Some remarks on the categories of the manifest image

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Abstract: This paper addresses the question whether or not philosophical discourse can avail the categories of the scientific image. I argue that the clash of the images is better understood on the semantic rather than the ontologic level and that it results from the challenge to the representational adequacy of the categories tha articulate the conceptual repertoires of the manifest image. A challenge that will be met by a succesful recategorization of the concept of a person in the scientific image. I suggest some reasons to believe that such a recategoritazion is possible in principle without dismantling the philosophical discourse.

Keywords: Metaphilosophical Problems; Manifest and Scientific Image; Powers; Categories; Normativity.

1. *Introduction*

Bluntly put, the problem that Sellars described as the clash between the manifest image and the scientific image is the problem of whether or not philosophy is entitled to deal with the human being by its own means. With regard to this problem, the purpose of this paper is a rather modest one: first, arguing that it is a metaphilosophical problem and, second, suggesting that looking at it in this way may offer some useful insights about the metaphysical issues that are typically raised by the clash of the images. I will not venture any solution to the problem though, nor in fact will I address the questions that concerned Sellars himself the most about it.[1] The plan of the paper, instead, is the following. In Section 2, I will talk about what metaphilosophical problems are, how they do arise and why the clash of the images can be understood as rising one. Sections 3 and 4 are devoted to characterizing the different normative structures of substance concepts in the manifest and the scientific images. Section 5 rehearses the Sellarsian thesis of the fundamentality of the concept of a person in the categorial articulation of the manifest image, with the pur-

[1] In particular, I will not discuss the problem of the unity of the person and the accommodation of sense impressions in the scientific image.

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pose of distinguishing the ontological and the semantic issues involved in such a fundamentality. Eventually, Section 6 explores the problem of recategorizing normativity in the scientific image. Hopefully, this path will lead to a better awareness of what the actual means of philosophical investigation are with respect of the clash between the manifest image and the scientific image.

2. *Are there metaphilosophical problems?*

The status of metaphilosophy as a discipline is a controversial one. Intuitively speaking, metaphilosophy is supposed to be the philosophical investigation of philosophy itself, of its domain, methods, goals and general meaning as an intellectual endeavor. Those who may wish to reject the idea of a philosophical discipline whose task is to conduct such an investigation have a rather strong argument on their side, an argument purported to show that the very notion of metaphilosophy is somehow inconsistent. It goes more or less like this: The self-reflective stance required by metaphilosophical investigation can either be adopted outside philosophy or inside it. If the former, then metaphilosophy is not a *philosophical* discipline – it must rather pertain to some other field, like, perhaps, sociology or the history of thought. But if the latter, then metaphilosophy is just philosophy at large and so it is not a philosophical *discipline* – it just what philosophers do when they think "carefully", which is what they are always supposed to do.

The problem with this argument should be apparent. It assumes that metaphilosophy, as a discipline, is to be characterized in terms of a certain "sideways on" stance that those who practice it should adopt. Such a view is probably conveyed by the prefix "meta". In effect, it is the same idea epitomized by the way in which the notion of a *meta*-language is sometimes conceived, namely: Metalanguages are required because you can't talk about an object language by means of its own expressive resources, on pain of contradicting yourself. So, the idea is, just like you need to put yourself in a position external to a language in order to talk about it, similarly you need to put yourself in a position external to philosophy in order to talk about it. But that, of course, is just as wrong for metalanguages as for metaphilosophy.[2] And even more so, given that it is not so clear what the expressive resources of metaphilosophy are

[2] What Tarski's undecidability theorem shows is that we should pay attention to the way in which we use the expressive resources of our semantic vocabulary, especially the truth predicate (Tarski 1933; 1944). This result has some very important consequences on the model-theoretic metatheory of arithmetics, but it by no means implies that, in order to talk about an object language, we must pull ourselves out of it in a *different* linguistic practice. On the other hand, the lesson about the expressive power of our metavocabularies will come in handy below.

supposed to be and whether or not their use could engender contradictions.

So, the argument would show that metaphilosophy is inconsistent *if* metaphilosophy was a stance or an attitude, which, as we have just seen, is not necessarily the case. But what is the alternative? Timothy Williamson (2007) famously proposed to conceive metaphilosophy as "the philosophy of philosophy," where, of course, the genitive is to be construed as an objective one. In this sense, it does not specify as much an attitude of the philosopher as the object of study of the philosophical discipline, and "metaphilosophy" is just to be considered as a bad name for what it should refer to. Unfortunately, we are no more in the position of changing our terms, if we ever were. Williamson had as good chances as anyone to do it, but failed. Oddly enough, "metaphilosophy" must have had some "philosophical" ring in it and it sticked. Be that as it may, there is no reason now not to comply with the standard practice, once the meaning of the term is clear.

In Williamson's sense, it is an analytic truth that metaphilosophy is a philosophical discipline, just like it is for the philosophy of science or the philosophy of mind. This approach, however, may raise another familiar sort of puzzlement. There can be little doubt, if any, that these are all disciplines and that they can be distinguished from one another in terms of their object of study. But what is it that makes them *philosophical*? What is the difference, for instance, between the philosopher of mind and the neurobiologist who thinks carefully and "persistently reflects" about her discipline? These are precisely the sort of puzzlements that Sellars thought he could address and clarify by means of the famous definition of the aim of philosophy that he proposed in the first line of *Philosophy and the Scientific Image of Man*.

