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Carnap's Scientific Humanism

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ABSTRACT

Scientific humanism is the formula by which Rudolf Carnap positions science as the best tool for improving life. Science allows us to maximize the rational character of human decisions on the basis of meta-values that include epistemic values and values for rational decision making. These values are politically neutral in that they are not tied to any partisan political position, but deeply political because they allow us to avoid irrational reasoning and to make the right use of science for our political and moral decisions. Maximizing rationality does not mean, for Carnap, that we must think and calculate before every action. Rather, the overall noncognitive character of values and decisions leads to a decisionist momentum, which means that we must find the right balance, both personally and politically, between sharp thinking and following our attitudes, because science is a signpost, not a leader, in life. Carnap's views are rooted in the intellectual currents of early twentieth-century Central Europe, including Max Weber's scientific value-neutrality, the German Life Reform and Youth Movement, *Lebensphilosophie*, the decisionism of the 1920s, and the empiriocriticist branch of Austrian social democracy.

1. Introduction

The purpose of this essay is to go a few steps further in the tradition of Carnapian exegesis represented by scholars such as Alan Richardson (2007), André Carus (2007, 2017), and Thomas Uebel (2020), all of whom have already argued that Carnap's philosophy of values, despite its noncognitive elements, is misunderstood unless we see him as recommending certain rules of reasoning that are obviously cognitive and therefore objectively justified condensates of science and rationality.[1]

[1] This essay is in several respects an outgrowth of the criticism that Thomas Uebel has made of my earlier work on several occasions. While I had almost exclusively emphasized

What makes this cognitive side of Carnap's philosophy of values so puzzling is that it must be reconciled with his insistence that even our commitment to science and its cognitive values is a matter of "emotional need" (Carnap [1928] 1967, xvii). My interpretation of this tension is that what Carnap (1963a, 83) calls scientific humanism implies not only that we have science as a cognitive tool that allows us to obtain rational feedback that makes our choices genuine and far-sighted, but also that we must first commit to science—in a sense to be explained—in order to reap its benefits. But there is also a tension here that those who accept science must learn to deal with, for we must decide in each case how deeply to dig scientifically. The challenge is to find the right balance between what Carnap calls perfect rationality and intuitive decisions made in the moment (on the details see Section 5). These arguments are aspects of a still often overlooked existentialist element in Carnap's philosophy, rooted in the decisionist turn of the 1920s,[2] as well as in the life-reform movement of fin-de-siècle Germany and the philosophies of Friedrich Nietzsche and Wilhelm Dilthey, as already pointed out two decades ago by Gottfried Gabriel and a few decades earlier by Arne Næss.[3]

the party-political side of Carnap's political thought in earlier accounts, I learned from Thomas that there is also a quite important aspect of politics in Carnap that is not at all bound to party-political views, but represents politics "in its broadest sense". I also owe to Thomas's critical comments the realization that all the meta-values of Carnap's philosophy of values are cognitive. Third, Thomas also pointed out to me that there is an important difference between Carnap's scientific humanism and the Vienna Circle's scientific world-conception to which I refer later in this introduction. These are just a few examples showing that the present paper is largely based on modifications and refinements of my earlier views on Carnap brought about by Thomas's critical comments, for which I am very grateful. This is not to say that Thomas necessarily agrees with the present interpretation, or can even be held responsible for it.

[2]The term "decisionism" is used here, although it is an ad hoc translation from the German word "Dezisionismus". "Voluntarism" might be an alternative term that is more common in English. However, I decided to stick with "decisionism" simply because there is no perfect English equivalent for the German term, and thus it might be better to introduce an artificial term rather than a misleading one. Thanks to one of the reviewers of this paper for asking me to pay attention to this issue.

[3]See Gabriel (2003, 2004) and Næss (1968). On the influence of the life-reformist movement see Damböck, Sandner, and Werner (2022), on Carnap and Nietzsche see Vrahimis (2020), on Carnap, Dilthey, and historicism see Dewulf (2017) and Damböck (2012), on the role of the decisionist turn see Damböck (2024b).

The first aim of this article is therefore to show how the radical defender of rationality Carnap fits together with these existentialist and decisionist sides of his thought. The second aim is to clarify the relationship between the central theoretical goal of Carnap's work, the maximization of rationality, and its political background and implications. Drawing on the work of Donata Romizi (2009), Audrey Yap (2024), Uebel (2012), Carus (2007) and my own previous work (Damböck 2022c, 2024a), I argue that while there is a strong political side to Carnap's views, because of the political pressure he faced within the academy at various times in his life, and also because of his radical modernism, these political factors were articulated by him only outside of his official work, in the more informal context of semi-academic lectures and publications. This has the unfortunate consequence that the political and practical implications and motivations of the formal and theoretical side of Carnap's work were not articulated in his official writings and are thus regularly overlooked (see Section 4).

While in Damböck (2022c) I addressed those more explicitly partisan political views that also played a role in Carnap's work, and while the aforementioned works by Romizi and Yap refer mainly to Carnap's political activism outside (Romizi) and within (Yap) academia, the present article tries to identify political aspects that are implicit in Carnap's theoretical views and that are political in a different way, neither in the sense of partisan politics nor in the sense of inner or outer academic activism. This third aspect of Carnap's political potential is the one that has often been addressed explicitly in Uebel's work and at least implicitly in the interpretations of Carus and Richardson, namely in the sense that there are some concrete political and practical implications in Carnap's theoretical views that can be seen as the germ of a political philosophy. Such a political philosophy of logical empiricism, the first Carnapian steps of which are suggested here, would be concerned with the political potential of science to improve our lives, along the lines of Carnap's formula of scientific humanism.

