PRINCIPIA **22**(2): 277–300 (2018) doi: 10.5007/1808-1711.2018v22n2p277
Published by NEL — Epistemology and Logic Research Group, Federal University of Santa Catarina (UFSC), Brazil.

CONCEPTS: NEITHER REPRESENTATIONS NOR ABILITIES BUT RULES

FEDERICO CASTELLANO

Instituto de Humanidades (IDH), Universidad Nacional de Córdoba-CONICET, ARGENTINA
fedec15@gmail.com

Abstract. Philosophers have always tried to explain what concepts are. Currently, most neo-Fregean philosophers identify concepts with abilities peculiar to cognitive agents. Philosophers who defend a psychological view, in contrast, identify concepts with representations located in the mind. In this paper, I argue that concepts should be understood neither in terms of mental representations nor in terms of abilities. Concepts, I argue, are rules for sorting an inferring. To support this, I follow Ginsborg's Kantian conception of concepts. Nevertheless, unlike Ginsborg, I provide an explanation of the cognitive relationship between concepts and thinkers that presupposes no linguistic awareness of any normative concept. In doing so, a dispositional approach to the normativity of concepts is proposed.

Keywords: Concepts • representational theory of mind • concept pragmatism • rule-following • error

RECEIVED: 07/12/2017 ACCEPTED: 09/05/2018

1. Introduction

Concepts are said to be the constituents of thoughts. They are involved in our judgments, categorizations, inferences and carefully planned activities. But, what really *are* concepts? Throughout the history of philosophy, many philosophers have tried to account for concepts. Although most philosophers share the view that concepts are the building blocks of thoughts, they typically disagree about the very nature of concepts. Some philosophers are prone to thinking of concepts as abstract entities. Following a venerable philosophical tradition that traces back to Frege, they take concepts to be objective, mind-independent entities that perform a very specific function: they constitute the content of our objective judgments about the world (Evans 1982; Peacocke 1992). Philosophers who defend a psychological point of view, in contrast, are more prone to identifying concepts with representations located in the mind. According to them, thinking is a psychological process that occurs in an internal system of mental representations (Fodor 1987; 1995; 1998; 2008; Margolis and Laurence 1999; 2007; Prinz 2002; Pylyshyn 1984; Schneider 2011).

Now, most philosophers who currently follow the Fregean line of thinking (sometimes called neo-Fregeans) do not feel comfortable with postulating mysterious abstract entities. In an effort to leave aside Frege's Platonism, they have recently tried to account for those *abstracta* in terms of abilities or capacities (Beck 2013; Brandom 2010; Davidson 1982; Dummett 1993; Evans 1982; Heck 2007; McDowell 2009; Peacocke 1992). Some of them, for example, have identified concepts with certain basic cognitive abilities such as the identification and re-identification of substances (Millikan 2000), the classification of property-instances (Weiskopf and Bechtel 2004), and the recombination of singular and general representations in active thinking (Camp 2009; Carruthers 2009). Others philosophers, in contrast, have identified concepts with more cognitively demanding inferential-linguistic abilities related to the social practice of "giving and asking for reasons" (Bermúdez 2010; Brandom 1994; 2010; Davidson 1982; McDowell 2009). Despite these differences, they all support what is typically called "Concept Pragmatism", that is, the view according to which, in order to explain the very nature of concepts, what is required is an elucidation of the cognitive capacities or abilities an agent must possess for her to have a concept.

In this paper, I will argue that concepts should be understood neither in terms of mental representations nor in terms of abilities. Concepts, I will argue, are objective entities whose fundamental property is to be normative.[1] Accordingly, I will suggest that the best way to understand what concepts are is to identify them with rules. To support this, I will follow Ginsborg's Kantian conception of concepts (Ginsborg 2008; 2011). Nevertheless, unlike Ginsborg, I will provide an explanation of the cognitive relationship between thinkers and rules that presupposes no awareness of any normative concept — no matter how primitive this awareness may be. In my view, a better and more comprehensive explanation of such a relationship must rest on a dispositional approach to *error*. Thus, in the last part of the paper I will advance a theory of concepts which explains how, in basic cases, thinkers can enter into cognitive relationships with rules without presupposing any representational or normative awareness.

The structure of the paper runs as follows. In section 2, I argue that the psychological approaches that identify concepts with mental representations cannot account for a fundamental property of concepts: their generality. In section 3, in turn, I argue that Concept Pragmatism is misleading since cognitive abilities presuppose concepts rather than the other way around. However, I will argue that, although concepts should be identified with neither representations nor cognitive abilities, both the psychological and the pragmatist views have something very important to say about concepts. In my view, the debate between pragmatists and psychologists regarding the ontological status of concepts derives from a previous a more fundamental disagreement about the very nature of cognition. From the psychological view, I borrow the idea that concepts are prior to cognitive abilities. Concepts, I will argue, are what

allow thinkers to carry out such abilities. From the pragmatist view, in turn, I borrow the idea that possessing a concept involves possessing cognitive abilities. This is so because, as I will show, concepts are fundamentally normative entities that prescribe specific cognitive courses of action. Finally, in section 4, I sketch an alternative approach to concepts: concepts as rules for sorting and inferring. Although I will not go into too much detail as to the ontological status of rules, I will show how understanding concepts as rules can accommodate the main concerns that both the psychological and the pragmatist views of concepts raise.

2. RTM and Psychologism about Concepts

Psychologism about concepts is the view that concepts are mental representations — whether they be ideas, mental images, mental symbols, or the like.[2] Traditionally, this view was associated with the Cartesian theory of the mind and many old-school empiricist theories such as Locke's, Hume's and Stuart Mill's. Currently, however, psychologism about concepts finds a better place in the *Representational Theory of Mind* (RTM). According to RTM, thinking is a psychological process that occurs in an internal system of mental representations. Propositional mental states such as beliefs and desires are mental representations that play distinctive functional-causal roles in cognition. So, for example, having an *occurrent* propositional attitude, say a belief, is a matter of having tokened in the head a representation (i.e., an object with semantic properties) that plays the functional-causal role that is characteristic of beliefs. The same goes for desires and other propositional attitudes.

One of the most popular versions of RTM claims further that the internal system of mental representations takes the form of a *language of thought* (LOT) (Fodor 1975; 2004; 2008; Margolis and Laurence 2007; Schneider 2011).[3] According to this view, mental representations have a language-like structure and, to a great extent, they work in the same way natural and formal languages do. From syntax, we obtain the rules that govern the compositional structure of mental representations. From semantics, we obtain the content of such representations. As a result, this version of RTM states that the content of structured mental representations is just a function of syntax working upon atomic mental representations. In other words, the content of structured mental representations is fully determined by the content of their constituent atomic mental representations and the way they are syntactically arranged.

Naturally, defenders of LOT take concepts to be atomic token mental representations. As tokens, they are mental objects.[4] They are particulars located in individual heads and, therefore, they can play causal roles in the physical world (Fodor 1987, p.19, p.98; 1995, p.2; 2003, pp.7–9; Margolis and Laurence 2007, p.564; Schneider 2007, pp.11–15). Moreover, they have representational content. Insofar as they

function as representational atoms, they contribute to the representational content of propositional mental states. For example, when John believes that a dog is barking, a structured mental representation is tokened in John's belief box: a representation constituted by both the atomic mental representation DOG and the atomic mental representation BARKING.