We will come back to the content and the implications of his proposal below. For the moment, it is more relevant to focus on the fact that the line of reasoning that we have just sketched exemplifies *one* of the ways in which metaphilosophical issues typically arise.[3] They do arise, in this first manner, when special sciences claim for themselves specific subject-matters that traditionally pertain to philosophy. When that happens, philosophers rarely retreat and abandon the disputed field to the newcomers, who, in general, tolerate them staying and simply go on with their own research and business. The problem araises for the philosophers instead, who need to justify their presence in the field that has been expropriated to them and is soon characterized and governed by different rules and practices. Thus, they may begin to ask in a

[3] Of course, philosophers have decided and may decide to engage in metaphilosophical reflections for the most various reasons. In the following, I will simply focus on two ways in which metaphilosophical issues may arise that are especially useful for the characterization of the problem raised by the clash of the images.

crescendo: What is the specific contribution of philosophy in this field? What is the specific contribution of philosophy to any field whatsoever? And, eventually: What is philosophy really about? In this first sense, then, metaphilosophical questions arise as a consequence of the demarcation of special domains of scientific investigation and their expropriation in favor of special disciplines. They arise out of the need for a reinterpretation of the philosophical contribution to the research in those domains, that was unreflectively taken for granted before.

This is probably the most common source of metaphilosophical issues, but it is neither the only or the most serious one. A second way in which metaphilosophical issues may arise occurs when the very categorial articulation that traditionally characterizes philosophical discourse[4] is challenged with regard to the representational adequacy of the theories that can be provided in terms of it.[5] Of course, this is the way in which the clash of the images is relevant to metaphilosophy. It is essential not to be mistaken about what "categorial articulation" is supposed to mean. For the moment, let us be content with Sellars's suggestion that the best way to start thinking of categories is to see them as "*summa genera* of conceptual items" (Sellars 1970: §24), or, better, "classifications of conceptual roles" (Sellars 1981: II, §81). Categories will be further explored in the next sections, but a few remarks are still in order here about what the issues generated by challenging their representational adequacy are not.

From a formal point of view, representational adequacy is best conceived as the possibility to define homomorphisms between a representing structure and the represented one. For our purposes, an homomorphism can be thought just as a mapping between the structures that preserves the properties of their elements and the relations between them. So, for instance, if I want to represent married couples as sets of points, my representation can be said to be adequate in this sense if, whenever it is true that *A* and *B* are married, then it is also true that the points into which *A* and *B* are mapped belong to the same set. More interestingly and generally, my conceptual representations can be said to be adequate in this sense if states of affairs can be homomorphically

[4] Here "discourse" is intended in a rather noncommittal sense as referring comprehensively to the expressive resources by means of which philosophy is practiced. The most significant parts of this discourse will be more thoroughly discussed below.

[5] At this point, already, some of those who even broadly sympathize with the Sellarsian enterprise, but harshly oppose representationalism (as e.g. the Rortian pragmatists) might be willing to jump off the train. My recommendation is to resist anti-representationalism at this early stage of the argument, at least for the sake of it. Even if one is not really keen to embrace Sellars's own "picturing" idea in order to make sense of the representational adequacy of different conceptual structures (Sellars 1968: ch. V), there are alternatives. Brandom and McDowell, pre-eminently, have shown how to make use of representational semantics while keeping its epistemic implications at bay (cf. Brandom 2013).

mapped into them.

Now, one reason why representations may fail to be so adequate is because the properties and relations of the representing structure are not sufficient, in number or type, to preserve those of the represented one. Thus, one could think that challenging the representational adequacy of the categorial articulation of philosophical discourse may consist in providing a better, or just different conceptual repertoire.[6] That, however, is a mistake. Categories are not conceptual repertoires: categories classify concepts of the same sort. So, different sets of concepts can be accommodated within the same set of categories, or, more precisely, different conceptual repertoires can share the same categorial articulation. By way of example, consider the difference between the concept of *miasma* and the concept of *virus*. They clearly belong to different conceptual repertoires: the former to the ancient Hippocratic medicine, the latter to the modern one. Both repertoires, however, share (part of) the same categorial articulation. In particular, both the concept of miasma and the concept of virus are *substances* that *cause* certain diseases. Of course, the problem could be raised of which one of them better "carves at the joints".[7]

But that is precisely a question of the sort that one could take to be properly addressed *in* philosophy.[8] Even if a question like that could foster some debates about the constitution of specific disciplines, like ontology or semantics, it has no direct impact on the way in which philosophy itself is construed, nor does it imply reorienting what philosophers do.[9]

Challenging categories is something else entirely. When the representational adequacy of a categorial articulation is put into question, the adequacy is

[6] A conceptual repertoire can be thought as an inferentially articulated collection of concepts in terms of which representational structures can be constructed. As far as I can see, in Chapter V of *Science and Metaphysics* Sellars adopts the term "conceptual structure" for the *cognate* notion of a (cross-)linguistic repertoire of resources to picture things that is available at a certain stage of the development of linguistic practices.

[7] In the sense of Lewis 1983 or Sider 2011.

[8] Needless to say, one could insist instead that the task of providing the right conceptual repertoire for representing how things are pertains to natural sciences. Or, one could even argue that the question itself is a bad one, because the choice between different conceptual repertoires is ultimately indeterminate with respect to the states of affairs that they are used to represent. And by no means these are the only views that could be endorsed in this debate. But the point here is just that they are all philosophical views and the debate is a philosophical one.

[9] Admittedly it *could* have a metaphilosophical impact, yet an indirect one. Thus, one could think that questions of that sort cannot have any real answer and, therefore, that trying answering them is not what philosophy should do. Notice, however, that this metaphilosophical view is not motivated as much by the question about what conceptual repertoire is better as by the realization that no conceptual repertoire is representationally adequate. In this sense, this is an instance of the second way of generating metaphilosophical issues that we are just about to characterize.

contested of any representation developed by means of *any* conceptual repertoire that shares such an articulation. And that is far more radical a challenge. As far as the topic of this section is concerned, it implies that the very questions about what concepts better carve at the joints should not be addressed in the same way as before and, therefore, that the philosophical discourse providing the context for the debate about such questions should change. This is precisely the second way in which metaphilosophical issues may arise. In this sense, they arise when something wrong is identified in the philosophical discourse, something that requires a revision of the way in which philosophy is thought and done.