Scientific humanism, which Carnap formulated late in his career, in his autobiography, differs from the earlier slogan of the "scientific world-conception", from the manifesto of the Vienna Circle ([1929] 2012). Scientific humanism positions science with all its potential and machinery of knowledge, technology, and tools of rational thought as a

tool for the improvement of life, while the scientific world-conception addresses only the critical potential of the scientific standpoint, which allows for the reform of the foundations of science, but can also function as a new way of thinking that can serve as a means of reforming our life. Thus, scientific humanism clearly grows out of the scientific world-conception and presupposes it, but it also makes use of science in a much more concrete way, beyond the mere scientific spirit, in areas where concrete scientific results and frameworks are used to improve human decision-making. While the scientific world-conception teaches us how science as an attitude can improve our view of the world in a very abstract way, scientific humanism involves the much more concrete plan of using all the tools that science provides to improve our choices and make the world a better place on levels such as economics, ecology, diversity, and individual health. In other words, scientific humanism takes into account the new role of science as a highly practical and application-oriented enterprise that emerged after 1945, while the scientific world conception focuses more on the foundations of mathematics, physics and biology, which above all give us a better abstract understanding of the world. In this essay, I will focus on the first, more concrete purpose of science as addressed in scientific humanism.

2. Cognitive Meta-Values and Maximally Rational Decisions

While references and historical details will be provided in the next section, in this section I will point to the overall conception I ascribe to Carnap, which consists of formal frameworks and what I here call meta-values.

Noncognitivism is the view that moral statements do not express beliefs that can be either true or false, and thus these statements are not capable of truth. Moral statements are a matter of individual attitude, and there is no way to justify a moral statement beyond the mere fact that it expresses the wishes and desires of a person or group. Carnap was certainly an advocate of this view. But he adopted this noncognitivism only in a limited way, using the possibilities of rationality and science as "constraints" (Carus 2017, 176). These constraints limit the noncognitivism of our moral attitudes insofar as a value is only

rationally acceptable if it is the result of an epistemic process that takes these constraints or meta-values into account. What is special about meta-values is that, unlike all object-level values, there is clearly a sense in which we can take them to be cognitively justified.

Epistemic values are the most uncontroversial example of epistemically justified meta-values. They are justified because they lead to the production of true scientific claims and scientific knowledge, and their absence leads to the production of false claims and the absence of knowledge. But there are other meta-values that can also be seen as cognitively justified. These other meta-values also depend on epistemic values in that they use the possibilities of science and rationality to make our decisions more genuine, farsighted, and social. These values have something to do with instrumental rationality because they are all tied with investigation of consequences of a value or possible action and the task to choose desirable consequences and discard undesirable ones. Because these values concern fundamental rational principles that also guide scientific decision making, I will call them rational meta-values.

First, this category of rational meta-values includes considerations on causal consequences of values and their logical consistency. In this sense, a value statement is only acceptable if it has been subjected to a comprehensive cognitive update that includes the following questions: What are the consequences of this attitude, and do I really want them? What actions does the attitude imply, and do I have a strategy for taking those actions? What are the possible side effects of the attitude and the actions it implies, and are they acceptable to me? Are the value statements contained in an attitude compatible with other value statements I hold, and can I derive all my value statements from a small set of core values?

Second, rational meta-values include the idea that we should trust only our own genuine attitudes and disregard the momentary emotions and values imposed on us by others who overwhelm us with the tools of propaganda.

Third, on the social side, rational meta-values include the full range of discursive strategies for dealing with value conflicts and disagreements in ways that lead to a compromise that is considered fair by all or most of the opponents.

Rational meta-values are epistemically justified, but unlike epistemic values, only indirectly, because the decisions they produce cannot be true or false in themselves. However, to act against these values is to make decisions that we later regret because they lead to consequences that we find undesirable, are inconsistent with other values, appear to be the result of a momentary surge of emotion or manipulation, or are non-cooperative and thus suffer from the fact that we must assume that there is a group of opponents who cannot accept our decisions and will therefore fight against them. In this sense, even though rational meta-values do not lead to claims that are true or false, but to decisions that cannot be true or false in themselves, these values are still cognitively justified because they characterize the good epistemic practice of rational reasoning.

The key abstract idea of Carnap's scientific humanism is to position science as providing objectively justified principles of rational reasoning that constrain the possibilities of choosing noncognitive attitudes. We maximize the rationality of our moral and political choices by using these cognitively justified principles of rationality. Carnap devoted large parts of his philosophical work to developing such rational principles for scientific, moral, and political decision making.

In this sense, inductive logic—the major project of the second half of his life—was intended to be part of a comprehensive framework for human decision making. Inductive logic dealt with the cognitive side of this framework: facts and the ways in which empirical hypotheses could be considered justified on the basis of our current knowledge. Carnap planned to complement this framework of inductive logic—a task he unfortunately could not complete—with a corresponding framework obeying rational principles for value systems. The path towards this unfinished main project of Carnap's philosophy is outlined in the fragment "Value Concepts" of 1958 (Carnap 2017; compare Damböck 2024d), which remained unpublished during Carnap's lifetime. There, using mainstream decision theory, Carnap describes a formal framework that includes almost all of the rational meta-values mentioned above, namely as follows.

The epistemic values belong to the side of inductive logic and logical reasoning as a whole that allows us to make judgments about formal and empirical facts. Given a hypothesis h and all the empirical evidence e

available to the agent at the time of the decision at hand, the agent must also develop a credibility function c that follows the rules of inductive reasoning and allows the agent to compute the credibility $c(h, e)$ that connects h to e on the basis of the agent's rational inductive intuitions. The value $c(h, e)$ thus reflects the degree to which the rational agent can call the hypothesis h cognitively justified at the time of the decision (on this part of the framework see Carnap 1962).

The values of instrumental rationality, in turn, come into play on the basis of a value function v that ranges over possible worlds w, w', w'', ... and specifies the relative value or utility $v(w)$ for each of them. This value function must also satisfy certain rational requirements, which I will return to in Section 5. If there are several different possible actions $a, a', a'', \ldots$ at the time of the decision at hand, then the most rational option is the action a that receives the highest preference value $\Pr(a)$ that is calculated as such:

$$\Pr(a) = \sum v(w)c(w, a \cdot e)$$

Here, w represents the hypothesis that the respective possible world will become reality, and $a \cdot e$ represents the available evidence e together with the assumption that the action a has been taken (compare Carnap 1963b, 971, formula 10). Rational preference values computed in this way take into account all possible outcomes of an action and evaluate them by combining the probability of these outcomes with the value the agent assigns to them. It is rational to choose those actions that are likely to produce an outcome that the agent values highly. In this sense, this framework covers almost all of the meta-values mentioned above, including epistemic values and the values of instrumental rationality. Even the part that Carnap does not explicitly mention in his fragment, namely social deliberation, would fit here, at least in retrospect, because the recent literature on social choice theory provides strong arguments that rational preference choice among groups works best in a deliberative democratic scenario (List 2018).