Proponents of LOT have a good story about how concepts acquire semantic properties: while the representational content of structured mental representations (thoughts) is determined by the content of their constituent atomic mental representations (concepts) — the story goes — atomic mental representations (concepts) acquire content because of certain *causal laws* that correlate them with the objects or instantiations of properties they are representations of. Roughly speaking, a mental representation, say DOG, represents dogs because all and only tokens of the mental representation DOG stand in reliable causal relations to all and only particular instantiations of doghood (Fodor 1987, p.100).[5]

According to Margolis and Laurence, LOT version of the psychological view of concepts offers two advantages over other proposals (Margolis and Laurence 2007, pp.563–4; see also Schneider 2011, pp.9–10). On the one hand, it accounts for the productivity and systematicity of thought. That is, it explains how thinkers are able to entertain an infinite set of thoughts just by combining a finite set of concepts in a systematic way. On the other hand, it accounts for a causal and, consequently, a naturalized explanation of entertaining thoughts. Having a concept is just a matter of having an object in the head. Hence, this view makes concepts incredibly transparent in comparison with the Frege's account of Senses. According to Margolis and Laurence, concepts understood as Fregean Senses are ontologically *suspect* in a way mental representations are not. To begin with, Frege's account presupposes an ontological realm, completely detached from the physical world, where only Senses and other abstract objects are allowed to lie in. This assumption is rather odd. But this is not the end of the story. What is actually at issue in the debate is not just the ontology of Senses but, primarily, a coherent explanation of how minds and concepts are related. In the Fregean view, Senses are not physical but abstract entities. This leaves the "grasping" relation between thinkers and Senses mysterious (Margolis and Laurence 2007, pp.579–81; 2011; Beck 2013, p.30). The psychological view, in contrast, makes room for a more transparent theory of concepts and, consequently, of thought. Since concepts are taken to be authentic objects, this proposal can easily explain how physical thinkers can be so related to them, without presupposing any mysterious cognitive capacity such as "grasping". Causes, Fodor says, are all we need to explain our cognitive transactions with the world (see Fodor 1987, pp.97–9).

Recently, some philosophers have cast doubts on the psychological view of concepts (Beck 2013; Brandom 1994; Ginsborg 2008; Glock 2006; Peacocke 1992). Among other things, they have argued that RTM cannot account for two basic prop-

erties of concepts: the publicity (Glock 2006; Peacocke 1992; Prinz 2002) and the generality (Brandom 1994; Ginsborg 2008; McDowell 2009).

According to the publicity argument, if concepts are objects in the mind, then they cannot be shared. Different persons would have different objects in their heads and, consequently, different concepts. For example, John's tokening of the mental representation DOG would be unique and, consequently, different from Gareth's. But then, concepts would not be public. Nobody would be able to access each other's concepts. Since concepts are public — the argument goes — concepts cannot be mental objects. Proponents of RTM have replied that the publicity does not pose a real problem to them (Fodor 2003, p.13; Margolis and Laurence 2007, p.566; Schneider 2011, pp.135–6). For RTM explicitly assumes the *token-type* distinction. Thus, when John and Gareth think of something that it is a dog, they token in their heads two different symbol-tokens (say, DOG_1 and DOG_2) of the same formal symbol-type (DOG) and, consequently, they entertain in the mind the same formal symbol-type — i.e., the mental symbol-type that is nomologically correlated to all and only dogs (or doghood).

Many things can be said about the token-type distinction. Types are not particulars and, consequently, they cannot play any direct causal role in the physical world. They are, so to speak, abstractions.[6] As abstractions, they seem to be as mysterious as Fregean Senses. However, defenders of the psychological view have argued that types do not pose a problem. For, unlike Senses, mental types are the kind of things that can be physically instantiated in different minds and, consequently, the mystery disappears (see Fodor 1993, pp.279–83).

But what about the generality of concepts? When studying philosophy, students are usually told that concepts represent general things-for example, that the concept "dog" represents the property of being a dog (or doghood). Concepts are supposed to represent such generalities. But, if RTM is true, then it seems that concepts as mental representations cannot represent them. For, as long as mental representations are objects the semantic properties of which are determined by lawful causal relationships with particular instantiations of properties, they would only represent particular entities (i.e., particular instantiations of properties). For example, each token of the mental representation DOG would represent, *ex hypothesi*, a particular instantiation of doghood, that is, the one instantiated by the particular dog which is causally responsible for it to be tokened in the head.

Defenders of the psychological view might reply that this move is misleading, for it rests on a misunderstanding of the role that both the token-type distinction and causal semantics plays in RTM. Let us remember that, according to RTM, concepts get their meaning by virtue of being casually related to what they are about. Thus, each token mental representation DOG represents doghood since all and only token mental representations DOG are causally related to the very *same* kind of thing (i.e., to

all and only dogs). Consequently, each token mental representation DOG represents the same kind of thing (i.e., doghood).

But does this move really explain the fact that each time someone thinks of dogs as such is representing the same thing about them? It certainly does not. For, it is true that by bringing causal semantics and the token-type distinction into play, it is possible to explain how thinkers are able to hold in their minds entities that convey general content. However, what is at stake is not an explanation of how minds are able to *hold* entities that convey general contents, but how minds are able to *represent*, by holding such entities, individuals as falling under such general contents. In other words, it is one thing to *have* in the mind the same type of entity each time one thinks of a dog as a dog; but it is another thing to *represent* — with the help of such type of entity — the dog as belonging, on each occasion, to the same kind of thing (i.e., as belonging to doghood). All defenders of RTM can say is that when someone thinks of, say Robert and Lucas, as dogs, she holds in her head two different symbols of the same formal-type, which is equivalent to say that she enters into a physical relation with two different entities that happen to convey the same general content (i.e., doghood). But this is different from entering, on each occasion, into a cognitive relation with the general content these entities convey (i.e., doghood).

To illustrate this difference, let us consider the following scenario. Suppose that my cat has been causally trained to hold a sign with the word "dog" each time and only when she is confronted with dogs. According to RTM, each time my cat holds the sign she represents a dog as such. But is my cat really representing this? From a third person perspective, it is possible for me to represent that a dos is nearby, provided that I know that my cat's behavior conveys the content "dog nearby". But the relevant question is: is it reasonable to conclude that my cat is representing the same thing that I do? With no further considerations to the effect that my cat is doing more than just holding a sign each time she is confronted with a dogs, we have no genuine reason to conclude that she is intending to represent dogs in the way I do. Just like trees' rings and age, smoke and fire, and many other causal-natural signs, covariating with dogs is not sufficient for representing dogs as such — although, it may be a necessary condition. In other words, there is a cognitive gap between being causally sensitive to doghood and come to represent individuals as belonging to doghood. For, whereas the former only involves being responsive to dogs in a way that leads to tokening in the head types of entities that convey information about dogs, the latter involves cognitively accessing the informational content that such entities convey.[7]

Naturally, defenders of the psychological view might reject such a distinction by pointing out that being causally sensitive to dogs in the way described above — i.e., holding entities in the mind that convey causal information — is precisely representing doghood. After all, RTM is the view according to which thinking is a matter of having in the mind entities that carry informational content. However, what I am sug-

gesting is that defending this view comes at a high theoretical cost. For, RTM misses something very important about representing generalities: it leaves us with no explanation as to how minds come to get involved not just with entities that carry general contents, but with the general contents that those entities convey. I will return to this point in section 4.

