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**«Contradictions and Paradigms:
A Paraconsistent Approach»**

Cultural Relativism and Philosophy

North and Latin American Perspectives

edited by Marcelo Dascal

Leiden & New York: E.J. Brill, 1991, pp. 29-56.

ISBN 9004094334

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§0.— Introductory Remarks

The present paper argues that: (1) warrant relativism is true — any belief warrant is relative —; (2) [truth] relativism is false (not every belief can be true only as regards some particular entity or reference-point); (3) there are valuable insights relativists have provided us with, one of them being the search for some kind of convergence; (4) a most convenient convergence policy can be articulated by applying a paraconsistent gradualistic (infinite-valued) logic, i.e. a logic which, by allowing degrees of truth and falseness, makes room for some beliefs being both [up to a point] true and yet [to some extent] false.

§1.— Why Paradigm Variation is Ensuant upon Contradiction

By a **paradigm variation** (PV henceforth) I mean the cleavage between two or more belief frameworks, each of them characterized by its own rules or standards, its own values, and its own worldview — or at least, so to speak, its own patterns or guidelines as to what is going to count as an admissible worldview. There are basically two different ways of looking upon PV. According to one of them, such a variation entails incommensurability, while the other takes every such variation as an alternance between opposite, mutually contradictory, beliefs.¹

¹. It is extremely interesting, in that connection, to examine the relationship between the incommensurability thesis in the philosophy of science and relativism. See [Devitt, 1984]: 137ff. Devitt regards views such as Feyerabend's and Kuhn's as weakly relativist, inasmuch as those authors seem to assume or agree that there are some entities whose existence is not relative to a theory or paradigm. I tend to look upon their kind of approach as more strongly relativist, though, since their assumption can best be held to be a concession for the sake of the argument. Devitt's objection against the incommensurability thesis, on pp. 151ff of the book, seems to me a little hasty or insufficient, even though I am most sympathetic to Devitt's thrust and purposes. On the relationship between meaning-relativism (the incommensurability thesis) and truth relativism — arguing for the latter on the ground of the former — see [Margolis, 1985]: 171ff. Unfortunately both Margolis and other relativists fail to clearly distinguish

The former view can be argued for by stressing that, when two paradigms are present, face to face, what happens is not that something or other is both asserted within one of them and denied within the other, since the very sense of some questions and answers is relative to a paradigm or conceptual scheme or framework, so much so that in fact no thesis can be nonrelatively identified as remaining the same across the paradigm border. Although that way of putting the view may owe something to Quine's indeterminacy of translation thesis, surely the view is widely shared, albeit under different guises, by a number of relativists.² For, even when some people set about discovering a PV by pointing to some fundamental presupposition which is held here and (at least implicitly) rejected there, they, more often than not, end up espousing meaning relativism. That sort of relativism claims that, each expression being endowed with a sense by its utterance context, which includes basic presuppositions, nothing is going to be asserted here and denied there with one and the same meaning, not even the presuppositions themselves — at least nothing the PV affects. Thus, the view we are now considering aims to find out what grounds any apparent assertion discrepancy between diverse paradigms. And it claims that the ground is an underlying incommensurability, the very fact that some questions arise within one of the confronting paradigms which are indeed meaningless within the other — or anyway they do not keep the same meaning there, or even their keeping it or failing to keep it is not nonrelatively definite or determinate, but varies according to translation manuals, for instance.

As against such a view I want to argue that a PV consists in one [same] «**basic**» or «**fundamental**» contention being held to be true here and either denied or rejected there. My argument is as follows.

Even should a PV consist in some kind of meaning relativism, the only way we could learn that such a PV obtained would be by finding out that some presupposition or basic contention would be held here but not there — or that it was claimed to be true here but false there. Until this is the case, nothing debars us from devising credible translation manuals in virtue of which each sentence asserted by such people as adhere to one of the paradigms can be translated into one which makes sense to those adhering to the other, and conversely. What prevents us doing so is for us to come to know, or at least surmise, that some words do not convey the same meaning here and there. But how on earth can we be led to such

these different kinds of relativism.

². I have argued elsewhere that Quine's thesis is committed to truth relativism. See my two papers [Peña, 1989a] and [Peña, 1989b]. However, Quine's thesis does not lead to Kuhnian incommensurability, even if Kuhn himself occasionally seems to think it does. Quine's thesis, [truth] relativist though it is, entails that any alternative theories are commensurable, viz. under — or relatively to — some translation manual. But of course, Quine is in agreement with incommensurabilists in rejecting any nonrelative commensurability between conflicting theories. Quine is so to speak a reference relativist on a higher level: it is not the case that any two alternative theories always refer to different sorts of entities, which would lack theory-independent existence; it is rather that whether they refer to the same entities or not is relative to a translation manual. On the other hand, it is widely agreed upon that Hilary Putnam's nonrealism is closely related to Quine's thesis, even if Putnam's arguments hinge more on model-theoretic considerations than on the radical translation thought-experiment — but in the end they are quite close. Now, although Putnam has generally refrained from putting his case as a defense of ontological or alethic relativism — keeping on, even in his recent papers, inveighing against truth relativism — there is at least a place where, rebutting Davidson's «transcendental» argument against «conceptual» relativism, he has espoused a meaning-relativistic construal of his own latter-days epistemology, namely [Putnam, 1987]: 69-77. (In [Peña, 1989b] I discuss Davidson's shrinking from Quine's relativist conclusions, which is made possible by paying the price of renouncing reference altogether.) On the relationship between radical interpretation and relativism — with the scales tilted to this position — see [Collin, 1987]: 53-63.

a conclusion if not by realizing that some assumptions which alone bestow a sense upon a word or expression are not commonly shared by both groups or communities? Now, if what allows us to reach such a conclusion is the fact that those assumptions lack even the possibility of being entertained or envisaged with the same sense by both groups, then an infinite regress would be triggered. (On the other hand, admittedly, a «Quinean» version of meaning-relativism probably does not fall afoul of this argument; but it, too, is committed to countenancing that: (1) it makes sense — under some appropriate translation manual — to assign a belief to those hanging on to one of the paradigms and the rejection or denial thereof to those clinging to the other; and (2) that such is in fact the case — again from the viewpoint of a certain translation manual. Thus, even Quinean relativism calls for at least a possibility of adjudicating ascription of an explicit or implicit claim to the people here and of its denial or rejection to the people there.)

But, then, satisfying ourselves that meaning relativism, or incommensurability, obtains needs our pointing to some identifiable divergence. Which entails that we can never find any widespread — or all-encompassing, or all-pervading — incommensurability, after all, since otherwise no divergence in basic opinions could take place. For, if most or many expressions undergo a meaning change across the paradigm border, it is hard to see how basic questions or beliefs could keep the same meaning. But then, if no widespread incommensurability is ever to be found, the hypothesis that there is some such incommensurability all the same is downright unverifiable. Although, to be sure, there are unverifiable truths, we cannot ever know that a certain unverifiable state of affairs does in fact exist. So we can never know that widespread incommensurability exists. But then the hypothesis that they do not exist becomes much more plausible, since it is simpler, more fruitful in explicative power and all in all more satisfactory.

Now, if no such incommensurability exists, surely isolated purported incommensurability cases can be dealt with in such a way that they emerge as instances of a surmountable incommensurability — i.e. as such that those within one of the paradigms can hoist themselves to understanding the other group's claims by acquiring additional vocabulary learnable from their own.

To sum up, no PV can exist unless there is some divergence or other between those clinging to one of the paradigms and those clinging to the other. Thus it is hard to figure out how a disparity correctly describable in terms of meaning relativism can in fact exist. The PVs meaning-relativists try to account for are best regarded as opinion divergences, i.e. as one same opinion being held here and either denied or rejected there. While **rejection** is not the same as denial, surely in most cases no claim is rejected unless it is denied and no claim is **strongly** denied — i.e. no claim is such that its strong negation, or **overnegation**, is asserted (see last Section below) — unless it is also rejected. I'm not going to dwell on the nature of rejection here. Suffice it to agree on the correlation between strong denial and rejection.

The foregoing discussion does not rule out truth-relativism, of course, which still remains compatible with whatever we have said. What thus far has emerged is that any PV involves a contradiction, in the sense of a belief being held (here) and either rejected or (whether strongly or simply) denied there. This is why going into some qualities of negation or denial, such as those paraconsistency (a notion to be explained in the last Section below) is concerned

with, bears upon how PV is to be assessed and how truth— or assertion-relativism is to be canvassed.

§2.— How Externalistic Warrant Parries the Threat of [Truth] Relativism

We have seen that meaning-relativism — or the incommensurability thesis — is open to a cogent objection. But what about truth-relativism — the thesis that «It is true that p» is always relative to some paradigm or other, to some framework or conceptual scheme, or historical circumstances or whatever?