In summary, meta-values can cover a range of different areas, from epistemic values to rational values that affect individual choices as well as group choices. What these values all have in common is that they unambiguously lead to more rational claims and decisions. Thus, the goal of the scientific humanist is to collect as many of these principles as

possible in order to maximize the rational character of human decision making. This is certainly one way of describing Carnap's overall philosophical attitude. With this general observation in mind, I will now discuss some historical and systematic details of Carnap's conception.

3. Carnap's Scientific Humanism in a Nutshell

Recent meta-ethical noncognitivism (compare van Roojen 2018; Schroeder 2010), while related to Carnap's views in various ways, has its roots mainly in theoretical views associated with the linguistic turn, all developed in England and the United States. The basic idea is that moral judgments express no cognitive meaning. The word good "stands for nothing whatever, and has no symbolic function. . . . it serves only as a symbolic sign expressing our attitude" (Ogden and Richards 1923, 125). The philosophical problem that arises here is a problem for the philosophy of language, because value statements involve a very special form of semantics, beyond true and false, that deals with the peculiarities of a statement that does not express a belief, but rather an attitude or emotion of the speaker. These problems in the philosophy of language were also taken up by Carnap, but only relatively late. He identifies the problem of values as a problem of language for the first time in his *Philosophy and Logical Syntax*, a lecture Carnap gave in London in 1934 in the presence of two pioneers of the linguistic approach to noncognitivism, C. K. Ogden and A. J. Ayer (Carnap 1935, 22–26).

Carnap, however, had already some years earlier adopted views that then determined his noncognitivist standpoint, from a current that developed quite independently of the views of Ogden or Ayer in early twentieth-century Germany and Austria. There, besides important links to Herbartianism via the views of Carnap's grandfather Friedrich Wilhelm Dörpfeld that were highly important for him (Heidelberger 2024; Damböck 2022b), to protestantism and pietism (Carus 2021, 2022), and to the German Youth Movement, to which both Carnap and Hans Reichenbach belonged,[4] a key author who also directly influenced Carnap was Max Weber. In "Science as a Profession and Vocation",

[4]See Werner (2003, 231–307; 2022), Damböck, Sandner, and Werner (2022), Reichenbach ([1913] 1978), Padovani (2022), and Damböck (2022a).

Weber formulated the famous narrative of a disenchanted world, which had "lost its magic" (Weber [1919] 2014, 342). Science can only inform us about facts and the mathematically calculable, but science cannot justify moral or political values. Science is "meaningless, in principle, because the different value orders of the world are in irresolvable conflict with each other". Science cannot justify values, but it still can tell us a lot about values. Scientists cannot be " 'leaders' in matters concerning the conduct of life" (Weber [1919] 2014, 349), yet science makes "positive contributions . . . to practical and personal 'life' " in three ways ([1919] 2014, 349). First, according to Weber, science gives us "knowledge of the techniques for controlling life—the external world as well as human actions—by calculation" ([1919] 2014, 349); second, it provides "the methods of reasoning: the instruments [of thought] and intellectual training" ([1919] 2014, 349); and third, science allows us to achieve what Weber calls "clarity" ([1919] 2014, 349). The latter means that science can tell us which means we must choose to achieve a given end, what side effects any action might have, and how different moral or political positions are logically related ([1919] 2014, 350).

Carnap read Weber's text in 1928 (compare Carnap 2022b, 748). A year later he gave a lecture at the Bauhaus in Dessau, entitled "Science and Life [Wissenschaft und Leben]" (Carnap 1929), which closely followed Weber's argument. We must distinguish between facts and values, Carnap said. Facts are "the task of science" (Carnap 1929, 1). "Valuation itself cannot be found by theoretical knowledge, because it is not the discovery of a fact, but a personal attitude" (2). Carnap, like Weber, then highlights the theoretical issues that are still relevant to value debates (2-3), and he emphasizes that failure to attend to these theoretical issues is often a problem:

> When people notice inconsistencies in their valuations (even unconsciously), it often happens that instead of harmonizing the valuations, they bend their theoretical thinking and form different ideas about the facts than they should according to their cognitive possibilities. (Carnap 1929, 3)

He concludes that "rational thinking" is "not a leader in life, but a signpost: it does not determine the direction", which is a matter of attitude and emotion, "but only provides information about the expected consequences" (4). We figure out the causal consequences of different

possible actions and then adjust the signpost in the direction we prefer, or choose the signpost that points in that preferred direction, while there is no leader who determines the direction for us. Our task, Carnap proceeds, is to find a balanced way to properly position science and rationality so that (a) no one and nothing overrides our attitudes or steers them in directions we do not want, (b) we do not allow "the irrational [i.e. the realm of attitudes] to influence beyond its scope, namely the rational", nor do we (c) "underestimate the importance of science" (Carnap 1929, 3). These are clear rules that define the conditions for acceptable decision making: we must trust science, rationality, and facts to overcome our temptation to bend our thinking with false facts and illogical claims. Science still functions here only as an aid or a signpost, because we must ultimately base our decisions on our attitudes, but science and rationality tell us what the causal consequences of a possible action are—do we really want them?—and how values are related—do they fit together logically? A decision is "illogical," as Carnap called it some years later (Carnap 1937a), if it ignores these empirical and logical factors. What the scientific world-conception wants to avoid is that people make a decision based on illogical reasoning that they would regret after considering the available evidence.