3. Concepts as Abilities: a Pragmatist Approach

Traditionally, many philosophers took concepts to be normative, mind-independent entities. Kant was one of the first philosophers in the modern era who explicitly thought of concepts in this way. According to Kant, concepts are primarily exercised in judgments and, as such, they only make sense in public, shareable, and normative scenarios (Brandom 1994; Ginsborg 2008; 2011; McDowell 2009).[8] Frege, in turn, took concepts to be functions or laws of correlation that map every argument to one of the two truth-values. According to Frege, any object which a concept maps to The True is an object that falls under that concept (Frege 1891, p.139).[9] Despite their differences, both Kant and Frege thought of concepts as having a *normative* role to play. In effect, they realized that when one is thinking (or judging), one is actually subsuming something (either a particular entity or a general property) under a concept, and that this activity, in turn, is necessarily exercised either correctly or incorrectly. Concepts, thus, appear to be the sort of things that closely relate to the norms that prescribe whether thinkers — when thinking or judging — are correctly applying a concept or not (i.e., are correctly subsuming something under a concept or not).

These days, philosophers who follow the Fregean line of thinking are prone to seeing concepts as abilities or capacities. Instead of postulating mysterious abstracts entities or transcendental conditions of possibility, most current neo-Fregean philosophers prefer to speak of concepts as abilities peculiar to cognitive agents. Some of them, for example, identify concepts with basic cognitive abilities such as the identification and re-identification of substances (Millikan 2000), the ability to sort objects (Weiskopf and Bechtel 2004), and the ability to recombine different representations in active thinking (Camp 2009; Carruthers 2009).[10] Other philosophers, in contrast, identify concepts with more demanding linguistic-like abilities (Bermúdez 2010; Brandom 1994; 2010; Davidson 1982; McDowell 2009). According to them, responding reliably to circumstances just by making the appropriate sounds (e.g., "that's red" in front of red things), reaching for mom, discriminating lions, or sorting apples, make not yet the case for an authentic conceptual move. Although necessary, for any response to be conceptual — they argue — it is required to be responsive to the *normative-inferential* dimension of concepts (Brandom 2010; McDowell 2009). This means that in order for someone to think conceptually, it is not enough to be

responsive to the present circumstances or reasons. What is required — they argue — is to be sensitive or responsive to reasons "as such" (McDowell 2009, p.128), that is, to be able to bring such responses into play in linguistic reasoning.[11]

This, of course, should not be taken as an exhaustive picture of what neo-Kantian and neo-Fregean philosophers currently say about concepts. In truth, I am aware that within this philosophical tradition it is possible to find a wide variety of views of concepts that range from the intellectualist point of view (Brandom 2010; McDowell 2009) to more gradualist approaches to conceptual thought and cognition (Camp 2009; Carruthers 2009; Millikan 2000). In any event, in this paper I do not want to pay attention to these differences but to what they all have in common: a pragmatist view of concepts, that is, the view according to which concepts are abilities peculiar to cognitive agents.

When it comes to concepts, the term "pragmatism", as a term of art, conveys a specific meaning. Fodor, who introduced this term, defines Pragmatism as the view that "concepts are individuated by their *function* in some proprietary sense of that notion" (Fodor 2003, p.16). It is paradigmatically pragmatist, says Fodor, "that having a concept is being able to *do* certain things rather than being able to *think* certain things" (Fodor 1995, p.7). It should go without saying that Fodor is against Pragmatism.[12] We have seen that for Fodor, having the concept F is a matter of being able to *think* about Fs as such, i.e., a matter of tokening mental representations about Fs in the mind. For pragmatists, in contrast, having the concept F is a matter of being able to identify Fs, sort Fs, and draw inferences from F, rather than having a token representation in the head. Thus, while proponents of the psychological view of concepts put emphasis on what is going on in the head when grasping a concept, pragmatists put emphasis on what kind of abilities a creature must possess in order for her to count as having a concept.

Although I am pretty confident that pragmatists have much to say about concept possession, I find the pragmatist view of concepts as abilities misleading. In my view, abilities presuppose concepts rather than the other way around. This idea has been suggested by Fodor (2003; 2004). However, my view rests on different grounds. Fodor argues that the pragmatist approach to concepts goes circular because pragmatists want the possession of concepts to depend on the possession of cognitive abilities — say, the abilities to sort and inferring — which, in turn, depends on previously having in the mind the conceptual contents that govern the exercising of such abilities (Fodor 2004). I follow a different line of reasoning. I think Fodor is on the right track when accusing pragmatists of circularity. But the circularity Fodor is pointing out does not rest, as he believes, on concept possession but on the very nature of abilities. Let me expand this.

Cognitive abilities are pretty similar to behavioral dispositions. From a behavioral point of view, there is no real difference between a rotten-fruit expert, who has

learned to sort out rotten fruit, and a rotten-fruit detector machine, which has been made for discriminating such fruit. From a conceptual point of view, however, there is a subtle difference between them. Although the rotten-fruit machine and the expert have something in common — i.e., they are both capable of displaying the same pattern of behavior under the same circumstances — intuitively, they are not doing the same thing. The machine cannot help but behave in the way it has been designed to. The expert, in contrast, behaves by virtue of exercising the ability to identify and sort rotten fruit.[13]

Thus, behavioral dispositions and cognitive abilities are closely related as they include the same behavioral constituent. However, they are not the same phenomenon. So, what makes behaving dispositionally different from exercising a cognitive ability? Cognitive abilities, unlike dispositions, have an intentional constituent which provides them with normative properties, namely: concepts. In effect, a disposition is just natural or artificial tendency or inclination (depending on whether it has been acquired naturally or *via* the intervention of an intentional agent such as in the case of machines and other devices) to behave or react just the same under the same circumstances. An ability is more than just the tendency or inclination to behave in this way. Behaving by virtue of exercising a cognitive ability involves behaving *in virtue of* a conceptual content which sheds light on the way one *ought* to behave. Thus, while dispositions involve behaving the same way in each encounter with the same circumstances, abilities involve behaving in a way that satisfies the conditions or standards that concepts prescribe.

To illustrate my point, let me introduce the following case. Suppose we have to explain to someone what the disposition to discriminate red objects consists in. We might correctly say that the disposition to discriminate red objects is the tendency or inclination to collect all and only objects that match the extension of the concept "red". Clearly, the disposition to discriminate red stuff is not determined by the concept "red". For, in order for someone to possess such a disposition, having the inclination to collect objects which merely match the extension of "red" is enough. But suppose we are required to explain to the same person what the cognitive ability to sort red objects consists in. Of course, we cannot say that the ability to sort red thing is the tendency or inclination to collect all and only objects which match the extension of the concept "red". Otherwise, the distinction between dispositions and cognitive abilities would collapse. Thus, the ability to sort red stuff must involve something else. But what else?

A wise strategy to tackle this question is to look for clear-cut differences between disposition and abilities and get straight about them. But as soon as we start seriously looking for such differences, concepts come immediately on the scene. For, behavioral dispositions are tendencies to behavior. As such, they are simply acquired, actualized, and lost. Abilities, in contrast, are more sophisticated patterns of behav-

ior, as they involve learning-processes and correctness conditions. In other words, abilities — unlike dispositions — are governed by both normative predicates such as "correctness" and "rightness", and cognitive predicates such as "learning". And these differences, although minor at first glance, reveal a lot about the ontology of abilities. For, what makes a course of action a cognitive-normative one, one that can be learnt and exercised correctly or incorrectly, are concepts. Indeed, concepts are what provide cognitive abilities with prescriptive contents which specify the conditions under which their exercising is correct, and on which the process of learning them rests. Without such conceptual standards, there would be no constraint on how a course of action ought to be carried out, leaving the cognitive-normative dimension of cognitive abilities meaningless.