I shall discuss truth-relativism below. For the time being I'll try to assess some proposals as to how to deflect the relativist's claims. The most outstanding proposal is externalism.³

Let me begin by considering what the relativist threat consists in, i.e. what the [truth] relativist's main argument amounts to. The relativist argues that in order to believe something is true we need some warrant or other — unless we are so irrational as to go in for wholly unwarranted acts of faith; now, warrant is relative, since nothing is warranted, period. Warrant is always bestowed upon a belief by some other beliefs, or the like, and so on, whether in a circle or by means of an infinite regress, or finally starting from, or hinging on, a set of basic, warrantless beliefs, which are the grounding presuppositions making up the conceptual scheme. This means that no warrant lies on rocky, absolutely steadfast ground; or, more to the point, that **being warranted** is no property of a belief: what instead exists is the relation of **being warranted by**; now, if warrant is relative, how can we assert that truth is nonrelative? Asserting that some belief — or sentence or whatever — is true is an act which calls for some warrant or other, and cannot sensibly or reasonably outreach the strength of the available warrant. Hence, truth is as relative as warrant is. Each warrant can be traced back to some kind of basic assumptions which can be taken for granted, whether provisionally or not. Likewise, each truth claim is to be taken as referring to those very same assumptions, or unchallenged grounding claims, which make up a horizon, or framework, or paradigm. Thus it is not a question of a contention being true or false, but of its being either true or false on the basis of, or with respect to, a certain paradigm.⁴

³. Externalism has been increasingly in the air these last years. See for instance : [Alston, 1980] and [Alston, 1986]: 179-222; [Goldman, 1986]; [Nozick, 1981]; [Luper-Foy (ed.), 1987]. To the present writer's mind the best arguments against externalism to be found in press are those of Laurence Bonjour in [Bonjour, 1985]. (Unfortunately, Bonjour's brand of coherentism seems in the end to be committed to too many concessions to both externalism and internalistic foundationalism; see all the Section II of [Bender (ed), 1989].) A very nice discussion of externalism is made by Ernest Sosa in [Sosa, 1988]: 153-88. My own discussion in this Section is aimed at Alston's externalism — my objections would need qualifications in order to apply to other externalistic accounts such as Nozick's, Luper-Foy's, or Goldman's reliabilism. An interesting distinction between belief- and norm-externalism (roughly a counterpart of the distinction between act- and rule-utilitarianism), is argued for in [Pollock, 1986]: 125ff.

⁴. Relativists who clearly reason along those lines are not easy to pin down, relativism being in many cases a little hazy in its arguments. More often than not recent-days relativists have laid more store on considerations borrowed from [meta]sociology and [meta]anthropology; see e.g. [Barnes & Bloor, 1982]: 21-47. More philosophically minded relativists are more prone to argue along lines as those I am entertaining now; see e.g. [White, 1983]; and [Margolis, 1982]: 91-7. See also [Meiland & Kausz (eds), 1982]. A refutation of the underlying relativist argument — from the existence of disagreements to the relativity of truth via the relativity of warrant — is put forward in [Wainwright, 1986]: 47-60. Moreover, a great deal of discussions about scepticism would apply to relativism, should the latter approach be taken much more seriously, as it ought to.

As against that line of argument, externalism emphasizes that warrant is nonrelative. For what endows a belief with warrant is not another belief, or set of beliefs, or the like, but a **warranting situation** in the world. Such a situation may consist in a causal link between the fact the belief takes to exist and that very same belief; or it may consist in something different — for instance, the reliability of the method applied in garnering the belief, a reliability which may be spelled out as a high ratio of true beliefs out of the total set of beliefs the method leads to, in the world where it is being applied. But anyway the warranting situation gives the belief warrant whether the believer believes it or not, or at least its giving it warrant does not lie in the believer's being aware of the situation.

The externalist claims that his view is the only one which can avoid a paradox which is faced by any other approach, i.e. by any form of **internalism** (the thesis that warrant is bestowed on a belief only by some other beliefs or doxastic states of the same subject)⁵, namely, the **counterfactual paradox**. Suppose a believer, d, who is warranted (whether relatively or nonrelatively) in having a certain belief, b, not because of a warranting situation obtaining in the world but because of d's doxastic state. Suppose now a counterpart of d, c, in an ever so different world, but whose doxastic state is, in relevant respects, the same as d's. c's world can be as different from d's as you please : we can regard d's criteria as reliable, with respect to his world, but not those of c. Yet any internalism of any ilk is bound to hold c as warranted as d can be. That is why — the externalist concludes — internalism is untenable.

The trouble with externalism is that it deprives us of any criterion about the soundness of our own criteria. Suppose we [d] had a [meta]criterion like that: it would consist in a way of sifting criteria, or doxastic canons, in accordance with something or other we could be aware of, ascertain, find out; i.e. in accordance with some other beliefs — otherwise the so-called criterion would be anything but a criterion, that is to say something we can apply in order to sift out the wheat of good doxastic canons from the chaff of bad ones. Since our counterparts [c] in the conceived alternative world would have a doxastic state which in relevant respects would be the same as ours, they, too, would have the [meta]criterion. Still, by hypothesis our [d's] canons would give us warrant, whereas theirs wouldn't. So our [meta]criterion would be of no avail. It would not be because of being selected thanks to the [meta]criterion that our canons would be truth-conducive, but quite independently of that, by the sheer and bare happening of some things in the world.

As for the so-called counterfactual paradox, I do not think the imagined state of affairs is paradoxical. Our imaginary counterparts would be as warranted in their beliefs as we are, even if our warrant is truth-tracking and theirs is not. For, what we need in order to call a doxastic canon warranting, or good, or correct, is not its being in whatever imaginable situation truth-conducive, but its being so in the actual situation. What gives our beliefs warrant is our being in some doxastic state, that doxastic state being in a «well-behaved», not-hoodwinking world such that applications of the procedures by using which we attain those beliefs

⁵. There is an approach which is somewhat intermediary between externalism and internalism, viz. John Pollock's (in [Pollock, 1986]), for which a belief may get its justification from something which is neither external (outside the subject's mind) nor doxastic, namely his perceptions. I'll refrain from discussing that approach here.

typically tend to be truth-conducive.⁶ Within a malignant-genius-ridden world things of course would be different, and our warranting criteria would not be truth-conducive in that sense; nonetheless we would be warranted or justified while clinging to them, or applying them.

While externalism is advanced as a way of parrying relativism's threat, it is perhaps ironic that it can in turn be considered a sort of warrant relativism, since it can be construed as claiming that a belief is not warranted, period, but warranted only as regards a certain obtaining situation, or as regards some world or other. Now, that being so, should we grant the relativists that truth cannot outstretch warrant, truth, too, would be relative. Admittedly some model-theoretic approaches to truth may be looked upon in that way, as claiming that a sentence is not unqualifiedly true or false, but only either true or false as regards a particular world. But then such kind of approaches can be twisted or reshaped in such a way that it would be claimed that the reference points needn't be complete worlds, but so to speak subworlds. That would mean that within a world a sentence could have different truth-values for different subworlds, whatever a subworld might consist in. Thus truth relativism would be vindicated and in the end espoused, if in a roundabout way.

It is owing to all the above reasons that I do not hold externalism to be a satisfactory alternative to [truth] relativism, for a start, since it agrees that truth cannot outstretch warrant. And in the end it turns out to be [at least construable as committed to] a particular variety of relativism.

§3.— Why Not to Ward Relativism off by Means of Foundationalistic Justification

If externalism fails, does internalism succeed? Internalism, we know, has it that nothing gives a belief warrant or justification except other beliefs or doxastic states of the same subject. But we can distinguish two different kinds of internalism. One of them, foundationalism, claims that some beliefs are justified by their having some special property or determination, and not in virtue of some other beliefs or doxastic states of the same subject.⁷ Thus, foundationalism deflects the relativistic threat, not by challenging the relativistic assumption that truth cannot outstretch warrant, but by contending that there is nonrelative warrant or justification, since the ultimate or basic beliefs are endowed with some self-warranting property, owing to which it is not the case that any warranting process either goes on in a nonterminating way or else is stopped at some basic beliefs which are just taken for granted — fundamental presuppositions.

For a belief to be self-warranting cannot mean for it to warrant itself, since doubtless the warranting relation is irreflexive. It is bound to mean that the belief in question has some property which justifies it in a nonrelative way. Now, if such is the case, the warrant in

⁶ Oddly externalists talk in a quite similar way. But their contentions can be construed in several ways — see e.g. [Sosa, 1988]: 165. In a nutshell the difference between externalism and the internalism I am advocating is this. Externalists regard warrant as bestowed upon a belief by the possible world the belief belongs to, in such a way that no belief is justified if it is reached by a method which is not **there** [in that world] reliable, or if it there lacks the necessary causal relationship with the world. My approach replaces that indexical treatment with a fixed one, the term 'warrant' **rigidly** designating a relation between beliefs of a subject which is in fact truth-conducive, i.e. truth-conducive in the actual world.

⁷ For a long time Chisholm was regarded as the main exponent of foundationalism. Recently, though, I take it that the most outstanding defense and articulation of foundationalism is Paul K. Moser's. See, e.g., [Moser, 1985].

question can involve no inference, since otherwise it would be relational. But should a belief enjoy any kind of noninferential justification, it would be incorrigible, unchallengeable, undeniable, unassailable. For, if a belief is challenged, surely it is so on the ground of some beliefs, from which the denial, or the rejection, of the belief can be drawn as a sort of conclusion — which means that the challenge is inferential; and then, whenever a challengeable belief is being maintained, it owes its being held to the absence of the challenging or undermining grounds. Which in turn means that it is not the case that its justification, whatever it may amount to, is independent of the presence of inferential relations. Therefore, any self-warranting belief — in the sense explained above — is bound to be past doubt or challenge. But there are cogent reasons why no belief at all is entirely indubitable. Those reasons are, to put it briefly, connected with [Quinean] holism, and needn't be dwelt on here. Accordingly, I conclude that there are no self-warranting beliefs.⁸

Moreover, the ascription of self-warrant to certain kinds of beliefs — such as logical axioms, or observation beliefs— can be disputed by showing that each of those beliefs is granted warrant by some other beliefs or doxastic states of the same subject. The controversy on this issue being widely known, there is no need to go into details here.

