ARNE NAESS

PLURALISM OF TENABLE WORLD VIEWS

I shall try to outline a philosophical point which I think might be acceptable from a combined logical and empirical point of view. From *the* world view (*wissenschaftliche Weltauffassung*) to the manifoldness (*Mannigfaltigkeit*) of tenable world views.

In the following, I consider humans as not insignificant parts of the world. Different views about humanity therefore imply different world views. A second premise I assume increases the manifold of which I speak. By "scientific" I do not here mean something like "implied by science" but a weaker contention: "compatible with science".

What about religious views if a weaker contention is adopted? The formidable development of Christian theology since Søren Kierkegaard has reduced earlier tendencies to assume that there must be a conflict between Christian and scientific general views. The number of what were called Christian dogmas is reduced. Here I shall only suggest that this development – plus the considerable increase in the number of people who favor a sort of Buddhism – increases compatibility. But I find it premature to take up the many implied relevant questions. The only remark I tentatively make is that those questions suggest a possible scientific acceptability of certain world views which have a strong religious flavour.

Logical empiricists, as I understood their *Weltauffassung*, suggested a view of the world *derivable* from scientific knowledge. Because scientific knowledge – apart from mathematics and logic – was clearly considered hypothetical, the status of a definite articulation of such a view would, by necessity, be rather hypothetical.

One way to delimit the use of the term "science" is by assuming that it only comprises the natural sciences. In what follows, I include a large part of the humanities. Historical research is scientific in the fairly large sense to which I subscribe. A world view that clearly negates results of historical research is not a world view compatible with science. Historiography, the streamlined accounts of enormously complicated happenings, need not be compatible with scientific method. Two mutually incompatible accounts of a revolution may both be excellent, but not part of a science.

Suppose somebody asks you: "What is your world view?", suggesting that he or she would write an article or a book describing (and criticising?) it. It is fairly clear that what would be considered an adequate answer would have to take into consideration that person's value priorities. We should *demand* of a descripton of

F. Stadler (ed.), The Vienna Circle and Logical Empiricism: Re-evaluation and Future Perspectives, 3–7.

a world view actually held by a human being that it take into account his or her value priorities. The logical empiricists took this seriously. Especially when political issues were being discussed, they outlined value priority views which were simply "dangerous". That is, the increasingly powerful national socialist movement made public assertions of opposite views likely to result in repressive attacks, sometimes even in incarceration in a concentration camp.

The pertinent answer to the formidable question "What is your world view?" will assume different forms: if you and your family are politically repressed, or if you are engaged in a dangerous fight against oppressors, your world will be narrower. If you live in a peaceful country like Norway, and you are without severe political or personal problems, perhaps only then are you likely to take very broad questions such as those of cosmology seriously. Incidentally, descriptions of what is going on in the cosmos by professional cosmologists tend to be talk about vast, unimaginable explosions within vast areas of time. This may not give rise to dark or pessimistic, tenable world views.

The formidable power of the Catholic Church in Vienna was felt in everyday life. Traffic came to a halt when some religious procession required considerable space in the streets. I remember such an occasion in which traffic came to a complete standstill because a 'relic', a piece of bone that might possibly have belonged to Christ, was triumphantly paraded through the city. At least one of the logical empiricists, Otto Neurath, had respect for and perhaps was jealous of, the power of the Church. He admired certain trends within the philosophical traditions of Catholicism. He insisted that especially Thomas Aquinas, but also other theologians developed their ideas on a remarkably high logical level. For certain axioms, they derived conclusions in a logically safe way. It was not by chance that Otto Neurath again and again warned against what he called excessive respect for mathematics and logic: "Logic? Leave it to the Catholic experts!". He himself had great competence in logic and the history of logic, but having been active in politics – not without serious consequences (prison) – he warned against trying to formulate logical empiricist political views on a high logical level. These views were, as could be expected in the 1930s, mostly socialist and sometimes Marxist.