So, we may answer the previous question now by saying that the ability to sort red stuff is not only the tendency or inclination to collect all and only the objects which merely match the extension of the concept "red", but the tendency or inclination to collect these and only these objects *insofar as* they and only they do fall under the extension of the concept "red". In short, the ability to sort red objects is not just the tendency to collect red objects but the tendency to do so *by virtue of the fact* that these and only these objects fall under the extension of the concept "red". Naturally, having the ability to sort red objects necessarily involved — unlike having the disposition to collect them — a cognitive contact with the concept "red". For, in order for someone to be able to collect red objects in virtue of the fact that they and only they fall under the extension of "red", having a certain idea of which objects do fall under the extension of the concept "red" is required. Without such cognitive contact with the conceptual content "red", sorting red objects would be a matter of covariating with objects that match the extension of "red", rendering the distinction between behaving dispositionally and exercising a cognitive ability senseless.[14]

This example shows that cognitive abilities, when taken as such and not just as mere behavioral dispositions, involve conceptual resources. To an important extent, cognitive abilities are patterns of behavior. But, unlike dispositions, they also involve conceptual contents which prescribe how someone ought to behave in order to exercise them correctly. Without such conceptual standards, such abilities would be *intentionally* blind. Their exercising would be nothing but covarying with certain conditions. But, if cognitive abilities are concept — governed patterns of behavior, concepts cannot be cognitive abilities nor can these abilities explain them — on pain of falling into a vicious circle comparable to Fodor's. For, when one is asked to explain the nature of cognitive abilities, it is impossible to do so without bringing into play what pragmatists wanted to explain in terms of them: concepts.[15]

Now, although I am suggesting that cognitive abilities presuppose concepts rather than the other way around, I am sympathetic to the view that identifies the possession of concepts with the possession of cognitive abilities. Sellars used to say that language

is prior to thought in the order of knowing, but thought is prior to language in the order of being (Sellars 1981). I think this insight accommodates the case of concepts as well. In my view, concepts are prior to abilities in the order of being, but abilities are prior to concepts in the order of knowing. Let me be clear about this. We have seen that cognitive abilities are special kinds of dispositions: ones which involve conceptual standards. This means that concepts are prior to cognitive abilities. But, from a methodological point of view, these abilities are prior to concepts. That is, although cognitive abilities depend on concepts to be what they are, we get to know what concepts are (come to individuate and theorize about them) by learning, exercising, and examining different cognitive abilities such as sorting and inferring. Of course, this is an empirical statement for which I cannot provide evidence here. But it leads to an interesting methodological thesis. It is pointless to state, as Fodor does, that we first have concepts in the mind — with which we primarily think — and later on we learn how to respond in accordance with them. We learn to think conceptually while learning to respond to the demands of the environment. But, more important, we learn things about concepts by scrutinizing abilities. Cognitive abilities are our first theoretical entry to concepts.[16] However, we do not have to conclude from what I am suggesting that concepts are cognitive abilities. Concepts are what we grasp when learning these abilities.

4. Concepts as Rules: an Alternative Proposal

Having shown that concepts are neither mental representations nor abilities, in this section I want to outline an alternative proposal, namely: concepts as rules. In section 3, I pointed out that Kant and Frege took concepts to be sort of norms, functions or laws of correlation which prescribe the circumstances under which the application of concepts in possible judgments is correct. This view brings the normative-epistemic dimension of concepts into play. Concepts are indeed some kind of rules. Thus, having a concept involves knowing how to apply it correctly in possible judgments, and knowing how to apply it correctly in possible judgments involves, in turn, being sensitive to the rule that prescribes the circumstances under which its application in such judgments is correct.[17] I strongly believe that taking concepts as rules provides a better understanding of how we cognitively relate to concepts. In section 3, I showed that concepts cannot be identified with cognitive abilities insofar as these abilities presuppose conceptual standards rather than the other way around. In section 2, however, I argued that having concepts cannot be a matter of tokening mental representations in the head, on pain of missing the generality of concepts. In what follows, I will argue that if we conceive of concepts as abstract rules, we will be in a better position to understand what it is for a creature to be cognitively related to concepts, and how being thus related amounts to the possession of cognitive abilities.

Recently, Hannah Ginsborg proposed understanding concepts as rules. Following a Kantian approach, she suggests understanding observational concepts in terms of rules for perceptual discrimination (Ginsborg 2008, p.6). The author puts forwards the idea that the observational concept, say, "red" amounts to the rule for discriminating or sorting, in perception, red things from non-red things. In this line, she claims that *having* the concept "red" is a matter of *grasping* the rule that prescribes how someone ought to behave in perception in order to correctly discriminate red things from things which are not red.

I believe this view is promising. Nevertheless, Ginsborg leaves some loose ends. In my view, all concepts are rules. Observational concepts — i.e., those whose contents are based on observations — are rules for perceptual discrimination. Empirical concepts — i.e., those whose contents are based on observational concepts — are rules for material inferences. Logical concepts — i.e., those whose contents are based on syntax — are rules for formal inferences. Observational concepts are rules for perceptual discriminations that range over all their extension. For example, the concept "red" is the rule for sorting all and only red objects. The concept "square", in turn, is the rule for sorting all and only square surfaces. Empirical concepts, in turn, are rules that prescribe courses of action which range over all the possible material inferences they license. For example, the empirical concept "dog" is the rule for inferring the concepts "animal", "barking", "mammal", etc., from the observational concept "dog". Finally, logical concepts are rules that prescribe courses of action which range over all the possible formal inferences they license. For example, the concept "and" amounts to the Conjunction Introduction and Elimination rules.

This view accommodates both the pragmatist and the psychological approaches to concepts. On the one hand, it does some justice to the pragmatist view without collapsing cognitive abilities with disposition. Concepts are not abilities but rules. These rules, however, prescribe specific cognitive courses of action. Thus, this view makes the relationship between concepts and cognitive abilities much clearer than pragmatist approaches. Concepts are the sort of things that makes certain patterns of behavior genuine cognitive abilities. In other words, this view is able to explain the fact that when one is exercising an ability one is behaving in the light of a conceptual standard which prescribes how one ought to behave. On the other hand, this view also does justice to Fodor's main insight according to which having a cognitive ability involves some cognitive contact with the concept the content of which its exercising is guided by. And it does so without leaving the publicity and generality of concepts mysterious. This is so because, insofar as concepts are rules and rules are general mind-independent entities, it is easy to imagine what would be for different thinkers to share the same concept. Basically, two thinkers share the same concept, say "dog", if and only if they are able to behave in the same way (discriminating dogs) under the same circumstances (whenever they are presented with dogs) by virtue of following

the same rule (the rule for discriminating dogs). It remains an open question, of course, how it is that they come to follow the same rule, that is to say, what is for thinkers to *grasp* the same content. I will address this below.

Conceiving of concepts as rules posed in the past many challenges to early analytic philosophers. Most of these challenges were extensively discussed by Wittgenstein in his *Philosophical Investigations* (1953). One of these challenges was how to account for our capacity to follow rules. When inquiring about semantic rules, Logical Positivists realized that by bringing rules into play in semantics the following issue arises. the meaning of words are rules. Hence, mastering a word (e.g. "red") involves the capacity to follow a rule (e.g. "utter 'red' in front of red objects"). However, to follow a rule is not merely to behave in accordance with what the rule prescribes (e.g. to utter "red" in front of red objects), but to behave in this way *because of* what the rule prescribes (e.g. because there is a rule which orders to utter "red" when one is presented with red objects). Therefore, mastering a word involves grasping a rule. But, what would it be for a thinker to grasp a rule?