Finally, what could possibly constitute a property of beliefs such that by having it a belief would be justified? Either such a property consists in a certain determination plus the fact that the subject is aware thereof, or else the latter conjunct is not needed. But in the latter case, we backslide into externalism, and so face the same difficulties encountered in the foregoing Section. Hence, the property in question is such that its warranting power calls for the subject to be aware of the fact that the belief under consideration has that property. But that means that it is a necessary condition that the subject has another belief to the effect that the purportedly self-warranting belief has the property. Suppose now two subjects having the same beliefs, including, for some belief *b*, the belief that *b* has the appropriate property rendering it self-warranted; but only one of those subjects is such that its having *b* does in fact possess that property. From an internalistic viewpoint both subjects are alike. So, foundationalism is incompatible with internalism.

I conclude that foundationalism, of any ilk, does not offer a convincing alternative to relativism. Its drawback is that it concedes to relativism the main assumption, that truth cannot outstretch warrant.

§4.— Defending a relativistic View of Warrant

I want to reject [truth] relativism, while espousing warrant-relativism.⁹ That means

⁸. That no belief, whether «mathematical» or «empirical», is unassailable I have tried to show in several places, e.g. in [Peña, 1979], in [Peña, 1980] and in chap. 2 of my new book (still in progress, as I am writing the present article) entitled *Philosophical Findings* (in Spanish).

⁹. My relativistic view of warrant is only one of the points my approach shares with E. Sosa's so-called «virtue perspectivism» — see [Sosa, 1988]. Only, Sosa's account is also indexical and brinks on externalism, since it develops a kind of canon on criteria of adjudicating knowledge claims in accordance with the adjudicator's perspective. My approach is not concerned with ascriptions of warrant, but with the fact of warrant, or anyway with self-ascriptions of it. (Notice that my contention that warrant is relative is not the same as the claim that any knowledge claim is relatively true because the kind, strength or level of warrant required for a belief to qualify as knowledge is variable in accordance with context; such is Robert Hambourger's proposal in [Hambourger,

that I dispute the **assumption** common to all approaches I have thus far canvassed and criticized, namely that truth cannot outstretch warrant.

I have never come across any cogent argument for that assumption. More often than not something like that assumption is taken for granted: ‘See, you cannot know for true what you do not have sufficient grounds to regard as true; and you cannot give a certain statable content more credence than what your grounds for doing so allow you to; so...’ But arguing that way — which is not very clear — would amount to begging the question. Or you may appeal to some «basic intuition», which would surface through our feeling entitled to ask a ‘How do you know?’ whenever we hear someone put forward a claim. But again arguing like that is begging the question. Doubtless we want to learn about any person’s grounds for his contentions. That does not mean, though, that those contentions’ truth cannot stretch beyond the grounding or warranting they enjoy.

It seems to me very clear that truth can outstretch warrant. Warrant gives us a hint, a clue, about the truth, but any human warrant is fallible and, on the other hand, there is no impossibility about a warrantless true belief — whether (as I have claimed elsewhere, in [Peña, 1988b]) such a belief is knowledge or not. There are a great many beliefs which turn out to be true but whose warrant can be regarded as dubious or worse. Columbus’s grounds for believing that there were emerged lands not too far from the Atlantic Afro-European coast westwards were flimsy and in fact contrary to widely accepted measures of the Earth’s size; they mostly hinged on attaching weight to unreliable sources. In fact Columbus drew that conclusion from the false premise that the distance between the Western European Coast and the Eastern Asian coast was a small one, only a few thousand miles. In spite of all that, his belief was true, and its truth by far outreaches its shaky warrant. (I mean what I say when I claim that its truth outreaches its warrant, namely that its degree of truth is greater or higher than its degree of warrant. My general approach being characterized by a recognition of degrees of truth, it is plain that one thing is for a proposition — or sentence, or whatever may be a truth-bearer — to be true, another thing for it to be warranted; the latter being nothing else but the truth of the proposition — or sentence — that the former proposition is warranted. The common scale is provided by the degrees-of-truth ranking, whether we can measure it or not and regardless also of whether mentioning the comparison is pragmatically relevant in a particular context or not.)

Likewise, why or how does warrant’s relativeness yield the relativity of truth? There is a *non sequitur* here which is probably due to a confusion. The confusion lies in mistaking subjective reactions for objective relations. For reasons pertaining to **pragmatic rules**, it misbecomes a person to say something is true but that she lacks any ground for believing it to be so — or that her grounds are wrong or weak, or anyway do not lend the belief as much credibility as it deserves in virtue of its degree of truth; or anything like that. Anyone talking this way would merit to be scoffed at — unless he went on to add that he hopes to find stronger grounds for the belief in question and is in fact looking for them. For the «incongruity» of asserting [or claiming to believe] something while offering avowedly poor, or unsound, or lame grounds for it and yet acknowledging one’s abstention from seeking stronger grounds, is of a pragmatic cast, that is to say constitutes an infringement of pragmatic rules presiding

1987]: 241-70. On my own opinion, though, knowledge is just true belief, so there is no variation such as Hambourger suggests. But if — as I claim — there are degrees of warrant, of course claiming that a belief is warranted is more (pragmatically) proper in some contexts than in others, according to how high the «caution standard» is in the context.)

over communication processes. It is not of a semantic or ontological nature, as is confirmed by the fact that, when speaking in 3d-person, you can ascribe to a man harbouring an opinion with only feeble grounds or even no grounds at all without thereby committing any such incongruity and without imputing it to that man.

Now, there are powerful, cogent arguments in support of warrant-relativism. A belief can only be warranted or justified by other beliefs or doxastic states of the same subject, as we've been able to conclude from our discussion of externalism and foundationalism. Are we then going to say that, while a belief may be warranted by some set of other beliefs [or other doxastic states], it may utterly fail to be warranted, all the same? In other words, is there a nonrelational property of **being warranted**, such that not everything warranted [in the relational sense] by something or other is warranted *tout court*? That seems to me extremely unlikely. For, if a belief, *b*, warranted by something, completely fails to be warranted, what would amount to its being warranted over and above its being warranted by something? Either it would be a particular property of the warranting entity — be it [a set of] other beliefs or whatever. Or else it has nothing to do with what the warranting entity happens to be. The latter alternative leads back into foundationalism or externalism, and so does the former, even if proving it does is not so straightforward.

But then, we conclude that whatever is warranted by something or other is warranted, period. The converse entailment is obvious, unless foundationalism or externalism are espoused. Accordingly, warrant is relative, at least in the sense that, should there be any nonrelational property of being warranted, it would supervene upon the relational property of being warranted by something, or would be a necessary and sufficient condition for the latter.

I do not intend to sketch out how a relativistic account of epistemic warrant can be implemented. The task has been discharged elsewhere (in [Peña, 1979],[Peña, 1980], and [Peña, 1988b]) by putting forward what has been called a gradualistic progressive internalism — progressive, since it allows for endless chains of justification, i.e. infinite warranting progressions.

§5.— A Transcendental Argument against [Truth] Relativism

A canon for choosing theories which has been laid down and is commonly accepted (see, for instance, [Perkins & Hubin, 1986] — even though their articulation of the canon is somehow different) is that of refusing to admit any theory such that believing it to be true would be incompatible with believing that one believes it. In other words, there are no truths such that it is incongruous to believe both that they are true (or they hold) and that one believes them to be true. The incompatibility under consideration needn't be downright incoherence, but may consist in incoherence between those beliefs and a «more fundamental» or deeply rooted belief, or doxastic rule. (By an **incoherence** I mean an overcontradiction of the form «*p* and not-*p*-at-all», whereas an incompatibility between two sentences or beliefs may consist in the impossibility of conjoining them with some more basic beliefs without thereby bringing forth a downright incoherence. Thus incompatibility may be conditional or relative.)

That canon is what gives ground and credence to transcendental arguments, to such arguments, that is, as conclude that the world is such and so from the premise that you can't

coherently believe it not to be so at all while also believing that you have such a belief.¹⁰ I am going to illustrate the notion of transcendental argument with some examples. Take Davidson's argument against the existence of conceptual schemes, an argument contending that, should there be a conceptual-scheme variation, you couldn't coherently believe that it existed and that you were aware of that existence, since such an awareness would call for you to understand more than one conceptual scheme, whereas such schemes would be defined so as to thwart that very same possibility. Another transcendental argument is that which — against eliminativism in the philosophy of mind — concludes that mind exists from the premise that you can't coherently believe that there is no mind and that you so believe — under the assumption that no belief exists unless mind exists, too. Or take the argument against the impossibility of semantics put forward by a few authors, an argument alleging that you couldn't coherently believe that semantics was impossible and that you believed it — the argument assuming that the existence of beliefs entails the at least possible existence of some semantics or other, surely on the ground that every belief is at least expressible. Also Putnam's argument against the brain-in-a-vat hypothesis: you cannot coherently believe that you are a brain in a vat and that you believe you are a brain in a vat — the argument assuming some Putnamian claims on semantic issues. Or, finally, an argument against the possibility of there being nothing, which is a modalized version of a transcendental argument: it is impossible for you to be able to coherently believe that nothing exists and that you believe that; therefore, something or other must perforce exist. There are similar arguments to be found in Leibniz and in Kant's 1763 work *Beweisgrund*.