But back to the question of limits to the diversity of world views compatible with the results of scientific research. More than most philosophers, I admire and cherish research rather than science. The endlessness of research, and the short life of definite scientific theories compared, for instance, to ethical norms, are for me a source of great admiration. It has reminded me of climbing: always risky to some extent, but manageable and mostly open to well-founded trust. I recommended in 1935 that the terms "antimetaphysical" (or even "ametaphysical") be left out of the formulations of basic characteristics of logical empiricism. Rudolf Carnap's view that philosophy in the future would essentially consist in the elaboration of the logical syntax of language, I found deplorable. I recommended that "research attitude" should be used as a central expression and slogan, rather than "scientific world view". Our views should not be incompatible with a

consistent research attitude. (After all, there are innumerable questions we pose which are not even very thinly covered by painstaking research.) There is not much vitally relevant science to point to. Propaganda for more such research, and a more consistent research attitude, are both essential. The metaphysics of Spinoza includes a definition of freedom and of free choice. Very roughly, a decision is free according to him when taken under no external pressure whatsoever. But "God" (*Deus*) is defined in such a way that it does not invite research. If we start with the last part of the *Ethics*, and not the formidable first part, we are open for research and redefinition of terms. This, in turn, facilitates an intense research attitude in relation to metaphysical texts in general. From the last – the fifth – part, we may proceed to the broad, fourth part. Every point there has a practical, a life import. In short, it is possible to maintain a research attitude, even when interpreting and applying the "dense" metaphysics of Spinoza. When I was staying in Carnap's home in California, this was one of the themes of our daily discussion.

On entering the Schlick seminar in Vienna in 1934, I presented myself as a kind of Spinozist. Spinoza enjoyed, of course, a high standing among the seminar members, but philosophy the way Spinoza practised it was of course fully, totally, decisively a matter of the past. So it was considered touching and in a way, admirable, to be a kind of Spinozist, but philosophically it was centuries too late.

What I am driving at is a complete acceptance of the kind of metaphysical formulations of a philosopher like Spinoza. That is, acceptance of their meaningfulness. But as for the kind of understandable contemporary articulations which would today be nearest to the meaning of his formulations is an open question. Different sets of answers would play a role in outlining different Spinozist world views. They would present examples of "scientifically" acceptable, mutually more or less incompatible world views.

Studying Immanuel Kant's texts, we may arrive at similar, or at least analogous, conclusions. Considering the great number of mutually incompatible nineteenth century and later Kant interpretations, we might point to the possibility of a variety of modern Kantian world views.

What about old Chinese and Indian philosophies? We may tentatively interpret the texts so as to make them relevant to the questions of scientific compatibility. The pervasive relevance of yoga in Indian philosophy has been studied extensively in the West as a practice, a strangely close combination of a seemingly abstruse and vague philosophy with very definite, clearly described practices. As an example of basic philosophical terms rather different from western ones, I would like to concentrate on "emptiness", "sunyata" in Sanskrit. At an East-West international philosophical congress, an Indian participant left his chair in a quiet way and crawled under the table. When asked closely later what he meant by this, he tried to make us understand that his movement was relevant and philosophically understandable within the Indian yoga tradition he belonged to.

HUBERT SCHLEICHERT

MORITZ SCHLICK'S IDEA OF NON-TERRITORIAL STATES

1. THE DOCUMENT

In 1952, a small booklet by Moritz Schlick appeared. It was entitled "Natur und Kultur", and was edited by Josef Rauscher, a former student of Schlick. Its preface identifies it as an unfinished manuscript of what Schlick had intended to become his main work. It may have been written around 1935. Schlick died in 1936. As far as I know, the booklet has not been translated into any other language. I am not sure as to how much Rauscher manipulated the text, but I think that it can basically be regarded without suspicion. The booklet features Schlick's thoughts on topics like culture and morality, the concept of fate in history, war and military service and other political problems. Although it is only a draft, and thus not ready for publishing, it shows a rather unknown side of Schlick. This side, one would be forced to say, does not really fit with the usual description of Logical Positivism. None of the key terms of Logical Positivism like meaning, verification, falsification, basic sentence, proposition, the possibility of feeling other persons pain, etc., appear in the booklet. Here we have, as it were, a Wittgenstein-free Schlick. Of course, Schlick was not schizophrenic; he simply was more of a philosopher than the standard historiography of the Vienna Circle and Logical Positivism seem to claim.