Some philosophers have thought that rules are imperative or indicative-ought sentences in a language that contains expressions for the actions the doing of which these rules prescribe. Thus, they have argued that grasping a rule is nothing mysterious but just a matter of mastering one of these sentences. Not only does this move raise a further issue — i.e., what is for someone to master a sentence? — but, if truth be told, it leads to a devastating refutation. As Sellars put it in the first lines of his remarkable "Some Reflections on Language Games", a language is a system of symbols the use of which is governed by rules. Thus, learning a language L is learning to obey the rules of L. But, *ex hypothesi*, the rules of L are sentences in a language which contain expressions for the actions the doing of which such rules prescribe. Consequently, learning a language L presupposes the ability to use a meta-language ML in which the rules of L are formulated. But this leads to a vicious regress. For, learning a meta-language ML presupposes the ability to use a meta-meta-language MML in which the rules of ML are formulated, and so on. Therefore, rules cannot be sentences in a public language that contains expressions for the actions the doing of which such rules prescribe.

A defender of LOT might argue that this refutation arises when explaining the capacity to grasp rules in terms of mastering a public language. However, if we adopt the Language of Thought hypothesis, the regress disappears. Thus, she might argue that grasping a rule is not a matter of understanding a public sentence where its prescriptive content is formulated, but a matter of tokening an imperative or indicative-ought LOT-sentence in the head. After all, LOT is the hypothesis according to which thinking is a matter of tokening mental linguistic-like sentences in the head. Although many defenders of the psychological view are likely to find this idea compelling, appealing to LOT-sentences does not really change things very much. Mental sentences

are sentences in a language, specifically in a language of thought. As such, they are composed of conceptual constituent — or as they called them: *mentalese* symbols. But, if concepts are rules, then having such *mentalese* symbols in the head should be a matter of obeying the rules for the manipulation of them. And we struggle with the same problem. For, the capacity to grasp such rules needs to be explained, and this explanation cannot rest on introducing new sentences in a meta-LOT in which the rules for the manipulation of LOT-symbols are formulated — on pain of falling into the same devastating vicious regress. The defender of RTM might still argue that having concepts is not a matter of obeying the rules for the manipulation of LOT-symbols but just a matter of tokening them in the head. Nevertheless, we have seen that tokening LOT-symbols in the head is not the same as becoming aware of their general contents. The moral: rules cannot be sentences either in a public language or in LOT, nor can becoming aware of their content be a matter of either understanding sentences in a public language or tokening *mentalese* symbols in the head.

In view of these concerns, many philosophers proposed a way of explaining the ability to grasp rules that presupposes neither a language nor mental representations. These philosophers may well be represented by Sellars's *Metaphysicus Platonicus*. *Metaphysicus* agrees that learning a language L is a matter of obeying the rules of L. However, he argues that obeying these rules does not presuppose mastering any other meta-language ML where the rules of L are formulated. On the contrary, *Metaphysicus* distinguishes between the linguistic formulation of a rule and its prescriptive content. In Sellars's words, "he compares the relation of rules to rule sentences with that of propositions to factual sentences ... and he argues that they are entities of which the mind can take account before it is able to give them a verbal clothing" (Sellars 1954, p.205). Thus, *Metaphysicus* claims that grasping a rule is becoming *aware of* the demands and permission the rule prescribes. Full stop. It goes without saying that this proposal leads to nothing good. We wanted an elucidation of what grasping a rule is, but now we are face to face with the mysterious faculty which Frege and many others were so prone to postulating. It is worth mentioning that appealing to such a mysterious awareness in order to explain our ability to make conceptual moves is not only theoretically suspect but worthless. As Sellars taught us, becoming aware of the content of a rule is also a move in a game.[18] As such, it is also governed by certain rules. Thus, *Metaphysicus* has no other option but to choose between explaining these moves in terms of obeying meta-rules, falling into the devastating vicious regress, or assuming that grasping rules are moves which do not rest on any cognitive contact with any meta-rules. *Metaphysicus* chooses the latter. However, this turns out to be a sham. For, we were initially told that making moves in a game was a matter of grasping the rules which govern such moves, and now we are told that grasping rules are moves in a special game where no rules govern such moves.

What is thus "grasping a rule"? Ginsborg has provided an original answer. To begin with, we should bear in mind that grasping a rule can be neither a matter of mastering a sentence in a public language nor a matter of having a token representation in the mind. Grasping a rule must be considered in a more primitive or basic sense. However, we should also bear in mind that grasping a rule should be more than just having the disposition to behave in accordance with what the rule prescribes. Otherwise, the distinction between behaving dispositionally and exercising a conceptual ability would collapse. In short, we need a good story of what grasping a rule is which does not appeal to representations nor does it reduce it to plain behavioral dispositions, and which, at the same time, could avoid *Metaphysicus*'s obscurity. Ginsborg has advanced an interesting thesis in this regard. Grasping a rule — Ginsborg argues — is neither a matter of having a representation of it in the mind nor a matter of mastering a public sentence in which the rule is formulated. On the contrary, grasping a rule is just being sensitive to the normative force of certain courses of actions. In other words, grasping a rule is just having the disposition to take certain patterns of behavior to be *appropriate* in the light of one's previous responses (Ginsborg 2011, p.237). Thus, having a concept is more than just being disposed to behave in accordance with what a rule prescribes. It involves, furthermore, being disposed to take the pattern of behavior the rule prescribes to be *appropriate* in the light of previous responses. For example, having the concept "red" is not merely being disposed to discriminate red objects. It is being disposed to both discriminate red objects and to take this pattern of behavior to be appropriate in the light of what you have been doing in the past. Of course, having the disposition to take a pattern of behavior to be appropriate must be understood in non-representational terms. What is interesting about Ginsborg's proposal is that grasping a rule — and consequently, mastering a concept — does not involve any explicit or implicit cognitive contact with its prescriptive content. According to this proposal, in order for a creature to count as grasping a rule, it is not required that she have in the mind what the rule prescribes. It is enough that she be able to behave in accordance with what the rule prescribes with a *primitive awareness* that in behaving this way she is behaving appropriately — though she be unable to either tell or represent why this course of action is the appropriate one, that is, she need not have in the mind nor need she be able to put in words the content of the rule that justifies her behavior (Ginsborg 2011, p.234).

Ginsborg has advanced a very promising thesis. This view allows us to address the issues raised by both defenders of the psychological view and pragmatists properly. On the one hand, it accounts for grasping a rule in a way that presupposes no awareness of any representational linguistic-like episode concerning the content of rules, avoiding the problems LOT faces. On the other hand, it accounts for the close relationship between concepts and abilities without collapsing abilities with dispositions. Grasping rules is more than having plain first-order dispositions. It involves,

furthermore, second-order normative dispositions, that is, dispositions that take first-order dispositions as inputs and produce as outputs normative attitude towards those inputs.