Quite often transcendental arguments are offered as overpowering, staunch arguments no one has the right to resist under pain of committing himself to irrationalism or worse. In fact even the best transcendental arguments are not as knock-down as they are made out to be. For the inference rule allowing to reject that $\neg p$ (or to assert that it is utterly false that p) from $\langle$ I cannot coherently believe at all that it is the case that p and that I believe that it is true that $p\rangle$ is an inductive (i.e. nondeductive) inference rule. Its applications depend on the subject's both having other beliefs which would produce the incoherence and lacking other beliefs to the effect that the incompatibility under consideration is contingent upon some particular circumstances. For instance, you cannot conclude that every humanly unimaginable event is ruled out on the ground that, should there be one, its being so would be a state of affairs such that you could believe it to exist and also believe you believe it, whereas, if you believed a certain event to be so or so, you would somehow or other imagine it, and thus it wouldn't be humanly unimaginable after all. The underlying error in that reasoning is that you do not lack a defeating or undermining belief. You have one, namely that, should one of those events take place while you'd be unable to believe it to be humanly unimaginable, that would be due only to the fact that the event couldn't be imagined by humans and you are human. It is quite a different matter, of course, to believe that there can be absolutely unthinkable events or facts.

The covering (disjunctive) principle upon which transcendental arguments hinge is that each $\neg p$ is such that either one can coherently believe that it is not the case that p at all and that one so believes, or else p . However such a principle is not generally, or unqualifiedly, true. There can be $\langle p \rangle$ s which our language cannot express and about which we can think

¹⁰. I have examined this canon on theory choice and other topics related to transcendental arguments in [Peña, 1988a]. The present paper, though, departs in some (probably minor) respects from the position which I outlined there.

nothing and which for all that are wholly false. The disjunctive principle under consideration is only true with some provisos — e.g. that one's unability to coherently believe that it's not the case that *p* at all and that one has such a belief is not ensuant upon some less than ideal particularities of one's own doxastic situation. Unless one has any reason for thinking otherwise, one seems to be entitled to take it for granted, when entertaining any hypothesis, that one is not debarred from believing in its truth and in one's belief by one's peculiar situation — be it one's humanity or whatever. But that entitlement claim can only be justified by applying the same rule governing transcendental arguments in general.

I think there is nothing mysterious about the idea of our having a reason for thinking that we are debarred from believing in some truths due to our peculiar situation. Thus, if we accept that some information is [for us, humans] irretrievably lost, we can contrive hypotheses such that we are aware we cannot, due to our finiteness, believe them to be true — while also holding other, more «basic», beliefs of ours. So, for instance, suppose an information has been entirely lost concerning some black hole, including any piece of information as to whether or not *p*. While maintaining this and other beliefs, we cannot coherently believe that we believe that *p*. For one's believing that *p* entails his believing that both *p* and he believes that *p* (such a principle of doxastic logic is argued for in [Peña, 1980]). But believing that *p* rules out believing that one lacks any information whatsoever as to whether it is the case that *p* or not, unless of course an entirely groundless belief is possible. But most of us also harbor among our «basic» beliefs one to the effect that every belief is prompted or elicited by some — ever so misleading — clue or hint. Hence not all those beliefs can stand together. And since we can imagine an information irretrievable for mankind, we know that some truths may be humanly unbelievable, due to our finite condition. Notice, though, that for an hypothesis to be — under certain circumstances — unbelievable is different from its being unimaginable.

Is there any less circular way of arguing for the soundness of transcendental arguments — even with the provisos pointed at above? Let's try. If the covering disjunctive principle, even with those provisos, is utterly false, that fact has to be compatible with the best explanation, since — in accordance with the [nondeductive] inference rule yielding the truth of the best explanation available — nothing can be true if it is not compatible at all with the best explanation. But for any situation describable as a failure of the (duly qualified) disjunctive principle under consideration, there is an alternative description which is compatible with the best explanation and which does not fall afoul of that principle.

What about the grounds for the inference-to-the-best-explanation rule? If it is right, it must have a true best explanation. And the best explanation seems to be that the world is epistemically optimal, which means that whenever there are two available alternative theories one of them describing the world in a less satisfactory way than the other, the former is false. That thesis can be argued for through a transcendental argument: suppose the thesis is completely false and you believe it; it would then be incongruous for you to look after an explanation for those beliefs' [purported] truth, since, should there be one, and were it attainable, we could explain why the world is worse than we could conceive it without giving up any available evidence; but then that would mean our having some additional evidence to the effect that the world could not be better — and thus the envisaged situation would not be one of the world's being worse than we could conceive without running counter to any available evidence; but a leading principle and norm of all our theorizing is to just look for some explanation or other; so our theorizing would be incongruous. And we fail to see any less than ideal particularity of ours on which such commitment to seeking some explanation hinges. Ergo.

Aren't we running in a sort of circle? That's true. However, that only means that our warranting procedures do not rely on rocky ground, but are displayed in endless, nonterminating, processes, whether infinite chains or circles — which after all constitute a particular kind of endless chains, namely such as comprise recurring elements or links. Since warrant is relative, no awful or dismaying result threatens us through those revelations.

Now, suppose that [truth] relativism is true, i.e. that, for any $\ulcorner p \urcorner$, $\ulcorner p \urcorner$ fails to have any truth-value, while there is a relational predicate «It is true that ... with respect to ---» such that for $\ulcorner p \urcorner$ as the first argument in this formula and something as the second argument, we have a true statement. Suppose also you believe it. What do you believe? That the result of putting $\ulcorner p \urcorner$ in the place of «...» and (a name of) something or other in that of «---» in «It is true that ... with respect to ---» is true — true *tout court*? No, surely not. For you would not then believe **only** in relative truth. Then, instead of that result's being true, what you'd believe in would be the state of affairs consisting in its being true with respect some particular reference point or other. Let's call that state of affairs *s*. And you wouldn't believe you believed *s* to be true, but, for some reference point, *r*, you'd believe that you believed that, with respect to *r*, *s*. Let's call *s'* that relativization of *s* to *r*. Now, *s'* couldn't happen or fail to happen as such, since a state of affairs happening is the same as the truth of the belief in its happening. Instead, *s'* would happen with respect to some reference point, *r'*. Its doing so would constitute another state of affairs, *s''*. You would believe in the existence of *s''*; only not just like that, in the air, but only with respect to some further reference point. And so on, and so forth, indefinitely.

While that is not incoherent as far as it goes — and the argument does not involve availing oneself of the nonrelative notion of truth, which is the question-begging which relativists blame their opponents for¹¹ — surely such an infinite regress is not compatible with the principles and rules governing our theoretical and doxastic activity. The incompatibility I am pointing to consists in this. Our doxastic activity is made out by beliefs. However, should truth relativism be right, it couldn't consist in beliefs, a belief being a relation between one's mind and a content, but in relations each of which would be the limit of this progression: (1st step) a relation between a mind and a pair of things, viz. the content and something else; (2d step) a relation between the mind and a pair of things, the first member of **this** latter pair being the former pair; and so on. Notice that, even if warrant is relative, belief is not — according to my present account. Truth relativism, instead, allows for nothing but infinitely relative believings.

Are the principles which govern our doxastic activity — including the one which rules that such an activity is made up by beliefs — contingent on some less than ideal particularity of ours? Could a nonhuman, more perfect, perhaps all-knowing, person exist who would think and reason in such a way that she could be subject to such an infinite regress without her ways of thinking and reasoning clashing with it? There are several reasons why such an hypothesis seems most unlikely, or worse. In fact we seem entitled to expect the contrary, that no such person can exist. If she is more perfect than we are, and we have beliefs, surely she also has beliefs, whereas the infinite doxastic regress we've seen truth-relativism entails prevents anyone from having beliefs — in the just explained sense of being related to a certain

¹¹. My antirealist argument is not the straightforward one that the relativist is committed to his own claims being nonrelatively true, which is the stock-in-trade way of refuting relativism; see e.g. [Newton-Smith, 1981]: 34ff. Newton-Smith's argument is rebutted by relativists as question-begging; see [Young, 1986]. But that kind of reply is not open to them against my present argument.

content in a particular way. Truth relativism rules out any such relation, since the content would need to be embedded at an infinite depth within the second argument of the relation. Thus it is not in virtue of some imperfection of ours that our doxastic activity fails to comply with what truth-relativism would enforce.

Consequently, not only can't we coherently believe that truth relativism is correct and that we believe it, but, furthermore, we lack any indication to the effect that such an impossibility is due to some imperfection of ours. So, our transcendental argument concludes that general truth relativism is not true. Not true **at all**.