This strategy of using science and rationality to find out what we really want has various different aspects, the most obvious of which is the one already emphasized by Weber and taken up by Carnap in his Bauhaus lecture, namely to study the causal consequences, side effects, and logical relations of possible values and actions, and to choose only those whose causal consequences we find desirable, whose side effects are acceptable to us, and which are sufficiently consistent with our overall system of values and attitudes. This is the strategy of instrumental rationality to which Carnap returns again and again when discussing how to determine values and actions.[5] But this strategy alone, as the above quotations from the Bauhaus lecture illustrate, certainly does not exhaust all the rational principles relevant to our decision making. There are important individual and social factors as well.

(1) On the individual level, it is crucial that decisions about desirability or utility must be based on our genuine attitudes, on what we really think in our hearts. This principle was close to the pietism of Dörpfeld

[5] See Carnap (1934b, 1934a, 1937a, 1954, 1955).

(1895) and it was extremely prominent in the German youth movement, whose most important maxim, the Meißner oath, which Carnap shared throughout his life, was to live one's life "on one's own initiative, out of one's own responsibility, and with deep sincerity", an "inner freedom" to which the German youth movement "unanimously stands up under all circumstances" (Mittelstraß 1919, 12–13). Similarly argues the young Reichenbach:

> *The supreme moral ideal is exemplified in the person who determines his own values freely and independently of others and who, as a member of society, demands this autonomy for all members and of all members.* (Reichenbach [1913] 1978, 109)

We must therefore try to remove all the sources, substances, symbols, and stories that try to make us ignore what we really feel about a problem; and we must, as Carnap later often remarked, distrust our "momentary emotions", considering that "a value statement expresses more than merely a momentary feeling of desire, liking, being satisfied, or the like, namely, satisfaction in the long run" (Carnap 1963b, 1000, 1009). These genuine attitudes, which Carnap also sifts out as logical entities reflecting individual attitudes, which he calls "pure optatives" (Carnap 1963b, 1000f), are something that we must first excavate, overcoming momentary feelings and attempts at manipulation. The fact that these often hidden genuine attitudes are more than momentary feelings does not mean that they are unchangeable, since attitudes can change not only because of new life experiences and formative events, but also, on a more theoretical level, in the light of new evidence. If I learn that smoking is a serious health hazard, this may change my initially positive attitude toward tobacco use, even without any dramatic events or life experiences, on a purely rational level. Rationality and science provide strategies for a cognitive update, which typically will also influence, change, or even firstly determine our genuine attitudes. Again: science is not a leader, but only a signpost.

(2) Beginning with his ambitious project of "political circulars," which he sent to friends and comrades-in-arms in 1918 with the aim of determining a common stance on the question of German war guilt and future political strategy,[6] Carnap pointed out on several occasions that

[6]See Werner (2022) and Carnap (2022a), which is closely related to the ideas of the political circulars.

moral and political questions can only be answered in a rational way if we approach them in a cooperative manner. This is already true of the first account of the practical side of his philosophy, which Carnap gave in 1928, in the preface to the *Aufbau*:

> The practical handling of philosophical problems and the discovery of their solutions does not have to be purely intellectual, but will always contain emotional elements and intuitive methods. The *justification*, however, has to take place before the forum of the understanding; here we must not refer to our intuition or emotional needs. We too, have "emotional needs" in philosophy, but they are filled with clarity of concepts, precision of methods, responsible theses, achievements through coöperation in which each individual plays his part. (Carnap [1928] 1967, xvii)

One puzzling aspect of this paragraph, to which I will return in the final two sections of this essay, is the fact that Carnap calls those principles of the scientific world-conception that we can obviously identify as cognitively justified an emotional need. Apart from that, however, the main pillars of this worldview as described here include not only clarity and precision—which can be seen as pointers to the whole realm of principles of instrumental rationality as discussed above—but also "responsible theses" and "achievements through cooperation in which each individual plays his part", two things that involve an understanding of the process of decision making, which cannot proceed without thorough social adjustment.

Three and a half decades later, in his intellectual autobiography, Carnap again formulates his political credo:

> . . . in the Vienna Circle . . . all of us shared the following three views which hardly needed any discussion. The first is the view that man has no supernatural protectors or enemies and that therefore whatever can be done to improve life is the task of man himself. Second, we had the conviction that mankind is able to change the conditions of life in such a way that many of the sufferings of today may be avoided and that the external and the internal situation of life for the individual, the community, and finally for humanity will be essentially improved. The third is the view that all deliberate action presupposes knowledge of the world, that the scientific method is the best method of acquiring knowledge and that therefore science must be regarded as one of the most valuable instruments for the improvement of life. In Vienna we had no names for these views; if we look for a brief designation in American

> terminology for the combination of these three convictions, the best would seem to be "scientific humanism". (Carnap 1963a, 83)

Scientific humanism positions science as a tool with important practical implications. Science tells us to be skeptical of mystical and religious ideas and to adopt the view that we are responsible for our own happiness and that the good life is something to be found in the real empirical world, not somewhere else. Science also tells us the strategies for improving life. And science not only provides the empirical and logical tools that define our conception of rationality, it also tells us to follow certain practical rules, such as being authentic and cooperative. This scientific spirit that guides the worldview of the scientific humanist is rationally justified at all levels and as such it is something that must be adopted unless one consciously or unconsciously adopts an irrational way of life.