Now, although Ginsborg's proposal is promising, I find some problems, especially when it comes to what it is for a creature to have a primitive awareness of appropriateness. Throughout her "Primitive Normativity and Skepticism about Rules" (2011), Ginsborg exemplifies this primitive capacity by showing how linguistic children — kids who already have a language which they can express their normative attitudes with — are normally prone to claiming to the appropriateness of their responses when following the "add-two" rule (e.g., by repeating "42" after "40" and insisting that "42" is the *right* thing to say after "40"), although they are unable to inform what it is that (the rule) that justifies their responses (Ginsborg 2011, p.234). The problem I find is that claiming to the appropriateness of a specific course of action, though primitively, requires a comprehension of the normative concept of appropriateness. After all, when claiming that your response is appropriate, though primitively (i.e., though you do not have in the mind the rule that justifies your response), you are making a linguistic move, one which requires, at a minimum, mastering the linguistic predicate "appropriate" (or similar predicates such as "right" or "fit"). Not only does this move pose a problem for creatures who either do not or cannot master such linguistic predicates but, worse still, it leads to a vicious regress. For, mastering the linguistic predicate "appropriate" should involve, though primitively, grasping the rule for the use of it. But we were told that grasping a rule was a matter of being able to primitively claim to the appropriateness of the responses the rule prescribes. Therefore, grasping a rule (e.g., the "add-two") will require grasping a meta-rule (which prescribes how someone ought to primitively claim to the appropriateness of the responses that the "add-two" rule prescribes) which, in turn, will require grasping a meta-meta-rule, and so on, in a vicious regress.[19] I have a different story to tell. I agree with Ginsborg that grasping a concept should be viewed as a matter of being sensitive to the normative force of certain courses of actions. But, as I see it, being sensitive to the normative force of certain courses of actions should not be a matter of being disposed to claim to appropriateness. Being sensitive to the normative force of certain courses of actions, I argue, is a matter of being sensitive to errors when responding in accordance with what a rule prescribes. Let my clarify this.

Grasping a rule, in this primitive sense I am proposing, is being sensitive to errors. And being sensitive to errors is not-as an Intellectualist (Davidson 1982, for example) would suggest-being linguistically aware of them. Otherwise, a new vicious regress would obtain. In my view, being sensitive to errors means being *spontaneously* disposed to make whatever is behaviorally required to reestablish a pattern of behavior that one is actually disposed to follow and which has been altered due to either external or internal events. By "spontaneously disposed" I mean that the self-correcting

responses one must be disposed to carry out must be neither afforded by the environment (i.e., the "solution" should not be presented in perception) nor the result of a plain operant conditioning (cf. Camp 2009, p.292). When a creature exhibits such a spontaneous capacity to correct some of its own responses which, for different reasons, have deviated from the rule she is previously disposed to conform to, then the creature is responding to her environment with a primitive sensitivity to the normative force of it. Thus, according to my proposal, having the concept, say, "red" is being disposed to both behave in accordance with the rule for discriminating red objects and to spontaneously get those responses that deviate from what this rule prescribes back on track.[20]

It is not difficult to think of cases that meet these two conditions. Before mastering linguistic predicates such as "appropriate", little children are very good at rejecting wrong patterns of behaviors and getting things straight quite spontaneously. Recent empirical evidence from developmental psychology, for example, suggests that early infants (kids who are between one and a half and three years old) are able to discriminate, match, and categorize colors long before they are able to name them properly — something which normally happens at around the age of four (cf. Pitchford and Mullen 2006; Wagner *et. al.* 2013). In typical scenarios, toddlers are presented with several boxes of different colors, and they are asked to take different colored objects and put them inside the boxes they belong. Not only do they learn relatively fast to put the right objects into the right boxes (e.g., red stuff into the red-box, green stuff into the green-box, etc.), but at certain stage of the process they learn to react negatively and correct themselves and others when objects are introduced in the wrong boxes (e.g., when a green object is introduced in the red-box) by taking the objects out of the wrong boxes and put them inside the boxes they belong. It should go without saying that, at that age, children are not only unable to put into words the rules that govern and justify their patterns of behavior but, more important, they are not even able to linguistically claim that their responses are appropriate, right, or even wrong. This shows that, to an important extent, young children are able to response to stimuli in ways which are not merely reliable but normative long before they are able to linguistically claim to the appropriateness of their own responses.[21]

Now, it might be suggested that the view I am proposing falls short of a fully dispositional approach to normativity, since it seems to illegitimately presuppose two cognitive concepts. On the one hand, it seems to presuppose a non-linguistic awareness of error which is not only unexplained, but seems to lead to a new vicious regress. On the other hand, it seems to presuppose the normative phenomenon of "deviating from a rule", since it is assumed that some of a creature's behaviors deviate from a rule she is apparently disposed to conform to, and not that such behaviors are part of one and only one pattern of behavior.

Regarding the first objection, it worth noticing that the view I am defending is

dispositional in that it seeks to account for a primitive sensitivity of error in non-cognitive terms, avoiding any vicious regress. As I see it, sensitivity of error, in such a primitive sense, is a special kind of *second-order behavioral disposition*: it involves just being behaviorally disposed to spontaneously correct those discriminations that deviate from the rule one is disposed to conform to. Thus, it is not required that the creature have any previous awareness of any correcting-rule or of any concept of error in order for her to behave in such a way. In other words, it is not required that the creature be able to judge either in a public language or in a language of thought that her discriminations went wrong in order for her to correct them. It is enough that she be disposed to do so while discriminating.[22]

The second objection is related to the first in that, apparently, I am illegitimately assuming that some behaviors *deviate* from a rule a creature is disposed to conform to when, in fact, it might be the case that the creature is conforming to a "disjunctive rule" — one which prescribes two different courses of action in the light of equal stimuli. This objection-which has been called the "indeterminacy problem" or "*gerrymandering*" (Brandom 1994, p.28) — poses an authentic challenge to any dispositional theory of content, and it has received in the literature many answers.[23]

Now, in my view, being primitively sensitive to errors when following a rule is not just being disposed to indistinctively behave in two different ways in the light of the same set of stimuli, but being disposed to respond, in the light of the very same stimulus, first in one way (the incorrect one) and, then, in the way the creature has been responding to stimuli of the same type in the past. For example, having the observational concept "red" amounts to:

(i) having the first-order disposition to discriminate red stuff from non-red stuff, and

(ii) having the second-order disposition to spontaneously correct those discriminations where, for example, blue stuff is discriminated as red;

where having this second-order disposition amounts to:

(iii) having the disposition to discriminate, at first sight and under specify misleading conditions, blue stuff in the way one is disposed to discriminate red stuff, and

(iv) having the disposition to discriminate, under more careful attention, those blue objects that have been previously discriminated as red in the way one is disposed to discriminate blue stuff — i.e., in the way one has been regularly discriminating blue stuff in the past.

It worth noticing that, in order for the sensitivity to error to be genuine, the inverse relationship must also obtain. That is, if the creature happens to discriminate a red

object in the way she is disposed to discriminate blue stuff, and she possesses the observational concept "red", then it is expected that, after making this mistake, she be disposed to discriminate this object in the way she has been regularly discriminating red stuff in the past. This implies that, in order for a creature to possess the observational concept "red", she must also possess others color concepts such as "blue". After all, when correctly discriminating the blue object that she had previously discriminated as red, or the red object that she had previously discriminated as blue, the creature is being sensitive to error in both directions: as to the rule for discriminating red stuff and the rule for discriminating blue stuff. So, it is not possible to possess an observational concept unless one possesses other observational concepts related to it. Errors, in other words, are dependent on a rich *history* of multiple discriminatory dispositions.

There are many loose ends related to normativity that, unfortunately, I will not be able to tie up here. Nevertheless, I would like to briefly summarize some of the positive points that the view I am defending here advances in comparison with the psychological and the pragmatist views of concepts. On the one hand, my view accommodates the fact that when someone learns an ability she does not merely acquires a disposition to behave differentially but becomes sensitive to the normative force of certain course of action, accounting for the intuitive relationship between concepts and abilities in a way that does not collapse abilities with dispositions. On the other hand, it accounts for the sensitivity to the normative force of dispositions without presupposing any awareness of linguistic-like representational episodes, avoiding, in turn, any possible vicious regress.