But, what about a nongeneral truth relativism: 'Some truths are only relative, even if some other truths also hold in a nonrelative way'? That contention is not refuted by the foregoing transcendental argument, and in fact I shall propose it below, although with some qualifications.

§6.— Towards [Partial] convergence

I thus have come to reject truth relativism, while espousing warrant relativism.

Yet, there is something to be said in support of truth relativism. Something important. If warrant is relative while truth is not, are we not doomed to remain, each of us, or each group of us, isolated, with the whole human community divided and split into uncommunicating circles? For, if your warrant is relative to the reasons you offer, and so on, where does anything surface pushing you towards a convergence with other people's reasonings? Or what allows one culture to be able to debate with another? Yes, truth is nonrelative. But each culture's warranting chains would be its own, and so nothing would constitute a higher reference point in virtue of which those different cultures were guaranteed to have a common warranting ground. So my proposal seems to condemn — or at least to open the possibility of condemning — different people or different cultures, or paradigms, to a mutual isolation. Their different opinions would clash — but they would not have any means of fruitfully arguing about such disagreements. The relativist, on the other hand, would pronounce those disagreements either to be nonexistent or only relatively existent (such is the verdict of meaning-relativism) or else not to consist in divergences (property so called): there would be no clash, either in virtue of incommensurability prevailing (meaning relativism) or at least in virtue of truth-relativity. My proposal would block any convergence, while retaining the clash. The relativist would deny the clash and so at least allow for a kind of convergence, namely that of each partner's agreeing that his own viewpoint or opinion is not superior to the other's (at least not superior as far as truth-finding is concerned) — agreeing to disagree, but to disagree in a clashless way (true for you, false for me). Have I anything better to offer?

I think I have. Nothing absolute or all-encompassing. Just something which, for one thing, permits a number of border-crossings and a wide range of paradigm-annexations or blendings, and, for another, allows for the same state of affairs being truer or more existent from one perspective, less true — or even, in some cases, completely false — from another.

Let me first run over and sum up the path that eventuates in the kind a approach I want to propose here to the issues connected with relativism.

Relativism is a sort of radical reaction to the scandal of PV or, more generally, of apparently unsurmountable disagreements. Relativism adjudicates those disagreements by

granting each contending party as much as possible, namely: each party is right but right only from its own viewpoint, which means that what it claims is **true as regards its own framework or paradigm or position**. (Or at least such is the case for many, deep-rooted, wide-ranging disagreements.)

Both externalism and foundationalism offer means of countering relativism (even though neither a relativistic externalism, nor a relativistic foundationalism are unthinkable or necessarily incoherent), but they do so while granting relativists their main underlying assumption to the effect that truth doesn't outstretch warrant. Thus, those two approaches reject truth relativism insomuch only as they also reject warrant relativism. But then a new scandal arises. It is not just that there are clashing opinions with no prospect of being reconciled — whereas of two contrary opinions one at most can be true — but, moreover, only one of the conflicting views can be warranted — at least in a number of such cases. Hence, the PV reveals a hideous feature of human nature, a perhaps invincible irrationality, evinced by staunch adherence to unwarranted [utterly] false beliefs.

What I have hitherto proposed — in the previous Sections — agrees with relativism that warrant is relative, but, by dint of challenging the assumption commonly held by relativists, externalists, and foundationalists alike, namely that truth does not outstretch warrant, agrees with externalists and foundationalists that truth is not [in all cases] relative. Now the scandal abates, since PV, irksome though it still is, does no longer point to any widespread or deep-rooted irrationality; only to widespread error, which nevertheless would be excusable insomuch as, warrant being relative, and so no guarantee being available for our doxastic systems, it would be just a matter of chance to have found an actually truth-tracking warranting line. However, the emerging human plight might be still bleak. Should finding oneself following a truth-bound path be a matter of chance — of chance in the sense that at least as often as not people would be following falseness-bound paths —, no convergence could be hoped for and it would be hard to explain how or why one does as a sheer matter of fact find oneself following [what he takes to be] a truth-tracking path. Furthermore, our warrant relativism, by dismissing any ultimate epistemic guarantee, allows us only relative, precarious, fallible «guarantees», in a weak sense; now, anyone's guarantee — in that sense — to the effect that he is following a correct, or truth-tracking, path cannot fail to be backwards-looking, i.e. to lie in a tracing back to previous stages of thought. For, since every warrant is inferential, all justification or warrant one has for one's ideas issues from such previous beliefs or doxastic states of the inferential processes eventuating in one's current beliefs. To be sure, some nondeductive inferences are processes of belief correction, which give rise to removing some of one's previous beliefs. Still, the inference is correct only if it relies on a number of true covering principles which one was holding when applying the inference rule, i.e. when making the inference under consideration. Those beliefs are connected with others in such a way that, unless much or even most of what one then believed was [at least up to a point] right, the conclusions reached cannot even be reasonably expected to be true, and so are not warranted [at all], even with the relative kind of warrant, or **weak** «guarantee», that our approach acknowledges. For, admittedly, whatever else epistemic warrant consists in, it requires at the very least that the warranted belief be thereby endowed with a determination in virtue of which one is reasonably entitled to expect it to be true; warrant's relativity does not thwart that entitlement — only it makes it relative : you are so entitled not «in the air», in a nonrelative way, but solely with respect to some antecedent beliefs or doxastic state of yours.

Now, each human person's series of inferential processes goes back to bodies of beliefs and doxastic states which she has inherited through cultural imbuing. Each inferential or warranting line can be traced back to reasoning patterns and ideas which have been bequeathed to us by our forefathers. If much, or most, of what they used to think was wrong, our inferential warrants are useless and futile — in fact, as I've argued, they are not warrants at all. Thus, whenever a different paradigm from ours has preceded the current one we stand by and cling to, either the former one was mostly right, or ours is wrong.

But surely any two ever so distant paradigms share a common ancestry, at least a remote one. And more often than not they share a close partial ancestry. Take, for instance, the case of Latin— and North-American cultures or paradigms. Even if they have evolved in different ways, their mutual heritage is undeniable. The Mediterranean and European culture has pervaded, shaped or — up to a point at least — even given rise to any current American culture. The bequest of pre-Columbian cultures is variable, with a number of both North— and Latin-American countries owing much more to the Old Continent's legacy — which includes African cultures — than to the indigenous one. Even the Amerindian cultures probably shared some mutual legacy too, as well as, if not exactly certain common features, at least a «family air» — they were pairwise legacy-sharing. Of course, the disparity or even variance between Latin— and North-American cultures goes back (in part) to a divergence between such European cultures as respectively influenced them; but nobody would deny that those cultures too are but branches of one tree.

Now, the wronger is what people belonging to another culture believe and the more their thinking methods and canons as well as their main persuasions have [indirectly, to be sure] originated — through applications of inference rules which some of our own ancestors held to be correct — from a stock of opinions which was also shared by sundry forbears of ours, the more the emerging situation casts doubts on our own doxastic lineage, and accordingly on our current doxastic fund and patterns.

Thus by a transcendental argument — of the sort presented above — we seem entitled to conclude that, since we are right in most of our beliefs, so were our ancestors and so are people in other cultures, people who cling to different paradigms, even when those seem to be at variance with ours. I am aware this conclusion sounds paradoxical and in a way it is so. I hope the next Section will clarify how I think the paradox is to be resolved or understood.

If that conclusion is right, some kind of **convergence** or **confluence** is to be expected between followers of what at first sight seem to be divergent paradigms. Otherwise, it would be unlikely for most opinions making up each of those paradigms to be true or right. If they are true, they must in the end turn out to be compatible among themselves.

That's what brings about the need for convergence. And in its own way relativism satisfies that need by claiming that within each paradigm the most commonly held opinions are true [with respect] to the paradigm. But, for reasons we have considered above, things cannot be so, since truth relativism also falls afoul of a transcendental argument.

Consequently, we feel bound to articulate our own approach so as to accommodate the need for convergence. There are two ways of doing so. I'm going to consider both in the next section.

§7.— A Gradualistic Paraconsistent Way to Convergence

§7.1.— Perspectivism and Non-Copulative Paraconsistent Logics

The first way towards implementing — or at least allowing for — some sort of convergence is what can be termed **perspectivism**. Loosely speaking perspectivism views itself as a doctrine which, while rejecting the relativistic contention that every truth is relative, claims that there are truths which are, in a certain sense, «more appropriate», or the like, from one perspective or horizon than from another. (Strong versions of perspectivism may generalize that situation, attributing it to all truths of a certain kind, or even to all truths of any kind.) The snag is that it is difficult to elucidate that unobscure notion of «appropriateness». Does it mean simply **truth**? If so, the doctrine espouses the existence of relative truths. But if there is a nonrelative truth such that the main beliefs making up the doxastic fund of one's culture are — in that nonrelative sense — true, then an additional burden is put on us by also countenancing relative truths — the burden of explaining how relative truth relates to nonrelative truth; and perspectivists hardly ever discharge that task in a suitable manner. And yet, otherwise, perspectivism runs the risk of being trivial: of course some truths about the Mississippi river are «more appropriate» in the US than in Ecuador.¹²

If in addition to nonrelative truths there are relative ones, what inference rules are allowed to handle both sorts of truths? How do they combine? Suppose there is some $\ulcorner p \urcorner$ such that it is relatively true that p (i.e. true that p with respect to certain «reference-points»), while it is also relatively true that $\text{not-}p$. How can we cope with the resulting situation? Can we combine [our beliefs in] both [relative] truths in order to reach whatever conclusion they yield when put together?

