Croiset turn out to be a reflection of what other people think of the case—a mixture of everything. Now my practical experience is that the sensitive, this gifted person, has no criterion by which to discern if he has real knowledge or not. It is absolutely impossible to determine. So, even when the sensitive makes statements which are absolutely true, which lead to finding John, the sensitive doesn't know. So my thesis is the sensitive does not know that he knows, and I would very much appreciate it if you could explain this in terms of your position.

FRENCH: My view is entirely consistent with the position that someone may not know that he knows something and it would still be true that he knows it. That is not the case with the *Justified True Belief* theory where one of the requirements of knowing is that you have the belief and the belief be well founded.