5. Conclusion

In this paper, I argued that concepts should be identified with neither mental representations nor abilities. Concepts are normative entities and, as such, they should be identified them with rules. Although identifying concepts as rules poses problems for any theory of concept possession, I argued that those problems can be overcome if we understand the cognitive relationship between rules and thinkers in a way that presupposes no awareness of any linguistic-like representational episode, namely: in terms of a primitive sensitivity to errors. When a creature discriminates her environment with a primitive sensitivity to errors, she responds to her environment not only reliably but conceptually.

References

Beck, J. 2013. Sense, Mentalese, and Ontology. *Protosociology* **30**: 29–48.

Bermúdez, J. L. 2003. *Thinking Without Words*. Oxford: Oxford University Press.
———. 2010. Two Arguments for the Language-Dependence of Conceptual Thought. *Grazer Philosophische Studien* **81**: 37–54.
Brandom, R. 1994. *Making It Explicit*. Cambridge: Harvard University Press.
———. 2010. Conceptual Content and Discursive Practice. *Grazer Philosophische Studien* **81**: 13–35.
Camp, E. 2007. Thinking With Maps. *Philosophical Perspectives* **21**: 145–82.
———. 2009. Putting Thoughts to Work: Concepts, Systematicity, and Stimulus-Independence. *Philosophy and Phenomenonological Research* **78**: 275–311.
Carruthers, P. 2009. Invertebrate Concepts Confront the Generality Constraint (and Win). In: R. Lurz (ed.) *The Philosophy of Animal Minds*, pp.89–107. New York: Cambridge University Press.
Davidson, D. 1982. Rational Animals. In: *Subjective, Intersubjective, Objective*, pp.95–105. Oxford: Oxford Clarendon Press.
Dummett, M. 1993. *Seas of Language*. Oxford: Oxford University Press.
Evans, G. 1982. *The Varieties of Reference*. Oxford: Claredon Press.
Fodor, J. 1975. *The Language of Thought*. Cambridge: Harvard University Press.
———. 1987. *Psychosemantics*. Cambridge: MIT Press.
———. 1993. Fodor's Guide to Mental Representation: The Intelligent Auntie's Vade-Mecum. In: A. I. Goldman (ed.) *Readings in Philosophy and Cognitive Science*. Cambridge: MIT Press.
———. 1995. Concepts; A Potboiler. *Philosophical Issues* **6**: 1–24.
———. 1998. *Concepts: Where Cognitive Science Went Wrong*. Oxford: Oxford University Press.
———. 2003. *Hume Variations*. Oxford: Oxford University Press.
———. 2004. Having Concepts: A Brief Refutation of the Twentieth Century. *Mind & Language* **19**: 29–47.
———. 2008. *LOT 2*. Oxford: Oxford University Press.
Frege, G. 1891[1980]. Function and Concept. In: P. Geach; M. Black (eds.) *Translations from the Philosophical Writings of Gottlob Frege*. Oxford: Blackwell.
———. 1892[1980]. On Sense and Reference. In: P. Geach; M. Black (eds.) *Translations from the Philosophical Writings of Gottlob Frege*. Oxford: Blackwell.
Ginsborg, H. 2008. *Concepts as Rules: A Kantian Proposal*. Unpublished manuscript.
———. 2011. Primitive Normativity and Skepticism about Rules. *Journal of Philosophy* **108**: 227–254.
Glock, H. J. 2006. Concepts: Representations or Abilities? In: E. Di Nucci; C. McHugh (eds.) *Content, Consciousness, and Perception: Essays in Contemporary Philosophy of Mind*, pp.37–61. Cambridge: Cambridge Scholars Press.
———. 2010. What Are Concepts? *Conceptus* **96**: 7–39.
Heck, R. 2007. Are There Different Kinds of Content? In: J. Cohen; B. McLaughlin (eds.) *Contemporary Debates in Philosophy of Mind*, pp.117–138. Oxford: Blackwell.
Horwich, P. 2010. Regularities, Rules, Meanings, Truth Conditions, and Epistemic Norms. In: *Truth Meaning Reality*, pp.113–141. Oxford: Oxford University Press.
Kant, I. 1998. *Critique of Pure Reason*. Cambridge: Cambridge University Press.
Machery, E. 2009. *Doing without Concept*. Oxford: University Press.

Margolis, E.; Laurence, S. 1999. Concepts and Cognitive Science. In: E. Margolis; S. Laurence (eds.) *Concepts: Core Readings*, pp.3–81. Cambridge: MIT Press.

———. 2007. The Ontology of Concepts. Abstract Objects or Mental Representations? *Nous* **41**: 561–593.

McDowell, J. 2009. Conceptual Capacities in Perception. In: *Having the World in View. Essays on Kant, Hegel and Sellars*, pp.127–144. Cambridge: Harvard University Press.

Millikan, R. 2000. *On Clear and Confused Ideas*. Cambridge: Cambridge University Press.

Peacocke, C. 1992. *A Study of Concepts*. Cambridge: MIT Press

Pitchford, N.; Mullen K. 2006. The Developmental Acquisition of Basic Colour Terms. In: N. Pitchford; C. Biggam (eds.) *Progress in Colour Studies: Volume II*, pp.139–158. Psychological aspects. Amsterdam: Benjamins.

Prinz, J. 2002. *Furnishing the Mind*. Cambridge: MIT Press.

Pylyshyn, Z. 1984. *Computation and Cognition: Toward a Foundation for Cognitive Science*. Cambridge: MIT Press.

Rescorla, M. 2009. Predication and Cartographic Representation. *Synthese* **169**: 175–200.

Sellars, W. 1954. Some Reflections on Language Games. *Philosophy of Science* **21**: 204–228.

———. 1981. Mental Events. *Philosophical Studies* **39**: 325–45.

Schneider, S. 2011. *The Language of Thought: New Philosophical Directions*. Cambridge: MIT Press.

Wagner, K. et al. 2013. Slow mapping: Color word learning as a gradual inductive process. *Cognition* **127**: 303–17.

Weiskopf, D.; Bechtel, W. 2004. Remarks on Fodor on Having Concepts. *Mind and Language* **19**: 48–56.

Wittgenstein, L. 1953. *Philosophical Investigations*. Oxford: Blackwell.

Notes

[1]Concepts may be said to be normative in at least two different senses: a weak sense and a more substantive sense. According to the weak sense, some concepts are normative in that what falls under them has normative properties. So, for example, the concepts "being honest" and "being a thief" have normative significance insofar as being a thief is — morally, legally, etc. — wrong whereas being honest is good. There is, however, a more substantive sense according to which all concepts are normative. According to this view, concepts are *intrinsically* normative in that they essentially prescribe how certain things ought to be done. When I claim that concepts are normative, I am referring to the second or more substantive sense of this expression. I thank one of the two reviewers for bringing this distinction to my attention.

[2]Although the word "psychologism" was originally meant to have negative connotations, I am taking it here in the more neutral sense. It is philosophical common knowledge that, at least since Frege and Husserl, "psychologism" was taken to refer negatively to those theories that mistakenly identify non-psychological entities with psychological ones. In this paper, I take "psychologism" only to refer to the view that concepts are mental objects which "are used in the psychological processes underlying the higher cognitive competences" (Machery 2009, p.10).