There is a compelling reason for refraining from such a combination. **Classical logic** — the logic, that is, devised by Frege and Russell — and, more generally, **Aristotelian logic** — any logical system belonging to the family inaugurated by Aristotle — enforce the **Cornubia rule** (which was first spelled out by a 12th. Century logician called John of Cornubia — whose work was mistakenly fathered on Duns Scotus) namely $\ulcorner q \urcorner$ (any $\ulcorner q \urcorner$ whatever) follows from a pair of premises one of which negates the other; formally: $\ulcorner p \urcorner, \ulcorner \text{not-}p \urcorner \vdash \ulcorner q \urcorner$.

Thus, if, on the ground of both p and $\text{not-}p$ being relatively true — each within its own framework — we combine them as premises, we are fated to encounter disaster, since we'd be bound to conclude anything and everything. Our system would thus become **deliquescent**, which means that we'd be logically bound to believe anything which can be put into words.

¹². There are a number of philosophers who have been called — or who have called themselves — perspectivists. There is some kind of mild relativism in Renaissance monadologies, like Cusa's, according to which each monad mirrors the world in a particular way, with its own truth which is not the truth of a different, even opposite mirroring, God alone being able to conjoin those mutually contrary views in his **coincidence of opposites**. See [Peña, 1987]. Leibniz's monadology is not clearly perspectivistic in that — somewhat obscure — sense. The Spanish thinker José Ortega y Gasset is perspectivism's most notorious standard-bearer (see e.g. [Ortega y Gasset, 1975]: 26f.); but his ideas are far from clearcut or perspicuous. There are some perspectivist trends in contemporary philosophy of science. Thus, as Leo Apostel has cogently shown in [Apostel, 1974]: 272-347, some contentions of the Copenhagen school in physical theory arise from the influence of philosophical perspectivism steeped in the tradition of German idealism. Apostel thus sheds light on the most philosophically momentous features of the doctrines put forward by those physicists, esp. N. Bohr, who openly espouses a complementarist perspectivism. On the other hand a number of writers have suggested something like perspectivist views, esp. Emerson and Melville. And Rescher has traced back perspectivism to the doctrine of double truth attributed — groundlessly, as it seems — to so-called Latin Averroists, like Siger of Brabant, in the 13th century.

But then the difference between truth and falseness would collapse, the point of believing or asserting something would vanish, our whole doxastic enterprise would founder.

A [nonAristotelian] logic lacking the Cornubia rule is what technically goes by the name of **paraconsistent logic**. There are two kinds of paraconsistent logics, viz. **copulative** and **noncopulative** ones. A logic is copulative if it enforces the **adjunction rule** (namely $\lceil p \rceil, \lceil q \rceil \vdash \lceil p \& q \rceil$). Now, the Cornubia rule may be looked upon as issuing from the Cornubia **principle** (viz: $\lceil \text{If } p\text{-and-not-}p, \text{ then } q \rceil$) via the rule of *modus ponens* (from $\lceil p \rceil$ and $\lceil \text{If } p, q \rceil$, to conclude $\lceil q \rceil$). Noncopulative paraconsistent logics may keep the Cornubia principle and *modus ponens*. They waive the adjunction rule and so block the deduction of everything from a pair of mutually contradictory premises — although not from a selfcontradictory formula, i.e. from an antinomy $\lceil p \& \text{not-}p \rceil$. In other words, according to them from $\lceil p \& \text{not-}p \rceil$ everything follows, but not so from the pair of premises $\lceil p \rceil$ and $\lceil \text{not-}p \rceil$. Separately taken they can be both true, whereas their conjunction would always be [entirely] false.

Noncopulative paraconsistent logics are suitable for articulating perspectivism. The underlying idea is that you are entitled to believe or assert something whenever it is true from some (legitimate) perspective or other, but those several beliefs do not interact. Admittedly they are in a sense integrated into a single body of beliefs, but the several perspectives so combined or amalgamated are thereby mingled but not fused, or blended, or merged, since the set of inference rules is crippled so as to avoid reaching a conclusion from two or more beliefs issuing from different perspectives unless the conclusion was anyway obtainable from one of those perspectives separately. The thus articulated perspectivism is of an ununiting cast, since it keeps, in a very strong sense, the different perspectives asunder, severed from one another as their inferential potential is concerned. Their harmonization is external, a sort of alloy or mixture.¹³

§7.2.— The Strength and Weakness of Two Copulative Approaches to Paraconsistent Logic

Copulative logics enforce the adjunction rule. So, copulative paraconsistent logics give up *modus ponens* or relinquish the Cornubia principle. More often they do the latter — although there is at least one such logic which takes the former tack.¹⁴

Thus frequently proponents of paraconsistent logics accept *modus ponens* and adjunction, but reject the Cornubia principle. However, that principle can be inferred from other widely accepted and commonly received logical laws, namely: $\lceil \text{If } p, \text{ then } p\text{-or-}q \rceil$ (addition); $\lceil \text{If } p\text{-or-}q,$

¹³. Noncopulative paraconsistent logics had best be resorted to as the underlying logics of the kind of physical theories referred to at the end of note 12, whereas those theories have thus far been usually articulated through logics lacking distributivity (the rule that from $\lceil p \text{ or } q \rceil$ and $\lceil r \rceil$ allows us to infer $\lceil \text{Either: } p \text{ and } r; \text{ or else: } q \text{ and } r \rceil$). So, even if $\lceil p \& r \rceil$ is a contradiction and so is $\lceil q \& r \rceil$, $\lceil (p\text{-or-}q) \& r \rceil$ may fail to be one. A paraconsistent noncopulative approach would have the latter formula entail $\lceil (p \& r)\text{-or-}(q \& r) \rceil$ but would instead block inferring that formula from the pair of formulas therein conjoined — its conjuncts, in technical terminology. Similarly even if in culture C it is true that p and in culture C' it is true that not-p, in an encompassing more general perspective we'd have both truths, p, on the one hand, not-p, on the other; but separately, since we would never have their joint truth. Such kinds of logics were first invented by the Polish logician Stanislaw Jaśkowski, in a paper (in Polish) published in 1948. [Rescher & Brandom, 1980] also develops a kind of such logic. There are other more recent contributions in that sense. On those topics there are several papers in [Priest, Routley & Norman (eds), 1989].

¹⁴. I am referring to a system proposed by Graham Priest in [Priest, 1979].

then, if not- p , q (disjunctive syllogism — D.S. hence); the rule of selfdistribution of the conditional (namely, from 'If p , then, if q , r ' and 'If p , then q ', to conclude 'If p , then r ').

Of those principles what is relinquished by all such paraconsistent copulative logics as keep the rule of *modus ponens* is D.S. But those logics fall into three groups according to how they account for abandoning D.S.¹⁵

One account is the **relevantistic** one : D.S. is rejected because of its leading to irrelevant conditional sentences, that is to say sentences wherein the «meaning» or «content» of the apodosis is not comprised — or contained, or included — in that of the protasis. An irrelevant conditional is precisely the Cornubia principle. The drawback of that line of reasoning is that D.S. is not clearly shown to be irrelevant, except inasmuch as it yields irrelevant conclusions; but it yields them only when combined with other principles and rules; so nothing allows one to pin D.S. down as **the** culprit. Furthermore, relevantism has failed to convince most people — including the present writer — that all true conditionals are relevant. A case in point is the principle «Verum e quolibet», namely 'If p , then, if q , p ', which is not obviously irrelevant either, but which, with *modus ponens* and any logical theorem ' p ', yields 'If q , p ', which is likely to be irrelevant, however you try to elucidate those obscurest and murkiest notions of «content» and «containment».

The Australian branch of relevantism, especially in the work of R. Sylvan, is closely associated with a philosophical outlook which has been developed into an integrative perspectivism of sorts called **pluralism** (see [Sylvan, 1987]). Such an approach hinges on these ideas. (1) Truth is independent of existence, reference and even possibility: there are floating truths about «objects» which nevertheless lack any entity whatsoever. (2) There are contradictory truths. (3) No negation is strong — that is to say no negation satisfies the Cornubia rule or principle. (4) True contradictions have nothing to do with degrees of truth. (5) There is no general logical criterion for rejecting theories, no general logical procedure of **reductio ad absurdum**. Thus Sylvan's approach is in a way genuinely pluralistic, insofar as, besides tolerating as possibly true many theories and doctrines although they represent nothing real or even possible **at all**, it goes on to rule out any syntactic characterization of which theories are to remain beyond the pale. The price to pay is that then nothing a person could say would be strong enough to express rejection. The 'only' within such an account is so weak that the truth of «Only x is so and so» is compatible with other entities different from x being so and so, too. Consequently, a universal theory would be quite legitimate and logically sound which would literally include everything people have fancied to accept or even entertain.