This unconditional nature of scientific humanism, as one reviewer of this paper argues, might be seen as in conflict with Carnap's principle of tolerance. Let us recall this principle: "*In logic*", and thus in science, one might add, "*there are no morals*. Everyone is at liberty to build up his own logic, i.e. his own form of language, as he wishes" (Carnap 1937b, 52); "before us lies the boundless ocean of unlimited possibilities" (Carnap 1937b, XV). This tolerance, however, Carnap explicitly adds, does not include tolerance for irrational reasoning and bad scientific practice. "All that is required", Carnap says unequivocally, is that anyone who wishes to discuss with us, the scientifically minded, "must state his methods clearly, and give syntactical rules instead of philosophical arguments". If we want to generalize this—and it seems likely that Carnap would have agreed with this—then we could say that what we require of everyone, regardless of what other attitudes and values guide their actions, is that they respect science and adopt good scientific practices. In other words, the principle of tolerance does not mean that we must tolerate the rejection of scientific humanism.[7]

Before exploring the theoretical and practical implications of scientific humanism in the remainder of this essay, I would like to point out the difference between the views I am analyzing here, which are also very

[7] A complementary treatment of the limited nature of the principle of tolerance can be found in Steinberger (2015), who also highlights important cognitive aspects of framework selection.

political in the sense indicated in the next section, and those partisan political views to which Carnap commits himself, for example, in the paragraph following the previous quotation. The latter views, which include rational planning and socialism, are clearly identified by Carnap as partisan views. Although these views are also instrumental to the goals of balancing state power and individual freedom, they are non-cognitive and are defended by Carnap simply because they reflect his attitude and personality (which strive for a balance between state power and individual freedom), whereas the views of scientific humanism obviously do not have this noncognitive and partisan character, but rather reflect views that follow directly from science and must be shared by any rational person. Carnap's socialism was shared only by the members of the left wing of the Vienna Circle, most notably Neurath and Philipp Frank (2021), whereas scientific humanism is a worldview that not only was shared by all members of the Vienna Circle, regardless of their political views, but it is a worldview that, as Carnap implicitly but I think also quite correctly argues, must be shared by everyone who respects science. Therefore, the political character of the worldview of scientific humanism differs significantly from the partisan political side of Carnap that I described in Damböck (2022c) in that scientific humanism embraces only those doctrines that can be directly derived from a scientific and rational way of thinking, but is largely neutral with respect to partisan politics and individual moral and political attitudes.

4. Why Is Carnap's Scientific Humanism Not Explicitly Defended in His Official Work?

What has led to misinterpretations of the views described in the previous section are sentences like the one preceding the long quote on scientific humanism, where Carnap says that these political views "were discussed privately, not in the Circle which was devoted to theoretical questions" (Carnap 1963a, 83). Does this mean that because these views are political and were not discussed in the Vienna Circle, the philosophy of the Vienna Circle has no substantial connection with them? I do not think so. First, I agree with Romizi (2009) that the Vienna Circle offered a politically engaged philosophy of science, and with Uebel (2004, 2005, 2020) that this political engagement is most pronounced in the left wing

around Carnap and Neurath. However, the above-mentioned views that Carnap describes in the preface to the *Aufbau* and in his autobiography are, I think, correctly attributed to all members of the Vienna Circle (and ultimately to all logical empiricists), regardless of their political orientation. Their political nature must therefore be independent of partisan views. In order to understand this, it is important to make a sharp distinction between political activism and partisan commitment, which is indeed found primarily in the philosophy of science of the left wing of the Vienna Circle, and the factors described here, which, to use a phrase borrowed by Uebel (2012) from Carnap (2022a), are political only "in the broadest sense".

Scientific humanism identifies only those aspects of politics—in its broadest sense—that follow from science and are cognitively justified.[8] The view that these principles should be defended as part of a scientific world-conception was shared by all members of the Vienna Circle. And, as shown in Section 2, Carnap, at least, devoted large parts of his philosophical work to discussions of these principles of rationality, which can be seen as essential tools of the scientific humanist. Inductive logic and decision theory are the examples I mentioned above, but Carnap's approach to conceptual engineering and "explication" (Carnap 1950, ch. I; compare Dutilh Novaes and Reck 2017; Carus 2007, 2017) can also be seen in this light. Thus, Carnap's later work was mainly devoted to developing principles of rationality that serve as a foundation of scientific humanism by explaining the ways in which science can serve as a signpost to improving our lives. What is missing from Carnap's official work, however, is any explicit statement that connects these mostly formal and highly abstract discussions with their intended application as principles that can help us make our worldviews and decisions more scientific and rational. The puzzle to be solved, then, is why Carnap abstained from any political commitment in his official

[8] One reviewer of this paper argues that the features of Carnap's scientific humanism, especially the rejection of a "supernatural protector", do not follow from science and are therefore a matter of personal attitude. I disagree with this claim, because it is one of the most fundamental claims of humanism and the Enlightenment in all its varieties that the scientific worldview implies that the idea of a supernatural protector must either be rejected altogether, or at least cannot be part of a framework that guides rational decisions. Science suggests that "man has no supernatural protectors or enemies". And since this is something that follows from the overall picture that science draws, it is obviously cognitive.

writings and relegated such statements to more informal contexts. There are, I think, two important factors, political coercion and the radical modernism of the Vienna Circle, that together caused an apolitical style that makes the genuine political aims of the Vienna Circle invisible in a very unfortunate way.

First, it seems that the motivation to keep theory free of politics was partly political coercion within academia, which began to play a role around 1930, when the Vienna Circle had to resist attacks from reactionary political forces and therefore kept all of its theoretical views free of political aspects, even those that were political only in the broadest sense of Weberian instrumental rationality. For the political and academic rulers of the 1930s, Weberian instrumental rationality was already perceived as an aggressive provocation that had to be fought. And this had direct consequences for the careers of the members of the Vienna Circle. For example, Carnap's application for a professorship at the University of Kiel failed because the preface to the *Aufbau* was perceived by the committee as a political provocation: to defend scientific humanism was already reason enough to become persona non grata in the German scientific community of the 1930s.

Even after Carnap's emigration to the United States, the political pressure did not disappear completely. As his diaries and correspondence powerfully illustrate, already in the second half of the 1930s Carnap became the target of fierce polemics by those pragmatists and metaphysicians who accused him and other logical empiricists of defending extremely strange forms of value relativism that made all moral and political views entirely arbitrary and subject to the free play of forces.[9] Joseph Alexander Leighton argued along these lines in his presidential address to the 1938 meeting of the APA Western Division. Addressing Carnap and other expatriates in the audience, he cynically argued that "since the Nazis have the guns and the guts, in short the superior force ..., the logical positivist would be not rational if he complained when he was put in a concentration camp or beheaded" (Leighton 1939, 126f). Carnap noted this statement in his diary, shocked, and added: "The whole thing sharply against Nazi politics! (I did not sleep well.)" (Carnap 1962, entry on 15 April 1938) Carnap, at this

[9]For detailed discussions of these accusations and the ways in which they can be countered using Carnap's and other logical empiricists' philosophy of values see Damböck (2025). I cannot repeat these arguments here.

time still in an insecure position—his professorship at the University of Chicago was not tenured until the mid-1940s—decided to refrain entirely from making statements about his moral and political views.