In this section, I have provided a concise characterization of metaphilosophical problems and their origins. With no claim of being exhaustive, I argued that there are at least two ways in which they can arise. In both cases, they do as a consequence of a challenge that puts the usual philosophical practices into question. Such a challenge can be of at least two kinds. It can be the more narrow one of contending for specific subject matters with other disciplines. Or, it can be the broader one of revising the categorial structure of philosophical discourse altogether. As anticipated, the challenge brought by the clash of the images is of the latter sort. So, that is what the next sections are going to deal with.

3. *Substances and powers*

When Willem deVries presents the notions of the manifest image and the scientific image for the first time in his introduction to Sellars's philosophy, he feels like warning the reader that the distinction has outgrown the domain that it was originally intended to pertain to and "has taken a life on its own" (deVries 2005: 9). What he has in mind is the fact that many of those who get acquainted with the Sellarsian distinction in the context of the debate on scientific realism are likely to understand it as depicting the categorial incompatibility between the way in which one and the same world is described by common sense and by science.[10] Thus conceived, the distinction would be nothing more than a philosophical gloss on Eddington's "two tables" example (Eddington 1928: ix). The core of the problem would be all already there. On the one hand, common sense says that a table is a white and wooden object. On the other hand, science says that the very same table is a collection of rapidly moving particles, deflecting photons and hitting with each other according to certain probabilities. Thus, the manifest image would be the image of manifest objects, like shoes

[10] For a classical use of the Sellarsian distinction in this diverted sense, see e.g. van Fraassen 1980.

and ships, while the scientific image would be the image of scientific objects, like particles and fields. If we think of the images this way, we will also be led to construe their clash as the conflict between the commonsensical reluctance to endorse the ontology of scientific theories as real and the scientist claim that the objects of common sense are merely apparent.

It is important to see why this interpretation of Sellars's original distinction is mistaken, even though the ontologies of the manifest image and the scientific image *are* indeed incompatible. As a matter of fact, the mistake is twofold. First, the real *locus* of the conflict is misplaced: the incompatibility between the images primarily lies in the logical articulation of their categories rather than the ontological commitments that the application of the conceptual repertoires articulated by those categories imply. Second, there's a misunderstanding about the theoretical purpose with which the distinction of the images was originally devised. Sellars aimed at problematizing the way in which philosophy is called by natural sciences to a recategorization of the discourse in which it has traditionally pursued its ethical and theoretical investigations. As we will see, this double misinterpretation prevents understanding the implications of the fact that the category of a person is fundamental to the metaphysics of the manifest image.

Admittedly, Sellars's own presentation in his 1962 essay does not really provide a clear understanding of the clash of the images beyond the ways in which it shows itself on the ontological level.[11] He stipulates that the scientific image is to be distinguished from the manifest one by the fact that only the former involves the postulation of imperceptible entities. That can't be right though, not until postulational methods are better qualified. Indeed, why can't manifest objects be postulated as well? Consider the following case: "I hear scratching in the wall, the patter of little feet at midnight, my cheese disappears – and I infer that a mouse has come to live with me" (van Fraassen 1980: 19-20). This seems just a sound instance of an explanation by postulational means, but it definitely comes out in favor of the continuity between science and common sense. Surely, one would rightly be reluctant to treat mice as postulated objects.

[11] Chapter V of *Science and Metaphysics* is tuned in the same ontological key. There, Sellars's focus is on the epistemic import of matter-of-factual statements and his aim is to explain how the objects pictured by a conceptual structure in the manifest image are "phenomenal" by showing that they can only be said to *really* exist if the concepts in terms of which they are identified have counterparts in the ultimate, "Peircean" conceptual structure in the scientific image. This way of illuminating the clash of the images, however, obscures the role of the categorial articulation of the different conceptual structures. In fact, the notion of picturing does not stand in place of, but presupposes an analysis of the semantic uniformities establishing the correlation in which a method of projection consists in (Sellars 1968: §58). And the way in which such semantic uniformities are determined is precisely what is made explicit in terms of a categorial articulation.

However, one should also be wary of reacting to this by insisting on the imperceptibility of postulated entities. Indeed, are the atoms postulated to explain why matter behaves the ways it does more "scientific" than the God of Thunder postulated to explain why it rains? Of course they are, but not because they are less perceptible. A more serious proposal along these lines would be to try and draw the distinction in terms of observational and theoretical objects. Unfortunately, for the present purposes, such a strategy would work only on condition of endorsing a crude empiricist notion of observation, according to which the content of experience is given independently of any conceptual mediation. For, as soon as the role of conceptual frameworks is acknowledged in the determination of the content of experience, the need would rise in turn for a distinction of the manifest from the scientific framework in order to separate observational reports pertaining to common sense and those pertaining to science. It is evident, therefore, that the strategy cannot be applied in the interpretation of Sellars, who is most famous for having attacked precisely this notion of observation as "The Myth of the Given".[12]

These preliminary remarks may well be trivial, but they are enough to show that the source of the clash of the images can not be traced back primarily, but only derivatively to the ontological level.[13] A far more insightful characterization of the differences between the scientific image and the manifest image is provided by comparing the postulational methods of the former with the correlational techniques of the latter. Sellars's favorite example to illustrate this contrast is the way in which thermodynamics explains the correlations between pressure, volume and temperature expressed by the law of ideal gases. For instance, one of such correlations (with a bit of simplification) is the following:

[12] This is not to say that the distinction between observational and theoretical objects does not make sense in a Sellarsian context. For the purpose of clarifying this point, I suggest considering an object theoretical if it is just not an observational one. The latter, in turn, can be conceived as an object to which reference can be made in observational reports. Thus, common sense observation can be intended as the perceptual experience of the layman, rather than the specialized and heavily theory-laden practice of the scientist in the laboratory. The latter is the sense in which, for instance, it is correct to say that Higgs bosons have been observed by the ATLAS and CMD detectors at the Large Hadron Collider at CERN in Geneva. This definition of theoretical objects might sound circular, but it doesn't have to. It is, however, a practical difference, in the sense that whether certain objects are treated as theoretical or observational in a certain discursive practice depends on the characteristics of the practice itself – and practices are not necessarily defined in terms of theoreticality. This approach is Sellarsian at least *in spiritu*: as deVries noticed, "[f]or Sellars, the observation-theory distinction is fundamentally a methodological distinction with no direct ontological import" (deVries 2005: 155), since nothing really prevents us from learning to make observational reports of theoretical objects.