2. NEGATIVE ASPECTS OF THE STATE

In the following I will only focus on a few remarks made by Schlick on the state. The term "remarks" must be stressed, because the whole issue was never really elaborated upon by Schlick.

Schlick does not use the term "social contract", but this concept obviously forms the backdrop for what he is saying. As is well known, this term is used to theoretically reconstruct what rational people could or would do in order to overcome a completely anarchic situation, a situation which usually is described as unsafe, poor, and miserable. According to this theory, rational people would agree to establish some kind of rulership or sovereignty by signing a "social contract". Thus a state is created in order to guarantee peace and security. However, as Schlick writes,

F. Stadler (ed.), The Vienna Circle and Logical Empiricism: Re-evaluation and Future Perspectives, 49–61.

(1) There is nothing in our European civilization that causes more grief than the state. Under it we suffer most.

Since there is nothing wrong with the original idea of the state, i.e. an association for help and protection through reasonable institutions, the mistake must lie in its execution ... The first question would be: Who participates in the unification? According to which principle shall the selection be made? (p. 67)

This is an unusual and surprising question. According to the standard version of the social contract, such a question does not arise at all. There is no selection to be made – the whole population, all the people together, agree to instate a certain government. Should somebody disagree, then – at least in some constructions – he would be forced to give his consent, or else he would be considered to be an enemy of the state. The state rules over a certain territory; everything and every person within it, even unborn children and babies come under the state's control. On the other side of the border, there are other states, which means potential enemies. From the very beginning, the state plays a double role. It guarantees peace within its territory and prevents civil war, while at the same time preparing for war outside its precincts, against other states. But this latter feature of every state is not discussed in the theories of social contract. Schlick makes a bitter remark about civil wars, which to Hobbes, for example, were the most terrible of all political situations:

(2) Terrible as they are, one has to acknowledge the fact that civil wars usually do not claim as many victims as wars between states with separate territories have, i.e. between hostile countries.

This is an argument to not separate contradictory tendencies ... by space, but to mix the enemies. Then the unavoidable balance will lead to only minor catastrophes. (p. 101)

I will let the last sentence stand for a moment without commenting on it. However, it is probably true, as a "body-count" would reveal, that the number of people killed during "official", "regular" wars conducted by states is much higher than those killed during civil wars. From this point of view, the whole ideology of a social contract is highly problematic. But let me come back to the last sentence of Schlick and his idea of separating hostile groups in space.

3. THE SOCIAL CONTRACT AND TERRITORIAL STATES

For historical reasons, it is obvious that states are defined by a territory. But is this the only possibility? As Schlick says, states are constructions that are made by us and can be changed by us, and we should make these constructions as safe and rational as we can. That states start wars against others, is not contained in the idea of a social contract. It is rather a degeneration of that idea. Unfortunately, this degeneration is the most common and – so to speak – normal thing in history. As we shall see in a moment, Schlick looked for an alternative conception of the state in order to prevent such degeneration.

There are still other difficulties in the usual theory; but in one respect the standard theory of a social contract comes quite close to political reality. In order to give the state a moral justification, free persons must consent to it. Yet even within contractarian theories, there is not much room for freedom of decision. There is only one state that can be established, and people can only say yes to it. Those who say no become outcasts. Once this is done, it is very difficult to revise this decision; the only way to do it would be by emigration. Practically speaking, the vast majority of all people on this earth become citizen or subjects of their state by birth and must remain in the state where they have been born.