And even after the Second World War, the political conditions did not fundamentally improve. On the one hand, Carnap now had tenure, and the logical empiricist network, of which he was a leading figure, quickly became the most important current in academic philosophy in the United States. But immediately after World War II, the anticommunist hysteria of the Cold War began, and Carnap soon became a target. He was monitored by the FBI, and his political activities provoked strong reactions from colleagues and former friends like Sidney Hook (Reisch 2005, 271–82). Although Carnap did not refrain from being politically active in his private life, he kept his official publications as a logician free of any political statements. And the reason for the latter was certainly partly that Carnap felt compelled not to jeopardize his social and scientific survival by making public political statements in his role as a university professor.

In sum, Carnap was constantly under political pressure inside academia, which was reason enough for him to keep his official writings free of political talk. Only before 1930, when he had not yet realized how intolerant the academic climate in Europe was, then again in 1934/35, when he realized that there was no chance for him to get an academic position in Europe, and again immediately after his emigration in 1936, Carnap saw himself in a position to formulate his political views more openly, but even then he mostly chose the informal form of public lectures (Carnap 1929, 1934a) or articles in semi-academic journals (Carnap 1934b). The only case in which he stated his political views rather explicitly in an academic context is his contribution to the Harvard Tercentenary Celebration (Carnap 1937a) to which I will return below.

But there is also a second factor that must be taken into account here, namely Carnap's radical modernism, which on a more aesthetic level led to the idea that theoretical and practical views must be kept separate.[10] The theoretical result of this radical modernism, which in ways that cannot be discussed here may also have been motivated or at least reinforced by the aforementioned political factors, led to a strictly antimetaphysical approach to science, for which all political aspects were

[10]Compare Galison (1990), Dahms (2004), and Damböck (2024c).

a matter of worldview or "attitude to life [Lebensgefühl]" (Carnap 1932, sec. 7), the articulation of which had to be strictly separated from the articulation of theory. To be sure, this is first and foremost a theoretical approach that rejects the pseudoscientific talk of those who obscure science by presenting noncognitive statements in cognitive disguise. And this argument is valid, completely independent of any political or aesthetic factors.

Carnaps antimetaphysics is meant to criticize all those articulations of *Lebensgefühl* that hide its noncognitive character in a pseudo-factual language. But if, following Carnap and the Vienna Circle, we also regard scientific humanism and thus the worldview of science and rationality as a particular form of *Lebensgefühl*, then this problem disappears, because science is epistemically justified and cognitive; it is precisely the opposite of metaphysics. So there is no rational reason to ban the articulation and defense of scientific humanism from scientific discourse. And yet Carnap did so. This is not to say that Carnap's strategy was not consistent with all aspects of his worldview—of course he *could* consistently keep scientific humanism separate from the purely cognitive parts of his philosophy. The question I ask here, and propose to answer in the negative, is simply whether it was a good idea for Carnap to separate the logical and the more political (though not partisan) sides of his philosophy so strictly.

Faced with Carnap's radical separation of the theoretical from the practical, what we interpreters of Carnap's philosophy have to do today is to restore the political nature of his thought. We can identify Carnap's relegation of all practical political aspects to a level outside the official work as the product of a radical modernist aesthetic that has had rather unfortunate consequences on this point. Above all, however, it is important to understand that Carnap's philosophy was developed over several decades, at least from 1930 to the mid-1950s, under great political pressure, and that his strategy of banishing everything practical and politically relevant from his official work—the few exceptions are discussed here—must be understood as a strategy of self-protection.

5. The Decisionist Momentum

Science will only spread in society if it or its advocates succeed in making it an emotional need for everyone through education and positive propaganda. I agree with Uebel (2020, 43–44) that it is crucial to set the right priorities here. We do not do science because we first felt the emotional need for it and only then started to do research, but the emotional need that science is for us results from its previously found objective justification of merits, which makes it the best tool for improving life. But this does not change the fact that (a) we must first show these advantages of science to others who do not yet see them, and (b) it is not a trivial task to determine to what extent science can help in a given situation. The latter deserves some "orchestration" (Neurath 1996, 236) and balanced use of science, even and especially for those who unequivocally defend scientific humanism.

Carnap's notion of "perfect rationality" is instructive here, which he developed in the above-mentioned fragment "Value Concepts" that was first intended as part of his reply to Abraham Kaplan in the Schilpp volume (Carnap 1963b, 999–1013), but was withdrawn by him because the technical details were not fully developed: the paper was only published in 2017 with an introduction by André Carus (Carnap 2017).

"The behavior of an agent", Carnap defines, "is *perfectly rational*" if it satisfies several conditions, including logical perfection, perfect inductive reasoning on a comprehensive basis of all available empirical knowledge, and a "value function" representing the agent's moral and political attitudes that "meets all standards of rationality". These standards include that a value function should be "derivable from general principles regarding the valuation of particular processes" and that it should be "continuous and relatively smooth" (Carnap 2017, 193f; compare Damböck 2024d).[11]

[11] As one reviewer of this paper points out, Carnap also says in the quoted paragraph that "all logic, including inductive logic, and factual knowledge are irrelevant" to the evaluation of value functions. This is a fair point, since the acceptance of value functions does not depend on empirical facts, nor on all the inductive and deductive logical conclusions we can draw from them. However, the criteria by which we judge value functions to be more or less rational are still clearly cognitive, since they include mathematical and logical properties such as being smooth, continuous, consistent, and the like.