[13] Notice that if it could, then the clash of the images would be a meta-ontological, rather than a meta-philosophical problem.

1. If the temperature of a gas increases, then its pressure increases as well.

Now, the kinetic theory of gases accounts for (1) by postulating imperceptible particles, whose existence corresponds to the existence of the gas, whose average kinetic energy corresponds to the temperature of the gas and whose hits on the walls of the container in which they are placed correspond to the pressure of the gas. Given correspondence rules roughly like these, the empirical generalization formulated in (1) can be explained in terms of a theoretical generalization such as:

2. Faster particles likely hit the walls of their container more frequently.

Sellars argues that theoretical generalizations like (2) explain why manifest objects obey empirical generalizations by means of the correspondence rules that identify them with (collections of) theoretical entities (Sellars 1961). Both (1) and (2) are lawlike generalizations that could be formulated as universally quantified conditionals, but – and this is the crucial point – they do not express laws of the same sort. Thinking otherwise would be failing to appreciate the categorial difference between the manifest and the scientific image.

Let us focus on (1) first. So, (1) expresses a correlation between two properties of the gas: being heated to a certain temperature and being under a certain pressure. Sure, temperature and pressure are to be considered quantitative concepts in their own right (cf. Carnap 1950). But the fact that the application of the concepts "being hot" and "being compressed" have been subjected to measurement in certain practices should not mislead us – no more than the fact that the truth of "Socrates is pale" could become a matter of degree on a scale devised by tan fanatics. Manifest objects have properties that regularly change in correlation with other properties. Just like Socrates becomes more tanned if exposed to the sun in standard conditions, so gasses become more compressed if heated in standard conditions. This much is what the empirical generalization expressed by (1) is about. But why is it lawlike?

Sellars's most comprehensive discussion of laws of nature in the manifest image can be found in *Counterfactuals, Dipositions and the Causal Modalities* (1957). There are two results of his analysis that are the most relevant for the present purposes. First, he argues that causal relations are expressed by counterfactually robust conditionals, rather than mere accidental generalizations, because modal vocabulary makes explicit the endorsement of defeasible rules for inferring from the assertion of the causes to the assertion of the effects. Second, our concepts of manifest thing-kinds are constituted by the rules of inference that are made explicit in terms of the subjunctive conditionals expressing causal relations.

The first thesis, of course, is testimony to Sellars's inferentialism, according to which conceptual contents are determined by their inferential articulation. Surely, there is a problem with the idea that laws of nature are expressed by counterfactual conditionals, if it is construed as condition for identifying causal relations, because not all the generalizations underwritten by counterfactually robust inferences are laws of nature – e.g. "If this apple were red, it would be colored" underwrites the semantic generalization that red things are colored – or laws at all – e.g. "If I were to choose a coin at random from my pocket, it would be copper" underwrites the accidental generalization that all coins in my pocket are copper (Brandom 2008: 105). Fortunately, we don't need to adjudicate here whether or not Sellars really endorses this idea. We will be content with a weaker reading of the thesis, according to which laws of nature, among other generalizations, are expressed by counterfactually robust inferences.

The second thesis grounds our understanding of substance concepts on the empirical generalizations that are underwritten by laws of nature. In the manifest image, the latter explain what things do when acted upon in certain circumstances. That is why the "logical form", as Sellars put it, of an empirical generalization in the manifest image is "*K*s φ when ψed in *C*". According to Sellars, this specific kind of empirical knowledge is embodied in substance concepts and sets the criteria for their application apart from those of the other concepts – in particular, it is what allows us to use them to re-identify things and stuffs in the world. In this sense, manifest substances are things endowed with dispositional ("iffy") properties, or "powers". The notion of causality in the manifest image is essentially intertwined with the conception of such powers.

These two theses together contribute to characterizing substances in the manifest image as having powers that determine their identity conditions and articulate the causal relations between them.

4. *Changing categories*

Let us now turn to (2) and try to see how it is supported by a different categorial structure, a different notion of substance and a different notion of cause. Surely, (2) is in striking contrast to (1) from an ontological point of view, given that it makes reference to a different sort of objects: the micro-particles postulated by the kinetic molecular theory. But how are these micro-particles really different from gases, i.e. the manifest objects that they are supposed to correspond to? We have already ruled out that the question could be answered by focusing on epistemic distinctions. A more promising suggestion would be then to draw the line directly by ontological means. So, for instance, one could

try and notice that while molecules are parts of gasses, they have no parts in turn. And even if they do, still there must be some ontological "atoms" that will explain the dispositional properties of all the less fundamental entities up to manifest objects like gasses.[14] Although there is something to this suggestion, it is ultimately wrong-headed in this case. The reason why these "atoms" would be suitable to play the explanatory role that Sellars ascribes to the postulated entities of micro-theories does not depend as much on the fact that they are ontologically fundamental as on the fact that they do not have powers. If they did, a more explanatorily fundamental level of scientific entities would be required in order to account for the manifest correlations determined by such dispositional properties. Once this is clear, it is easy to see that ontological fundamentality is neither sufficient nor, in fact, necessary for the sort of explanation that Sellars has in mind for the scientific image.[15]

Conceiving the particles of the kinetic theory of gases as scientific objects then is, primarily, not categorizing them in terms of concepts for manifest thing-kinds. This means that it is a mistake to read (2) as "Particles hit the walls of the container more frequently when accelerated" and as expressing a causal property of the particles. The mistake consists in overimposing the categories of the manifest image on the concepts of the scientific one. A mistake that can be amended only by understanding the criteria with which the latter are applied and articulate empirical knowledge. Just like we did for (1), then, it is worth starting by asking why (2) is a lawlike generalization.