A quite different sort of account is the so-called Brazilian approach (founded by Newton C.A. da Costa — see [Costa, 1980] and other references in [Peña, 1984]), whose abandonment of D.S. is ensuant upon rejecting the principle of noncontradiction — P.N. henceforth (i.e. the principle to the effect that, for any ' p ' whatsoever, 'It's not the case that both p and not- p ' is always true). That account thus replaces D.S. with this more complicated principle : 'If not both p and not- p , then, if p or q , then, if not- p , q '. That principle would yield D.S. should P.N. be available within the system, which it is not [at all]. The main snag is that in order

¹⁵ I have discussed the merits and demerits of each of those three approaches in [Peña, 1984]. The reader will there find an extensive bibliography about those three trends. Since the present writer is the proponent of one of the three approaches — **transitive** or gradualistic logic —, it is fair for him to mention a criticism of that approach written from the viewpoint of another of the three treatments by the founder of that treatment — and of copulative paraconsistent logic in general — Newton C.A. da Costa:[Costa, 1989].

to keep — as in fact it does — the principle of excluded middle (‘Either p or else not p ’), this kind of approach is bound to reject some most plausible principles, such as the so-called DeMorgan principle (‘If p -or- q , then it’s not the case that neither p nor q ’) and **involutivity** — the mutual replaceability of ‘ p ’ with ‘not: not- p ’. Moreover, this account concedes too much to partisans of Aristotelian logic, namely that asserting the negation of a contradiction entails rejecting that contradiction. For otherwise we can deny every contradiction without necessarily rejecting them all, that is to say we can both accept the P.N. and also **certain** contradictions.

§7.3.— The Logic of Contradictorial Gradualism

Thus I now turn to what has been termed the **transitive approach**, which consists in distinguishing simple or natural negation, for which P.N., excluded middle and involutivity hold, from strong negation, or **overnegation**, for which P.N., excluded middle and D.S. hold, while only a [weaker] version of involutivity — or, more accurately, an approximation to it — holds. The idea is that there are **degrees of truth**, an idea by espousing which the transitive approach belongs to the family of fuzzy logics, whose pioneer was Lofti Zadeh: see [Zadeh et al., 1975]. Simple negation is up to a point compatible with assertion since both the affirmative belief and its simple negation may be true, each in some degree — the same or different (the same only when the belief is exactly as true as nontrue). On the other hand, affecting a statement with strong negation — to be read ‘Not **at all**’ or ‘By no means’ — amounts to prefixing to it ‘In no degree at all’, ‘Not in the least’ or the like, i.e. to denying that that to which it applies is true or existent in any degree, to any extent.

The transitive approach posits infinitely many degrees of truth or existence, with one degree being the least one, immediately bordering on whole falseness or nonexistence. Wholly false beliefs are exceptional, whereas just infinitesimally true beliefs — beliefs which are true only in the least degree — may be common.

To my mind the transitive approach is the best one. Its possessing a strong negation renders it as powerful as classical logic. That is a feature it shares with the Brazilian approach. And thanks to that feature it affords a rule for theory repudiation, namely that of rejecting a theory with **over**contradictions — that is, with two theorems or assertions one of which is the overnegation of the other. On the other hand, it departs from the Brazilian approach — while keeping company with relevantism — in maintaining P.N., De Morgan laws and involutivity of simple negation. But, most of all, it alone offers a clear account of why not every contradiction is absurd, or of how a contradiction can be realized : it can be realized solely in case neither p nor not- p are wholly true, i.e. when neither is entirely true or entirely false. The coexistence of p and not- p is possible only inasmuch as neither of them is fully real. Thus, they remain up to a point incompatible, always, as one of them can be realized only inasmuch as the other is not realized. (‘Only inasmuch’ means the same as ‘Only to the point that’ or ‘Only to the extent that’, or the like.) Therefore no contradiction can be fully realized.

Applying a transitive logic of that sort allows us to treat a great many beliefs belonging to different cultures and [up to a point] mutually contradictory or incompatible as partly true, thus integrating them into a more comprehensive body of beliefs. Doubtless there are different ways of carrying out a convergence policy in accordance with such transitive guidelines. Two persons thinking within diverse perspectives or paradigms will apply those guidelines in different ways : one of them will «translate» the other’s statements into his own system in such a way as to grant most of them as high a degree of truth as is compatible with his own

main assumptions; the other will do the same; but, since the starting points are different, they will most probably reach different conclusions.

However, each of those two results will constitute something like a Gadamerian fusion of horizons, some sort of blending of paradigms, but in such a way that in each case it is the other paradigm that gets incorporated, integrated, annexed, merged into one's own. The annexation is reciprocal, though. The policy I am recommending leads to no onesided subservience of only one paradigm to the other.

As I will shortly try to show, by repeated applications of those procedure guidelines, the discrepancy between striving or alternative paradigms, or cultures, or metaphysical systems, or the like, is most probably bound to diminish more and more, although it is likely to remain existent to a larger or smaller extent. Consensus is utopian and undesirable. Human conscious life owes much of its point and richness to the existence of divergences.

I am of course aware that the very notion of discrepancy degree between theories, or systems, or paradigms, is one which badly needs clarification and which has thus far withstood attempts at articulating it in a suitable way. But that is a powerful reason for us to keep on endeavoring to find a perspicuous account thereof, not a sound reason for jettisoning it. For we are pretheoretically certain that there exists some relation of discrepancy between sets of beliefs and that it comes in degrees (which of course does not mean that such a range of degrees totally orders the set of such discrepancies, i.e. that out of any two such discrepancies it needs to be either truthfully assertible that one of them is smaller than the other or truthfully assertible that they are equal). We feel confident that Homer's worldview is closer to Euripides' than to B. Russell's, don't we? So, we cannot reasonably give up trying to articulate our view of that relation, inspite of all difficulties surrounding it.

A different challenge my proposal has to meet is that of how to demonstrate my claim that, by dint of applying the incorporation rule I am recommending, convergence between theories will increase. My case is pretty obvious on the face of it, but conclusive, rigorous proofs thereof are likely to be missing. Anyway, let us suppose two thinkers, *t* and *t'*, who apply that recommendation to one another's worldviews, and who thus end up accepting doxastic bodies such that most of the former beliefs of *t* are now — under a more or less literal translation — beliefs of *t'*, and conversely. If the discrepancy degree has not diminished, surely that is bound to be caused by the existence of some subset of the set of new beliefs of either thinker or both. But that sounds odd, doesn't it? For by hypothesis the new beliefs are accommodations with the other worldview, so it is hard to figure out how those accommodations could give rise to new discrepancies so as to offset the discrepancy reduction stemming from the incorporation. Unless such an incorporation is held to have in and of itself contributed nothing towards discrepancy decrease, which sounds most incredible.

Thus, my contention about the convergence-oriented virtues of the incorporation policy seems to be borne out by cogent, if not clinching, arguments.

To sum up, the kind of procedure I am here propounding is an epistemological rule to the effect that, the more valuable a worldview different from ours is (**valuable** from some viewpoint or other which is interesting for us), the more we have to incorporate into our body of beliefs as many beliefs as possible of those that make up that worldview's framework, by way of suitable translations (which ought to comply with a number of constraints I'm not going into here) to which we have to ascribe as high a degree of truth as is compatible

with our main or more cherished beliefs. That rule of course resembles the Davidsonian principle of maximizing charitable interpretation, with, moreover, the ultimate reasons for both policies bearing close likeness to one another. There are nonetheless two chief differences.

(1) The introduction of infinitely many truth degrees allows for doxastic combinations which would be simply illogical or absurd by Davidsonian standards.

(2) Whereas Davidson's rule is primarily a criterion on belief attribution, mine is first and foremost an inference rule, a method of reasoning, a way of enlarging one's own body of beliefs. Which means that sometimes the best application of the incorporation rule may turn out to have to avail itself of translations which are not the best ones as pure interpretation is concerned. Of course no chasm can exist between them, no drifting apart, since then the point of the rule would be lost. But momentary or partial clefts are possible. Even if, under a reasonable way of construing what our ancestors — e.g. one thousand years ago — or our neighbours — north or south — used to say, or do often say, most of it is true (is recognized as true by us), certain assertions of theirs may be construed in ways which are more faithful to their meaning, even if the truth ratio is thereby lowered. For in order for us to be justified backwards in the way suggested above — which has prompted our incorporation policy — it seems to be enough to save our ancestors' or our [even distant] kin's main opinions under some reasonable interpretation or other.

Those possible discrepancies between interpretations or translations can be accounted for from a gradualistic viewpoint as follows. From such a perspective there is no longer a need for us to reject that an expression can have different denotations. To be sure, in order to avoid meaning relativism of any sort we recognize a unique objective relation of denotation (or meaning, or reference), but we do not take it to be a function, i.e. to carry each argument into just one image (the entity it denotes). Instead an expression may denote several entities in different degrees. For the purpose of our backwards doxastic warrant, it suffices to save many of the beliefs composing the doxastic framework under consideration in each case with respect to a set of those entities meant or denoted, even if they were not those which were the most meant by the words or other signs featuring in such statements as express those beliefs.

Thus, while Davidson's canon of stressing charitable interpretation risks to trivialize the history of philosophy, the present approach seems compatible with more trenchant attitudes — to my mind an as literal as possible construal of the philosopher's sayings being an indispensable tool for doing interesting history of philosophy. (But of course charity is also a good exegetic principle, even though it is not paramount.)