Although Carnap is not very detailed in this fragmentary text about how exactly all these principles that guide perfectly rational behavior should look like, it is the overall strategy that strikes me as important. Perfect rationality represents an ideal that combines a maximum of scientific possibilities with an understanding of values that are decidedly individual—value functions represent the moral and political attitudes of a particular empirical human being—but are still constrained in some way by objective scientific principles. Rational value systems must not be inconsistent, they must be derivable from simple general values, and they must be produced in the light of all the empirical and logical evidence available to the agent. The point is that the criterion of perfect rationality specifies a set of principles that values and value-based decisions must satisfy, all of which are cognitive and objective. The task of moral and political philosophy is therefore to identify as many of these cognitive principles as possible in order to maximize rationality. Carnap does not think that this means that all rational value functions are the same. There may still be very different ways of seeing the world morally and politically. As Carnap put it in the idiosyncratic language of the reply to Kaplan:

> It is logically possible that two persons *A* and *B* at a certain time agree in all beliefs, that their reasoning is in perfect accord with deductive and inductive standards, and that they nevertheless differ in an optative attitude component. (Carnap 1963b, 1008)

Even if we manage to get all members of society to accept all rational meta-values and behave almost perfectly rationally—which seems utopian anyway—we must expect continued disagreement. This could lead to violent conflict, but it could also be seen as a positive vision of a peaceful, cooperative, and democratic society in which different cultures and lifestyles coexist. And most readers of these lines will probably share the author's regret that today's society is so full of irrationality and anti-democratic tendencies, whose breeding ground seems to be almost exclusively irrational thinking rather than value conflicts among rational individuals. But what are the implications for this situation of the considerations in this essay on the cognitive meta-values of Carnap's philosophy of value? Is all post-factual and anti-democratic discourse simply refuted and false? In a sense, the answer to the second question is obviously yes, because false statements are false and illogical and

uncooperative reasoning is bad epistemic practice. But there is also some bad news, because this refutation of illogical thinking is hardly accessible to those who already adopt it.

5.1. The disease of irrational thinking

The decisionist momentum at work here implies that we move science from the purely objective and cognitive level of representing a set of more or less well-justified truths and principles to the noncognitive level of lifestyle, using and positioning science as a tool for improving life. Then, it first becomes an emotional need and science becomes something entirely different and new, while it leaves the ivory tower and is spread over the whole society: "The scientific world-conception serves life, and life embraces it" (Stadler and Uebel [1929] 2012, 90). But this decisionist momentum not only offers a unique opportunity to make science a way of life and a possibility for all citizens, improving the world in undeniable ways through adult education, etc., it also implies that there is no rational way to prevent people from doing things differently.

A striking example of how extreme an opposite way of life, which completely rejects science and rationality, can be consciously adopted by mature people is the philosophy of Martin Heidegger, which is also important here because it was understood by Carnap himself as the exact opposite of his philosophical worldview. As I have shown elsewhere,[12] Heidegger and Carnap shared the general decisionist point of view that resulted from Weber's slogan of a disenchanted world in which there is no longer any absolute foundation for values. Not only do we have to decide for ourselves what moral and political values to adopt. As Carnap and Heidegger recognized, even the adoption of the self-evident means of science and rationality is a matter of subjective choice. Carnap and the Vienna Circle, here following Weber, chose to stand for science and adopt a strictly rational worldview, while Heidegger went in exactly the opposite direction, believing "that philosophy has the task of throwing man back into the harshness of his destiny from the lazy aspect of a person who merely uses the works of the mind" (Heidegger [1929] 1991,

[12]See Damböck (2024b), where I argue that the picture drawn by Friedman (2000) ultimately fails to fully account for the irreconcilable tension between Carnap's scientific and rational worldview and Heidegger's anti-scientific and anti-rational one. My interpretation is therefore closer to Gabriel (2003).

291, my translation). Heidegger's task was to find the decisiveness to act entirely out of the moment, unhindered by any form of logical reasoning or scientific evidence about the causal consequences of an action.

Carnap's antimetaphysics opposed this very worldview, and he was right that scientific argumentation allows us to easily refute this anti-rational strategy. The problem is that these theoretical arguments that refute Heidegger and other anti-scientific thinkers are, by definition, inaccessible to someone who is already thinking illogically. If I eat this poisoned apple even though I know it is poisoned and I have no intention of poisoning myself, but my gut tells me to eat it and Heidegger's philosophy has convinced me that following my gut is the only right thing to do, then I will have to learn the inconsistency of my behavior the hard way and perhaps find a way to become more rational if I am lucky enough to survive.[13] So time is on the side of the scientific world-conception, if there is enough time, simply because the Heideggerian way of life is constantly disproving itself, but it is in the nature of things that rational arguments are only heard by those who are receptive to them in the first place.

Nevertheless, it is important to note that, despite all the fundamental contradictions and incompatibilities of their philosophical views, the overall decisionist and existentialist stance was something that Carnap shared with Heidegger or Jean Paul Sartre. He only rejected their irrationalism, and this rejection was not a matter of attitude, but a scientifically justified claim. In an account of a conversation with the Korean philosopher Ahn Carnap reports in his diary: "I explain: Sartre has a worldview, which he presents well in novels and plays; but his philosophical approach, e.g. on perception, is useless; Heidegger is much worse, all pseudo-theory, no art; Nietzsche is much better because he is poetic" (Carnap 1962, entry on 2 September 1961). The poetic expression of a *Lebensgefühl*, one may add, is only legitimate, if it is dedicated to worldviews that do not necessarily have to be capable of rational justification—with the exception of the scientific world-conception no legitimate worldview is ever capable of rational justification—but which are also not allowed to be refuted by science, i.e., to be capable of true and false. In their partly poetic, partly pseudo-scientific language, Sartre and Heidegger express worldviews that are not legitimate because they are

[13] This is a modified version of the famous example from Carnap (1934b).

simply inconsistent and false. They and their advocates thus just suffer from defending views that refute themselves without being receptive to these refutations.