It is tempting at this point to be led to emphasize the fact that at the micro level "in the fundamental laws of physics there are odds" (Feynman 1967: 145). Indeed, it could be argued that the probabilistic character of the laws of quantum mechanics is what makes them most puzzling for common sense. And yet, indeterminism is a red herring as far as the problem of understanding the categorial distinction between the manifest and the scientific image is

[14] Granted that wholes might have dispositional properties that none of their parts have, still an explanation must be provided of how such powers emerge given their ontological constitution. The burden of the proof is on those who deny that some sort of such an explanation is required.

[15] This is how I understand Sellars's observation that micro-theories postulating micro-thing-kinds with the same logic of manifest thing-kinds do not take us all the way to the scientific image (Sellars 1957: §51). This point must be carefully distinguished from the gist of Sellars's reiterated remark that "our work-a-day descriptions of the [conceptual] episode are [...] of a mongrel hypothetical-categorial character" (Sellars 1968: VI, §4). In particular, the idea that in the manifest image we can provide only a functional classification of our inner episodes in analogy with the *ought-to-be*s (semantic uniformities) governing our overt linguistic behavior, and that in the scientific image we will have at our disposal determinate conceptions of the categorical character of such episodes does not imply *per se* that our descriptions of such episodes in the scientific image will do without mongrel hypothetical-categorical statements.

concerned. In order to see why, we need to distance ourselves a bit from the analysis that Sellars gives of probability in the context of establishing empirical generalizations.

To begin with, Sellars notices that stochastic methods are part of the tools that scientists use in the manifest image as well. This use of probability is not really problematic for our purposes. It applies to cases in which a system is so complex that we just cannot know everything we would need in order to calculate the outcomes precisely and so we attribute a certain probability to each of them. For instance, if I were to roll a 6-sided unloaded dice, I could, in principle, predict how it will land by means of the purely deterministic laws of classical mechanics. But knowing all the variables required to make such a prediction is practically impossible, so we prefer to describe the system by saying that the probability of rolling each number is 1/6 (*ibid*.). Another example is again the way in which statistical mechanics is applied in the kinetic theory of gases. In this sense, stochastic methods are an expressive resource that can be accommodated within the manifest image because it does not imply any change in the logic of empirical concepts. Indeed, according to Sellars, the purpose of probability in inductive inference is to make explicit that there are empirical reason to make certain assertions (Sellars 1954: §§57-71; 1957: §60; 1964).

The sense in which probability is used instead within the very laws of physics to express the fact that nature is intrinsically nondeterministic seems to go deeper into the structure of our empirical knowledge. And in fact it does, but it is important not to run together the implications of the nondeterministic conceptual repertoire provided by quantum mechanics with the implications of the scientific categorial structure to which it belongs. While the latter are what we are trying to investigate here, the former could in principle be the same also for a conceptual repertoire in the manifest image. Suppose, for instance, that dices were intrinsically nondeterministic thing-kinds, to be understood (in Sellars's account) in terms of dispositional properties like "Dices, when rolled, land on 5 with a probability of 1/6".[16] Of course, the laws so expressed would be probabilistic and that would have implications for our concept of causality, but the reason why such generalizations would be lawlike is just the same as we have seen before. In other words, stochastic powers would still be powers.

Particles, *qua* scientific objects, have no powers. But what does that mean? Actually, the sense in which entities in the scientific image have no causal properties is not so hard to understand. And in fact, it can be grasped even without mobilizing the counterintuitive framework of quantum mechanics. For the sake of the argument, however, let us assume that physics provides in effect the

[16] Would that really sound so bizarre to the layman?

paradigm of a scientific representation of the world of nature. Physicists are trained to study physical systems and to apply mathematical tools to represent them. A complete description of the state of a physical system can be provided by specifying the values of the *n* variables that represent the properties of the system that change with time.[17] All the possible states of the system can be represented as points in a *n*-dimensional space, the so called "phase space" of the system.[18] A series of equations are then defined to represent the evolution of the system in time. By filling in all the information required to specify a present state of the system, a physicist can determine the behavior of the system in the future *and* in the past.

The particles composing a gas in the kinetic theory are a physical system, whose behavior is understood along these lines. When we say that in the scientific image "a gas is [...] a cloud of molecules" (Sellars 1961: §41), what we mean is that a gas is a physical system. Notice, however, that there do not really seem to be "objects" in a physical system. Of course, as long as physical systems are studied of which we also have more intuitive representations in the manifest image, it is easy to treat them as merely useful technical tools to make calculations and predictions about *things* that do not really have such a categorial structure. But the clash of the images is already there. In the case of the systems of quantum mechanics it is just more painful, because no manifest intuition is available to challenge the reality of the mathematical representations.

There do not really seem to be "causes" either in the evolution a physical system. Surely, there are no causal relations between *doings* and *results* of the sort underwritten by the powers of manifest thing-kinds, for the simple reason that there are no such kinds in physical systems. But there are also other aspects of the intuitive notion of causality that are lost in the mathematical representation of a physical system. The most striking one is the absence of any definite sense in which in a physical system the effects should be construed as following and be determined by the causes. In fact, given a certain state of the system the very same equations can be used to calculate a state in the future as well as a state in the past. More generally, if the scientific image is acknowledged as real, it is not clear how the calculation of the evolution of a system could be construed as the representation of a given state causally determining another one. It is precisely along these lines that Russell (1913) went on arguing

[17] So, for instance, in order to describe the state of the system of a particle moving on a line, the values of just two variables must be specified: the position of the particle in one dimension and its momentum.