4. AN ALTERNATIVE: SCHLICK-STATES

At this point, Schlick introduces an alternative kind of social contract, which allows people to make a real choice between several possibilities, a choice that later also can be revised without great problems.
He argues:

(3) According to our notion of the state, it is an association with the purpose of protecting all vital necessities. This conception leaves it completely open whether the boundaries of the state – i.e. the group of citizens of the state – are determined by living together on the same territory, or by some other principle. (p. 101)

It is not a priori necessary to define a state as sovereign over a certain territory. A state could also be defined as a sovereign over a certain group of human beings. In this case, several "states" could coexist within the same territory. Schlick tries to describe such a situation as follows:

(4) Suppose that the separation according to political convictions replaces the separation by geographical states. In such a case there would be no countries in the usual sense, but political organisations, the members of which would live scattered over all continents. Each of these invisible communities could have its own laws and costumes, its courts, police, and state form. There could be invisible republics and monarchies, but the presidents and kings would not rule over territories, but only over such people as voluntarily belong to their state. Since human convictions can change, it follows from the very principle that one can at any given time move from one organization to another. (p. 102/3)

Let us refer to this as "Schlick's Principle" and "Schlick states".

Clearly, all this is utopian thinking. The question is, is it an interesting utopia? Is it worth consideration? It is a theoretical reflexion about how modern, rational people, after having been through all the negative experiences mankind has had with territorial states, would or should construct their state – or rather, their commonwealth of states.

Unfortunately, Schlick does not provide any examples from history. Perhaps he thought that his ideas were too far removed from reality. Therefore, we have to look for examples ourselves.

CARSTEN KLEIN

COORDINATION AND CONVENTION IN HANS REICHENBACH'S PHILOSOPHY OF SPACE

The concept of coordination ("Zuordnung") was central to the writings of some of the early followers of Logical Empiricism. In his *Allgemeine Erkenntnislehre* (1918), Moritz Schlick characterized the process of cognition as a coordination of concepts with objects and of judgements with facts, while defining truth as uniqueness of coordination. Whereas Schlick's conception was realistic in spirit, Hans Reichenbach used in his *Relativitätstheorie und Erkenntnis apriori* (1920) the concept of coordination in a framework that was still influenced by Neo-Kantianism. He emphasized the role of coordination with respect to the constitution of objects and introduced the idea of coordinative principles ("Zuordnungsprinzipien") which are *apriori* in a relativized sense.[1] Later, he abandoned the Kantian approach and moved on to a conventionalist epistemology, trying to separate factual and conventional kinds of coordination and calling the latter coordinative definitions ("Zuordnungsdefinitionen").

I would like to take a closer look at the concept of coordinative definition as it is employed in Reichenbach's *Philosophy of Space and Time* (1928).[2] I will argue that he employed two quite different concepts of coordinative definition here without distinguishing properly between them. The first one bears a strong similarity to the conception of definitional coordinations that can be found in Schlick's *Allgemeine Erkenntnislehre*, regarding them as interpretation rules for the concepts of an axiomatic system. But without proper differentiation, Reichenbach used a different type of 'coordinative definition' in the broader sense of conventional elements of our world descriptions, despite their not being coordinations in a proper sense. I will try to show that the most prominent example of a so-called 'coordinative definition' in Reichenbach's philosophy of space, the definition of congruence, is of such a kind.

In his *Philosophy of Space and Time*, Reichenbach introduced the concept of coordination within the context of his distinction between mathematical and physical geometries. He took the idea that the application of a mathematical system to reality can be interpreted as a coordination of implicitly defined concepts with real objects from Moritz Schlick's book *General Theory of Knowledge* (*Allgemeine Erkenntnislehre*, 1918).[3] This way, a mathematical geometry is turned into an empirical theory. But not all coordinations can have a factual content and, hence, be true or false. Rather, there must be *some* coordinations that are definitional in nature, called *coordinative definitions*.[4]

F. Stadler (ed.), The Vienna Circle and Logical Empiricism: Re-evaluation and Future Perspectives, 109–120.

Reichenbach explains the idea of coordinative definitions by presenting a simple example. If a distance is to be measured, the unit of length has to be determined beforehand by definition. But that cannot be done by an ordinary conceptual definition, since such a definition does not say anything about the size of the unit. This can only be done by "reference to a physically given length"[5], i.e. by a coordinative definition. Before such "metrical coordinative definitions" are given, statements about distances do not have factual meaning. In this sense, Reichenbach calls them "logical presuppositions concerning measurements".[6] It is possible to express this insight in a different way: the adoption of a unit of measurement is not determined by facts, but is rather a matter of stipulation. Thus, coordinative definitions are examples of conventional elements in our world-description.