I bring this Subsection to a close by remarking that the present gradualistic approach of course owes its existence to many other reasons, and motivations, besides allowing for some kind of convergence. They are, in a nutshell, reasons which hinge on coping with fuzzy predicates and properties, sorites, semantics for comparative constructions, identity paradoxes, set-theoretical paradoxes, duty conflicts, and related issues in the fields of philosophy of language, metaphysics, theory of knowledge, philosophical theology, ethics; the approach is now being developed so as to offer satisfactory solutions to these thorny issues.

§7.4.— Implementing the Notion of Relative Truth

Although the line offered by transitive logic seems to me most promising, I don't want to dismiss the notion of **being only relatively true**, or true in some respects only. As it happens, the transitive approach also incorporates that notion and thus affords an exact, rigorous procedure for tackling the problem of relative truth, by dint of regarding truth values, not as scalar degrees, but as tensors, sequences or combinations of such degrees.

The problem within classical logic and even a number of nonclassical logics is that truth cannot be both one-place and two-place. In general a predicate has to have a fixed, unique number of arguments it takes in each case. But suppose that a statement's truth-value is an infinite sequence of entities taken out of a certain set. Let us call such sequences **alethic tensors** and their components alethic elements. The set of alethic elements may be large or small. If you are a bivalentist, that set will be $\{0,1\}$; from my gradualistic perspective, it will comprise infinitely many degrees of truth. For any $\ulcorner p \urcorner$, let v be the valuation relation which carries statements into truth values, and so $v(\ulcorner p \urcorner)$ will be one of those alethic tensors. But suppose that v is **also** a two-place relation, such that for an argument w belonging to a certain set W , $v(w, \ulcorner p \urcorner)$ is another alethic tensor which is a subsequence of $v(\ulcorner p \urcorner)$. That means that, if W is the set of «possible-worlds», the truth of p in world w is the result of filtering or straining the truth of $\ulcorner p \urcorner$ in some way. Which means that those «worlds» (the members of W) had better be looked upon as perspectives, «zones», horizons, or layers of the real world. Now we regard as **truthfully assertible** that alone which is, to some extent or other, however small, true in all those respects or perspectives. And anything whose overnegation is not truthfully assertible will be called **relatively true**: such statements alone turn out to be relatively true as are true in some perspective or other.

Thus from p 's being true in some perspective it does not follow that p , but only that it is relatively true that p . And from p 's being relatively true and so being q , it does not follow that $p \& q$ is relatively true. So failure of the adjunction-rule had a point. Yet the treatment I am propounding does not sacrifice adjunction, but wisely refrains from granting to the operator 'It is relatively true that' distributivity over conjunction (although $\ulcorner \text{Relatively: } p \& q \urcorner$ yields $\ulcorner \text{Relatively } p \text{ and relatively } q \urcorner$ — but not the other way round).

Thus my present approach vindicates a **mild** truth relativism, too, by giving logical credence to the existence of relative truths, without thereby espousing hard truth relativism, which in fact has been criticized in this paper.¹⁶

8.— Bibliographic References

- Alston, W.P., 1980, «Level Confusions in Epistemology», *Midwest Studies in Philosophy* V (Minneapolis: University of Minnesota P.): 135-50.
- Alston, W.P., 1986, «Internalism and Externalism in Epistemology», *Philosophical Topics* 14/1: 179-222.

¹⁶. There of course are a great many issues I refrain from going into here; e.g. how I conceive those worlds or perspectives; how a paradigm or worldview is to be related to a world; how a world may encompass other worlds — as the real world encompasses each and every world — and be encompassed by other worlds and so on infinitely; what is the place of the so-called **actual** world in that array of worlds; etc. A number of those topics are investigated in [Peña, 1985].

- Apostel, L., 1974, *Matière et forme*. Gand (Belgium): Communication and Cognition.
- Barnes, B. & D. Bloor, 1982, «Relativism, Rationalism, and the Sociology of Knowledge», in M. Hollis & St. Lukes (eds), *Rationality and Relativism*. Cambridge (Mass.): MIT Pr.: 21-47.
- Bender, J.W. (ed.), 1989, *The Current State of the Coherence Theory*. Dordrecht: Kluwer.
- BonJour, L., 1985, *The Structure of Empirical Knowledge*. Harvard U.P.
- Collin, F., 1987, «Relativism and Radical Interpretation», *Ratio* 29: 53-63.
- Costa, N.C.A. da, 1980, *Ensaio sobre os fundamentos da lógica*. São Paulo (Brazil): Editora da Universidade de São Paulo.
- Costa, N.C.A. da, 1989, «Aspectos de la filosofía de la lógica de Lorenzo Peña», *Arbor* N° 520 (Madrid: CSIC): 9-32.
- Devitt, M., 1984, *Realism and Truth*. Oxford: Blackwell.
- Goldman, A., *Epistemology and Cognition*. Cambridge (Mass.): Harvard U.P.
- Hambourger, R., 1987, «Justified Assertion and the Relativity of Knowledge», *Philosophical Studies* 51/2: 241-70.
- Luper-Foy, St. (ed.), 1987, *The Possibility of Knowledge: Nozick and His Critics*. Totowa (N.J.): Rowman & Littlefields.
- Margolis, J., 1982, «The Reasonableness of Relativism», *Philosophy and Phenomenological Research* 43: 91-7.
- Margolis, J., 1985, «Objectivism and Relativism», *Proceedings of the Aristotelian Society* vol. 85: 171-91.
- Meiland, J.W. & M. Kausz (eds), 1982, *Relativism: Cognitive and Moral*. University of Notre Dame Pr.
- Moser, K., 1985, *Empirical Justification*. Dordrecht: Reidel.
- Newton-Smith, W., 1981, *The Rationality of Science*. London: Routledge.
- Nozick, R., 1981, *Philosophical Explanations*. Oxford U.P.
- Ortega y Gasset, J., 1975, *El espectador I*. Madrid: Revista de Occidente. (4th edition).
- Peña, L., 1979, *Contradiction et vérité: étude sur les fondements et la portée épistémologique d'une logique contradictoire*. Liege (Belgium): Université de l'État. (Ph.D. diss.)
- Peña, L., 1980, «Conocimiento y justificación epistémica», *Revista de la Universidad Católica* N° 28 (Quito): 35-67.
- Peña, L., 1984, «Tres enfoques en lógica paraconsistente» *Contextos* (University of León, Spain), N° 3: 81-130; and N° 4: 49-72.
- Peña, L., 1985, *El ente y su ser: un estudio lógico-metafísico*. León (Spain): University of León Pr.

- Peña, L., 1988a, «Argumentación trascendental e ideales valorativos de la razón», *Analogía* (Mexico City) II/2: 31-86.
- Peña, L., 1988b, «Naturalized Epistemology and Degrees of Knowledge», paper delivered at an International Conference on epistemological matters held at Tepoztlán (Mexico).
- Peña, L., 1989a, «Indeterminacy of Translation as a Hermeneutic Doctrine», in *Hermeneutics and the Tradition*, ed. by D.O. Dahlstrom. Washington, D.C.: ACPA, pp. 212-24.
- Peña, L., 1989b, «A vueltas con la indeterminación de la traducción y los enunciados existenciales», in *Lenguajes Naturales y Lenguajes Formales IV*, ed. by Carlos Martín Vide. Barcelona: University of Barcelona Press, 67-96.
- Perkins, M., & D.C. Hubin, 1986, «Self-Subverting Principles of Choice», *Canadian Journal of Philosophy* 16/1: 1-10.
- Pollock, J., 1986, *Contemporary Theories of Knowledge*. Totowa (N.J.): Rowman & Littlefields.
- Priest, G., 1979, «The Logic of Paradox», *Journal of Philosophical Logic* 8: 219-41.
- Priest, G., R. Routley, & J. Norman (eds), 1989, *Paraconsistent Logic*. Munich: Philosophia.
- Putnam, H., 1987, «Truth and Convention: On Davidson's Refutation of Conceptual Relativism», *Dialectica* 41: 69-77.
- Rescher, N., 1973, *The Coherence Theory of Truth*. Oxford: Clarendon Pr.
- Rescher, N., & R. Brandom, 1980, *The Logic of Inconsistency*. Oxford: Blackwell.
- Sosa, E., 1988, «Beyond Scepticism to the Best of our Knowledge», *Mind* N° 386: 153-88.
- Sylvan, R., 1987, «Philosophy, Politics and Pluralism: I. Relevant Modellings and Arguments», *The Journal of Non-Classical Logic* (Campinas, Brazil), 4/1: 57-107.
- Wainwright, W.J., 1986, «Does Disagreement Imply Relativism?», *International Philosophical Quarterly* 26: 47-60.
- White, F.C., 1983, *Knowledge and Relativism*. Assen: Van Gorcum.
- Young, J.O., 1986, «Relatively Speaking: The Coherence of anti-Realist Relativism», *Canadian Journal of Philosophy* 16/3: 503-9.
- Zadeh, L., Fu, K., Tanaka, K. & Shimura, M. (eds), 1975, *Fuzzy Sets and their Applications to Cognitive and Decision Processes*. New York: Academic Pr.