In his unjustly little-noticed contribution "Logic" to a symposium entitled "Factors Determining Human Behavior" at the Harvard Tercentenary Celebration in 1936,[14] Carnap identified "illogical thought" as "an important factor in determining human behavior," a "disease of intellectual confusion" for which "[the] logician by himself has no remedy to offer" because illogical thinking is impervious to rational argumentation. Implicitly at least, Carnap left no doubt that philosophy and irrational metaphysics were partly to blame for the disease of illogical thinking. "Indeed, certain anti-rationalistic tendencies of our day"—one thinks of Heidegger here, though Carnap does not explicitly mention him—"preach the view that reason should be esteemed less, and that men ought to assign a smaller role to rational thought in practical life." Rational thought cannot immediately help those who suffer from the disease of illogical thinking, but psychology may find therapeutic means: "Logic can point out the anomalies, but it is psychology which must find the curative methods for [those who suffer from the disease of illogical thinking]" (Carnap 1937a, 117–18). Once someone is lost in the trap of irrational reasoning, science can only try to cure such an irrational person by psychological and pedagogical means.

5.2. The limits of rational thought

The possibility that the decisionist momentum leads us to negate science and rationality altogether is not the only circumstance that complicates the picture for the scientific humanist, despite the fact that their views are rationally justified. There are other perspectives that limit the possibilities of rational thought or perfect rationality in ways that even and especially those who unambiguously defend scientific humanism need to take seriously. I conclude this essay with three examples of this phenomenon, all of which played a role in Carnap's philosophy, the first two also in the context of the fragment "Value Functions".

[14] See Carnap (1937a). On the role that this conference played for Carnap's scientific carrier in the United States see Verhaegh (2020, 14–17). A funny point in Verhaegh's account of the Harvard celebration is also that the joint invitation of Carnap and Heidegger was considered by the committee.

First, as Carnap notes, there are cases in which an action that receives the highest preference value is not actually the best possible action, "due to certain circumstances not known to [the agent] at the time of the action" (Carnap 2017, 194). This is possible because even perfect rationality is based on the agent's always limited empirical knowledge. And because the world is full of surprises, we often act decidedly suboptimally even when we are extremely rational. If, after careful consideration, I choose to travel to Vienna by train rather than by car, and I die in a train accident, this is a clear case of rational behavior with a suboptimal outcome. If I rationally choose the organic egg and it turns out that it is contaminated with salmonella then it would have been better to choose the uncontaminated mass-produced egg. Of course, I could not have known that the accident would happen and that the salmonella would be there, but this still shows that rational behavior does not necessarily lead to the desired outcome and is therefore not necessarily optimal. The world is full of traps and surprises, unexpected side effects and hidden opportunities. And this also somewhat limits the possibilities of perfect rationality.

Second, "[no] one is ever perfectly rational" and "since deviations from perfectly rational behavior are possible in completely different ways . . . it is hardly possible to decide without an arbitrary convention under what conditions a deviation in one way should be considered equal to a deviation in another way" (Carnap 2017, 194). There are certainly cases of behavior that are clearly rational or irrational. If you want to stay healthy, it is irrational to smoke. If you want to stay alive, it is irrational to eat that poisoned apple. But which item on the menu, which walk in the park, which vacation destination, which opportunity to flirt, or which meeting time is more rational to choose? There are cases where there is no clear preference at all, or where the obvious imperfection of our reasoning means that preference calculations become rather ambiguous. This leads to the scenario formulated decades earlier by Neurath in his famous early paper "The Lost Wanderers of Descartes and the Auxiliary Motive" (Neurath [1913] 1983), where he argued that in all cases where no clear preference can be calculated it would be "pseudo-rational" to construct reasons in favor of one of the options: better to use an "auxiliary motive" such as rolling the dice or using one's gut.

Carnap is not only open to the scenario in which auxiliary motives are needed because different actions with different outcomes obtain similar preference values in a calculation that comes close to perfect rationality. By admitting that no one is ever perfectly rational, Carnap opens the door to a discussion of real-world situations in which decisions are forced under highly imperfect conditions. This scenario has similarities to the debate about "inductive risk" (Hempel 1965; Douglas 2000), because the latter debate concerns cases in which a decision must be made even though the available evidence is highly fragmentary, and lack of funds or time constraints mean that we simply cannot dig deeper. This increased risk of error must be taken into account when evaluating the calculated preference values. Often, we do not have enough evidence to assess what the actual outcome of an action will be, or we do not know what our attitude to a value question actually is, because there is no time to carefully analyze the problem and thus identify our "pure optatives". In such cases, the inductive risk of a calculation can be so incredibly high that it would be irrational and silly to start a calculation at all, quite apart from the fact that there may not even be time for it. Using intuition and gut feeling may be a perfectly reasonable and even the most rational option in these cases, assuming that what we intuit or unconsciously reason about the problem might be much more genuine and adequate to the situation than any ad hoc calculation on inadequate grounds. Thus, it is often more rational to use auxiliary motives than to make a calculation.

Third and finally, the decisionist momentum also has implications for political decision-making. Scientific humanists seek to be as scientific as necessary, not scientific under all circumstances. Scientific humanists insist on respect for science and careful calculation in all cases where policy decisions have obvious effects on the economy, ecology, diversity, or individual health. But even in all these cases, lifestyle factors and individual attitudes play a role, because achieving certain benefits for the things that policy seeks to optimize—economy, ecology, diversity, or individual health—will in most cases mean that some aspects of the lifestyles of some or all of us will have to be affected and sometimes restricted. And this means that we arrive at complex tasks for deliberative democracy (Damböck 2025) that require a balancing and orchestration that takes into account objective empirical and logical facts as well as

individual attitudes and desires. The task of politics, says Carnap in the last sentence of his autobiography, is to find "ways of organizing society which will reconcile the personal and cultural freedom of the individual with the development of an efficient organization of state and economy" (Carnap 1963a, 84). I hope that the remarks in this essay make clear that this is not an empty formula, but a precise formulation of the complex task of politics as a whole, which is to find the right positioning of science and rationality in the midst of a society characterized by the individual attitudes of its members.

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