In the given example, the coordinative definition is ostensive in nature, it can only be achieved by reference to a physical object: "'that thing there' is to correspond to such and such a concept".[7] According to Reichenbach, there is no difference in principle when there is an "insertion of some further concepts" between the concept to be defined and the real object. His example is the coordinative definition "a meter is the forty-millionth part of the circumference of the earth". Here too we refer to a "physical length", the circumference of the earth, even if the reference here is "rather remote" by means of the interposition of conceptual relations.[8] And the situation is the same when we define the unit of length by reference to a certain wavelength. It is true that not the wavelength itself is observable but only certain phenomena like interference patterns, which are theoretically related to it. Nevertheless, the wavelength is "a piece of reality", and thus it can play its part in a coordinative definition.[9]

That the unit of length must be defined before measurements are possible is not a very profound insight. But Reichenbach gives us this rather trivial example only in order to clarify the main characteristics of coordinative definitions. After this is done, he turns to the far more interesting case of the relation of congruence.[10] But it will turn out that, contrary to Reichenbach, the definition of congruence is very different in nature compared to the definition of the unit of length.

To determine whether two distances at different locations in space are congruent, we have to measure their respective lengths. The standard procedure is to carry a measuring rod from one place to the other and read off the respective numbers. By taking up insights of Hermann von Helmholtz, Reichenbach saw that the measuring procedure just described is subject to a hidden premise – namely, the presupposition that the length of the measuring rod did not change while transported. That this is by no means a matter of course becomes clear once we consider the question of determining such changes of length: it seems obvious that this can only be done by comparison with a different measuring rod. Now imagine a force that has the same effect on all objects regardless of their composition, and let this effect be of such a kind that the lengths of these objects change by the same factor while in transit from one point to another. It is easy to

see that such a "universal force" could not be detected, since all *relations* of length would remain the same, and it is only such relations that can be measured.[11] Therefore, the assumption that such an effect does not arise cannot not be derived from observable facts.[12] Reichenbach concludes:

> The problem does not concern a matter of *cognition* but of definition. There is no way of knowing whether a measuring rod retains its length when it is transported to another place; a statement of this kind can only be introduced by a definition.[13]

Thus the relation of congruence that holds between objects that are divided spatially is undetermined unless the concept of congruence has been fixed by definition. In this sense, the definition may again be called a "logical presupposition concerning measurements". And since it is achieved by a coordination of the concept of congruence with "a real object", here again we have a case of a coordinative definition.[14] At least that is what Reichenbach tells us. But is this really a tenable point of view?

When Reichenbach says that it is the function of coordinative definitions to give such statements that express the results of measurements an objective meaning, he seems to have a certain semantic model in mind. Coordinative definitions are regarded as semantic designation rules that determine the reference of geometrical concepts. And after their reference is fixed, they can be used in the context of a physical geometry to make assertions about the real world. This way of looking at coordinative definitions obviously follows the model of defining the unit of length: before the concept of a unit is given a reference, it cannot be used to make statements about the lengths of physical objects. But it would be a mistake to over-emphasize the similarity between this simple case and the definition of congruence. With respect to the coordination between concept and object, there is a principal difference between these two cases. It is plausible to consider the definition of the unit of length to be an ostensive definition. There is a physical object, the standard meter in Paris, that can be identified by an ostensive gesture as reference for the concept in question. And an interposition of other concepts does not change the way in which the coordination works. It does not matter whether one has a measuring rod or a pattern of interference: there is always an observable object that can be identified by an ostensive gesture, even if in the latter case the object of reference is not the observable pattern itself but the non-observable wavelength, which is connected to the observed phenomena by a simple conceptual relation.

The case of the definition of congruence is completely different. Since it is a two-place-predicate, the coordinated entity can only be a relation, i.e. the relation which obtains between two spatially separated physical objects if their lengths turn out to be equal when measured by a transported rod. The extension of the congruence-predicate, then, is the class of pairs of congruent objects. This reading is supported by Reichenbach's formulation that the concept 'equality of length' is coordinated to a "physical structure".[15] At first sight, this seems to be an acceptable view – why should we not regard relations as being real in the