[18] More precisely, the phase space is a vector space in which a state of the system is represented as the coordinates of a vector specifying the properties that change with time. Since we will not do any calculation, however, we don't really need the mathematics of vector spaces either.

for his famous dismissal of the law of causality.[19]

Are there "laws" that govern the behavior of a physical system? This is of course how the question with which we began the analysis in this section has to be rephrased now. One might be tempted to answer straightforwardly in the affirmative: what else the equations with which the evolution of the system is calculated would express otherwise? As a matter of fact, however, the point is a little more delicate than that. On the one hand, it is correct to say that the equations are not underwritten by contingent regularities.[20] When a physicist applies the equations to calculate the evolution of a physical system, she does not merely mean that the system could have been in a given state in the past and could be in a given state in the future, but that it *was* (with a certain probability) in a given state in the past and *will be* (with a certain probability) in a given state in the future. On the other hand, however, it is not equally clear that she means that the system is *governed* by the laws that are expressed by the equations or that the evolution of the system *abides by* them.

Let us try and sharpen our intuitions about this distinction by thinking about one more question (in the manifest image).[21] Suppose that *all* (all!) *possible A*s are also *B*s: Is that enough to say that it is a *law* that all *A*s are *B*s? On the one hand, one might be willing to answer that the absence of possible (not merely actual) counterexamples is indeed enough to make sense of a universal generalization as a law. In this sense, the fact that all possible *A*s are *B*s is the reason why it is correct to infer that something is *B* under the assumption that it is *A*. This first intuition amounts to the idea that the laws of nature are not really normative: they are just general facts. Norms govern only our inferential practices in view of the facts that we aim to represent by means of them. On the other hand, one might be willing to answer in the negative instead and rebut that the notion of the absence of counterexamples is just different from the notion of a normative connection in which a law consists. This second intuition has it that the modal vocabulary in which the former notion is formulated is but an expressive resource to make explicit the latter in the "material mode".[22] It is not hard to see that the distinction between these two intuitions tends to

[19] He was, of course, followed by Wittgenstein, who, in the *Tractatus*, denied the existence of a "causal nexus" (5.136) and at the same time – more insightfully – acknowledged that causality is not a law but "the form of a law" (6.31).

[20] In view of the general Sellarsian framework in which the present discussion is conducted, it is legitimate enough, I reckon, to assume this without argument.

[21] This is the very same distinction that Sellars discusses by means of his counterfactual example about planets revolving around a central sun (Sellars 1957: §65).

[22] Sellars famously noticed in this regard that "the language of modality is [...] a 'transposed' language of norms" (Sellars 1953: 332).

be congruent with the distinction between the notion of a law in the scientific image and the manifest image respectively.

This last observation allows us to introduce one last point that is crucial to make before moving on to the next section. It has to do with the fact that the terms "objects", "causes" and "laws" were put in scare quotes above when we questioned their *existence*. The reason for adopting this typographic practice is that those terms do not really refer to *things* that could or could not exist in the world.[23] They are examples instead of the categories that articulate the structure of a conceptual framework. As was pointed out, according to Sellars they provide classifications of conceptual items, i.e. they are terms that belong to the syntactic metalanguage of rules and are applied to make explicit how the expressions of the object language are used. In this sense, taking the questions about their existence as they are formulated *in the material mode* at face value is a mistake. When they are transposed *in the formal mode*, such questions ask about the empirical reasons for the use of referring expressions, the application of substance concepts and the assertion of the conclusion of inferences. Saying that the conceptual frameworks of the scientific image and the manifest image have a different categorial articulation is saying that such questions receive different answers with respect to the two frameworks. Therefore, it is a mistake to say that there are no objects, causes or laws in the scientific image. The truth is that those are categories that change in the scientific image.[24]

5. *The fundamentality of persons in the manifest image*

On numerous occasions Sellars insists that the concept of a person is fundamentally intertwined with the categories of the manifest image. At first glance, the ties seem to go both ways. On the one hand, people are used to conceive of themselves in terms of the manifest image as intentional subjects and rational agents. On the other hand, the manifest image can be said to be the conceptual framework of persons, because its categorial articulation is modelled right after the concept of a person. According to Sellars, however, the first direction of dependence is merely contingent, in the sense that people can also conceive of themselves in terms of the scientific image. As is well known, he argues that the concept of a person is not essentially grounded in the manifest image and can be eventually recategorized as a system of scientific objects (Sellars 1969:

[23] This idea is just the core of the "rationalistic metaphysics" that is attacked in this regard by Sellars (1957: §106; 1970: §§17-31) – and by Wittgenstein.

[24] Of course, *in the material mode one* could still say that in the scientific image there are no *manifest* objects, no *manifest* causes and no *manifest* laws, but there are *scientific* objects, *scientific* causes and *scientific* laws.

§59) – possibly, a bundle of absolute processes (Sellars 1981: III, §125). This conclusion, of course, is far from obvious and securing it is what Sellars is most interested in. As far as our present purposes are concerned, however, the dependence of the manifest categories on the concept of a person is far more relevant. By way of clarifying such a foundation, Sellars puts forward two lines of reasoning that we will briefly rehearse here.

The first one is framed as a genealogy. According to it, the manifest image is a refinement of an "original" image. Just like the manifest and the scientific, so the original image too was an all-encompassing conceptual framework, but its most significant characteristic was the fact that *all* the objects in it were persons: not only men and women, but every *thing* was conceived in terms of the concept of a person as an intentional subject and a rational agent. This means that, in the original image, rivers, for instance, flow towards the sea because they intend or are used to do so, and if someone were to divert their course they could get angry, so that they should be prayed to convince them not to overflow. In other words and more straight to the point, in the original image every event is explained in terms of the paradigm of intentional actions, either as the result of an object's intentions or habits. Therefore, the only sense for an episode to be caused in the original image is the sense in which a person causes another to do something that she wouldn't otherwise do (Sellars 1962: 13).