[3]There are, of course, many well-known theories of the mind that support the representational view of thinking but get explicitly away from LOT. In particular, I am thinking of philosophers and cognitive scientists such as Bermudez (2003), Camp (2007; 2009), Heck (2007), Millikan (2000), Rescorla (2009), and others, who have recently argued that not all cognition involves linguistic-like representational episodes. Millikan (2000), for example, argues that some basic concepts — what she calls "substance concepts" — are non-linguistic representations. Bermudez (2003), in turn, has argued that there are certain mental representations — what he calls "protothoughts" — which do not involve linguistic vehicles. Finally, Rescorla (2009), Camp (2007), Heck (2007), and others, have argued that there are ways of thinking about our surrounding that involve non-linguistic representations such as cognitive maps.

[4]Although the thesis that concepts are objects might be puzzling, it is an explicit assumption that advocates of LOT make.

[5]There is a wide variety of theories within RTM that conflict as to the psychological nature and structure of concepts. Prototypes, exemplars, theory's theories and conceptual pluralism are just some of the strategies philosophers and psychologists have recently followed. If I focus on the LOT version of RTM here, it is just because of a matter of simplicity. As I will show latter, no matter how defenders of the psychological view take concepts to be structured, my criticism is prior in that it attacks the heart of RTM, that is, the view that concepts are mental objects.

[6]There is no consensus among philosophers as to the ontology of types. Some authors think of types as kinds whereas others as sets. A third position takes types to be laws. In this paper, I will follow the standard view (as Fodor and Margolis and Laurence do) according to which types are abstract objects.

[7]This is not to say that in order to represent dogs as such, one needs to meta-represent that one is representing dogs as such. In my view, representing dogs as such is a middle way between having in the mind the entities or vehicles that convey the conceptual content "doghood" and representing that one is representing a dog as such.

[8]Although Kant was never explicit about the ontology of concepts, there should be no doubt that for Kant concepts are not to be understood in terms of mental objects but in terms of transcendental (or universal) conditions for entertaining empirical thoughts (Kant 1998, A11-B25). This interpretation follows from the famous distinction that Kant draws between empirical reality and transcendental ideality. As Kant himself recognized, concepts belong to the latter and, as such, they are independent of any empirical mind — though they are an essential part of the transcendental machinery. It remains unknown, of course, what the realm of transcendental ideally is supposed to be in Kant's critiques, but it is certain that it is not inside empirical heads.

[9]In the recent literature, however, Frege's view of concepts has been closely related to his famous senses. Senses are neither representations nor words. Senses are, in Frege's words, "the way of being given of a sign" (Frege 1892, p.26). Concepts have been related to Frege's Senses in that they cut the world as narrow as concepts. That is, Senses carry the cognitive content of words, an activity that concepts were traditionally supposed to do (see Evans 1982 and Peacocke 1992).

[10]Millikan, for example, defends a gradualist theory of concepts according to which substance concepts are ontogenetically prior to property concepts. As she sees it, identifying and

re-identifying substances in new environmental contexts is cognitively prior to both classifying (sorting) them under general concepts in virtue of their properties and recombining substance representations with property representations (Millikan 2000, chap.3). Camp also defends a gradualist approach to concepts but, unlike Millikan, she puts emphasis on the Evans' Generality Constraint, that is, the ability for creatures to systematically recombine both singular and general representations in active thinking (Camp 2009). Peter Carruthers (2009) and Richard Heck (2007) also take the Generality Constraint as the fundamental condition for concept possession, but they interpret this constraint in different ways.

[11]Responding conceptually — Intellectualists argue — is a matter of being able to bring such responses into play in what Brandom has called "the game of giving and asking for reasons"; and activity which they take to be paradigmatically linguistic (Bermudez 2002, 2010; Brandom 2010; Davidson 1982; McDowell 2009).

[12]In Fodor's view, "...the defining catastrophe of analytic philosophy of language and philosophy of mind in the last half of the twentieth century" (Fodor 2003, pp.73–4).

[13]I do not deny that machines may eventually learn and exercise cognitive abilities. My point is that, if a machine can be regarded as doing the same thing we do when we exercise such abilities, then some of it patterns of behavior should be taken to be the result of excessing cognitive abilities rather than the actualization of purely first-order behavioral dispositions.

[14]The same goes for the identification and inferential abilities.

[15]In response to Fodor's circularity argument, Weiskopf and Bechtel (2004) have argued that pragmatists could avoid the circularity by interpreting these abilities in non-intentional terms. According to these authors, the circularity appears when explaining concept possession in terms of the possession of intentional abilities (abilities governed by conceptual standards). But if these abilities are understood in mechanical terms, the circularity disappears. I think Weiskopf and Bechtel are right, but at the expense of collapsing cognitive abilities with behavioral dispositions.

[16]Paraphrasing Sellars's famous Myth of John (1956), there was a time when our Rylean ancestors, used to exercising cognitive abilities of different kinds in a primitive way, without having any theory of concepts, but with a clear sense of what was cognitively right and wrong, came progressively to realize that, when following and coordinating cognitive courses of actions, they were abiding by certain cognitive standards and called them "concepts".

[17]It is important not to mistake the thesis that concepts are rules for the thesis that concept-possession involves some sensitivity to rules. Although, of course, they are conceptually related, the former operates at the ontological level whereas the latter operates at the cognitive level.

[18]"...that it is playing a game is indicated by the use of such terms as 'correct', 'mistake', etc., in commenting on them" (Sellars 1954, p.206).

[19]In response to a related objection, Ginsborg argues that the predicate "appropriate" is special in that "our grasp of it does not seem to depend on a capacity to 'go on' from the use of the corresponding word in particular cases" (Ginsborg 2011, p.252). However, she admits that "...in taking for granted the consciousness of normativity, my approach falls short of a fully general account of intentional content" (Ginsborg 2011, p.252). At this point, Ginsborg has turned out to be a new version of *Metaphysicus*. For, either she explains our grasp of "appropriate" in terms of making moves in a game, which leads to a vicious regress, or she argues that grasping this concept is a move in a special game where no rules govern such

moves, which is exactly what *Metaphysicus* proposes. In my opinion, a better explanation of the sensibility to the normativity of concepts should rest on a naturalized approach to error.

[20]This view has a family resemblance with Paul Horwich's notion of implicit rule-following (2010). According to Horwich, a subject *S* implicitly follows a rule R if and only if (a) *S*′ activity is governed by the ideal law *R* and (b) there is some tendency for *S* to correct instances of non-conformity (i.e. to react against his initial inclinations) (see Horwich 2010, p.117). I thank one of the reviewers for pointing this out.

[21]Evidence from developmental psychology suggest that until the age of four, children are not able to pass the "false-belief" test — a test that has been designed to prove awareness of error. Coincidentally, it has been also shown that it is not until that age that children get a full understanding of color-terms (see Wagner et. al. 2013). My point is that children are able to discriminate colors and respond normatively to them long before they pass the false-belief test and learn the proper color-terms.

[22]Someone might object that my view presupposes a concept of "spontaneity" which seems to become corrections a sort of "behavioral miracle". For reasons of extension, I will leave open the question as to how to account for such a spontaneous capacity. It might be accounted for in, say, biological-functional terms (Millikans 2000), or in terms of intersubjective practices. As I see it, spontaneity is just a way of being disposed to behavior which presupposes no operant conditioning. I do not rule out, however, other alternatives.

[23]See, for example, Fodor's famous disjunction problem in Fodor (1987), pp.101–2.

Acknowledgments

This paper was supported by the Consejo Nacional de Investigaciones Científicas y Técnicas, under a five-year doctoral scholarship (Beca Interna de Posgrado 2013-2018). I want to thank Mariela Aguilera, Liz Camp, Laura Danón, Hanjo Glock, Daniel Kalpokas, and one of the anonymous referees of this journal for useful comments and discussions on previous drafts.