The manifest image would have emerged from this original conceptual framework by means of "a gradual pruning of the implications of saying with respect to what *we* would call an inanimate object, that it *did* something" (Sellars 1962: 12), so that the only sense in which such objects are expected to do something is by habit, disposition or power. When Sellars says that the manifest image results as a *refinement* of original one, he means that this "pruning" does not amount to a modification of the categorial structure of the image. This is important and should be acknowledged at face value: *all* the objects of the manifest image are still persons – although some of them are "truncated" ones.

Now, of course, the historical plausibility of a panpsychist conceptual framework that could ground the reality of the original image is not to the point here, because the genealogy proposed by Sellars is not to be intended as an argument to prove the dependence of the manifest image on the concept of a person. Sellars's purpose is rather to articulate the sense in which the manifest image is the conceptual framework of persons. Thus, the genealogy makes clear that in the manifest image substances are shaped upon the concept of person and why causality is conceived in terms of their dispositional properties.

The second and more important line of reasoning that helps clarifying the dependence of the manifest image on the concept of a person is developed by Sellars with relation to the normative account of the determination

of conceptual contents. Indeed, according to Sellars, conceptual contents are determined by the rules that govern their application in the space of reasons. In the absence of such rules no conceptual framework could be conceived and the question of its representational adequacy would not even make sense. Now, Sellars argues that *in the manifest image* the normativity that is constitutive of conceptual contents is grounded on the concept of a person. In brief, the reason is that only persons are suitable to play the game of giving and asking for reasons. But the details of Sellars's argument are so much articulated and delicate that it is often tempting to take a shortcut through some of them, with the risk of concluding something more or something different than what Sellars originally intended to. Since there is no space here to follow the argument through all its steps across the different texts in which Sellars unfolds it, I have to take that risk myself and provide but an outline of its main parts.

The first part is the idea that we can primarily understand the semantic content of our episodes of conceptual thinking only on the model of the pragmatic significance of our episodes of outer linguistic behavior. Such a pragmatic significance is articulated in terms of *ought-to-be*s to which our spontaneous dispositions to think-out-loud must conform. The second part is the idea that these *ought-to-be*s imply *ought-to-do*s, in the sense that the reason why our linguistic behavior is not merely regular, but rule-governed is because we have been taught to exhibit it by adults who intentionally acted so that we conformed to the norms that determine the pragmatic significance of our languagings. The third part is the idea that normativity has a transcendental condition: we are properly bound by rules to the extent that we share intersubjective *we*-intentions that rationally motivate our actions as members of the same community. Since persons are what can share *we*-intentions, they are fundamental to the possibility of determining conceptual contents in the manifest image.

Two lines of reasoning have been rehearsed here to explain why persons are fundamental in the manifest image. The first one sheds light on the fact that the manifest category of substance is shaped upon the concept of a person, in the sense that all manifest objects are either persons or "truncated" ones. The second one reconstructs the role of the concept of a person in grounding the normativity of conceptual contents. It is essential not to run the two lines of reasoning together. The first line of reasoning deals with an ontological issue, the second line of reasoning addresses a semantic issue.

6. *Norms in the scientific image*

In the opening of this paper the clash of the images was described as the problem of whether or not philosophy is entitled to deal with the human be-

ing by its own means. Apparently, the idea that special sciences have successfully competed with philosophy for more and more specific subject-matters and have imposed the categories for their investigation implies that philosophy is ultimately an alien in the scientific image and that it should be at home only in the manifest image. It is now time to zero in on such a presupposition and consider what the proper means of philosophy really are.

Sellars' own solution to the clash of the images is notoriously problematic. On the one hand, one of the most exploited "ideal types" in his rhetoric is the notion of a "perennial philosophy", which endorses the manifest image as real. Indeed, the idea of a perennial philosophy implies that a significant part of at least the western philosophical tradition is in no position to work with the categories of the scientific image. On the other hand, of course, Sellars thinks that philosophers should appreciate the picturing dimension of conceptual structures and learn to navigate the categorial changes leading through the scientific image to the Peirceian conceptual structure, in terms of which ideally adequate representations can be provided (Sellars 1968: V, §§72-74). Yet, when it comes to envisaging a strategy for resolving the incompatibilities generated by the clash of the images, it seems that the best he can offer is a metaphor and an advise. The metaphor of a stereoscopic vision in which the images can be brought together and the advise not to rush and endorse the scientific image as real in its current categorial articulation, which is presumably not yet complete. This is hardly enough to cash out as a metaphilosophical thesis the claim that "the aim of philosophy [...] is to understand how things in the broadest possible sense of the term hang together in the broadest possible sense of the term" (Sellars 1962). This, however, is also a quite ungenerous way of framing Sellars's contribution.

I will not attempt to provide here a full blown interpretation of his metaphor and the solution to the clash of the images that he sought to distill thereby. My purpose is the different one of bringing to light the metaphilosophical implications of the clash itself. In order to do that, however, I need to address at least a possible misunderstanding lurking in the characterization of the scientific image as a personless conceptual structure. The misunderstanding is generated precisely by confusing the ontological sense and the semantic sense in which the concept of a person is fundamental to the manifest image that were described in the previous section. Such a confusion could bring forth an argument like the following one: The ontological fundamentality of persons is required to ground normatively determined conceptual contents, *therefore* conceptual contents cannot be accommodated in the scientific image.

If such an argument were sound, one could actually use it to attack the very notion of the scientific image as a conceptual framework as an incoherent

one.[25] As it is easy to see, however, the argument has a few things wrong with it. In order to highlight the problematic points that are most relevant to us, it is worth unpacking it a bit and make explicit three main ideas that support it:

A. Conceptual contents are constituted by norms.
B. Norms are grounded on the shared intentions of discursive practitioners.
C. Persons do not belong to the scientific image.

Of course, generally speaking, all these ideas are highly controversial. For the sake of the present purposes, however, let us look at them mainly from a Sellarsian point of view. If we do that, we can't but accept (A), because it is the cornerstone of Sellars's semantic theorizing.[26] The other two ideas are more problematic.

Let us consider (C) first. According to Sellars the claim that the ontology of the scientific image does not include persons is simply mistaken. The correct claim would be that while scientific substances are not persons, it is not obvious that manifest persons could not be recategorized in the scientific image as pluralities of scientific objects. For such a recategorization to be adequate, it must also take into account those social features that allow normativity to be grounded (Sellars 1962: sec. VII). Indeed, recategorizing the concept of a person in the scientific image is arguably one the core tasks of Sellars's whole philosophical enterprise.[27] Here, we are not interested as much in his results as in his methods. Sellars did not conceive recategorization as the task of providing the genera of empirical concepts whose species will compose conceptual repertoires in the scientific image. That is not the task as much of philosophy as of empirical sciences. What he did was making explicit the articulation of the manifest concept of a person in terms of the normative relations in which the concept is embedded in the manifest image. Such an articulation provides the criteria for recategorizing the manifest concept of a person, in the sense that the structure of those normative relations has to be

[25] In effect, Brandom (2015) argues that Sellars's whole distinction between a manifest and a scientific image of man in the world is a "misplaced [...] attempt to naturalize Kant's transcendental distinction between phenomena and noumena" in view of his scientific realism, that threatens the possibility to treasure Kant's fundamental semantic insight that conceptual contents are to be understood in normative terms.

[26] I will not argue for this thesis here. I just want to point to the fact that rejecting the normativity of conceptual contents simply cuts the Gordian knot of the clash of the images. Such an approach could well quieten the puzzlement generated by the problem, but at the price of ignoring its intricacies. That would be unfortunate, because there might be some lesson to be learned there.

[27] He mostly pursued it with respect to intentional episodes – in particular, of course, immediate sense experiences. Unfortunately he did not elaborate as much on the scientific successor-notion of collective intentions.

respected by the conceptual repertoires that will succeed in the categories of the scientific image.

Now, if (C) is dropped, as Sellars explicitly recommends, clearly the argument does not go through anymore. That is to say, the conclusion does not follow that the notion of the scientific image is incoherent. However, while (A) and (B) are in place, the sense in which conceptual contents would result to be accommodated in the scientific image is still problematic. Indeed, if persons are accepted in the ontology of the scientific image only as derivative from ultimate entities, the normativity that their discursive practices are supposed to ground would make sense only as *ideal* (in the Kantian sense). This disappointing result that seems to force upon us the mere ideality of our "second nature" has been variously resisted in the Sellarsian scholarship by proposing different interpretations of the synoptic view promised by the metaphor of the stereoscopic vision. A discussion of such proposals, however, is beyond the purposes of this paper. Especially since the third of the main ideas that support our argument against the scientific image is still to be addressed.

So, are there good reason to abandon (B)? Many have thought so. According to Millikan (2016), for instance, there are indeed good reasons, but they lead away from Sellars's original path, so much that she thought that having followed them she deserved the epithet of a "renegade daughter" of his. As is well known, she developed an account of (some of) substance concepts as naturally and culturally selected cognitive abilities to keep track of things in the world. Her approach to the naturalization of the space of reason, however, is not the only one. She pursues the task of explaining how conceptual contents are determined in terms of the selective advantage of the organisms possessing the corresponding cognitive abilities. An alternative to this piecemeal strategy, so to speak, would be to conceive the effects of the evolutive pressure on our representational abilities not primarily at the level of the processes that put our cognitive systems in factual relations with things in the world, but at the level of the cognitive abilities that enable us to engage in social practices (cf. Rouse 2015).

Of course, the mere existence of alternatives is not good enough a reason to reject (B). However, since our purpose is not as much defending the scientific image as learning something about it, considering possible paths for the naturalization of normativity is extremely useful, not only because they offer another opportunity to reason about the categorial differences between the conceptual structures of the manifest image and the scientific image, but also because in this case the clash does not reveal itself in the ontology and so one does not run the risk of being misled by ontological issues. In this case the question is not about the scientific successor of a given manifest concept, but about the scientific successor of the normative structure that allows making

sense of the categorial articulation in the manifest image. However, just like the question whether or not manifest persons exist in the scientific image does not do justice to the task of recategorizing the concept of a person, so lamenting that conceptual contents in the scientific image are not determined in terms of manifest normativity is missing the point. That might well imply that one is better off by saying that one does not really recognize conceptual contents in the scientific image anymore, just like one does not recognize persons in it. And it might also imply that telling what normativity is in the scientific image turns out to be, ultimately, an empirical task. Sellars's advise not to embrace the scientific image in its current form, at this point, seems to be as sensible as ever. Even at this level, however, I suggest that the task of the philosopher does not really change. In the case of the recategorization of a concept, she has to develop the expressive resources to make explicit the rules that constitute its content and to keep track of it across different conceptual structures.[28] In the case of normativity, she must develop the expressive resources to make explicit not only the rules by which we play the game of giving and asking for reasons, but also keep track of them across different conceptual structures.

7. *Conclusions*

Rejecting the idea of a scientific image clashing with a manifest one is rejecting the idea that we could change the categorial articulation of our conceptual structures. It is the conviction that while the rules of the game of giving and asking for reasons change, in the sense that we can modify our conceptual repertoires, they are still written in stone in the sense that we can't modify our categories. For as we have seen, if conceptual contents are constituted by norms, changing the categories of a conceptual structure means changing the structure of normativity. I hope I have offered enough reasons here to be wary of the idea that a similar recategorization would necessarily undermine our conceptual contents, even if they are construed as normatively articulated. I wish to suggest to the contrary that at least part of the task of philosophy may just consist in developing the expressive resources required to navigate such changes.

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[28] As we have seen, this latter is part of what Sellars describes as acknowledging the picturing dimension of conceptual structures in chapter V of *Science and Metaphysics*.

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