May 2020

Cognitive Creatures and Conceptuality

William J. Gamrat
University of Wisconsin-Milwaukee

COGNITIVE CREATURES AND CONCEPTUALITY

by

Will Gamrat

A Thesis Submitted in

Partial Fulfillment of the

Requirement for the Degree of

Master of Arts

in Philosophy

at

The University of Wisconsin-Milwaukee

May 2020

ABSTRACT

COGNITIVE CREATURES AND CONCEPTUALITY

by

Will Gamrat

The University of Wisconsin-Milwaukee, 2020
Under the Supervision of Professor Rachel Goodman, PhD

What does it take for thought to be *conceptual*? And which creatures get to count as having *conceptual* thoughts? This paper explores these questions. The discussion follows Elisabeth Camp by contrasting two families of views. One family of views endorses that conceptual thought is the ability to represent the world in a way that brings about action. The other family wants more of conceptual thought: namely, that it exhibit *objectivity* and, in particular, that it come with the ability to speak a language. This discussion also follows Camp in looking for a better way to tie *activeness* to *conceptual* thought than those that have, generally, dominated the philosophical literature. It departs from Camp, however, by arguing that her account also fails to give a workable way of specifying this connection. By drawing on the idea that *conceptuality* is tied to *agency*, it suggests a different way to specify the connection. The suggestion is that *flexibility*—an open-ended use of cognitive abilities that deals with environmental features in novel ways—provides a way to specify the connection between *activeness* and *conceptual* thought.

TABLE OF CONTENTS

When considering what it is to have concepts, and so what sense to give to the word 'concept'[1], there are two views which have played an important part in the thinking of cognitive scientists and philosophers: *minimalism* and *intellectualism*. *Minimalism* is a permissive view allowing that any structured, representational state is conceptual. But there are reasons to find this view lacking. You might think that *conceptual* thought does more than represent[2]. It is at least intuitive that there are plenty of creatures or systems that have representational states but aren't conceptual thinkers. For example, ants seem to have representational states but don't seem to be conceptual thinkers. *Intellectualism* requires more of *conceptual* thought, specifically that it do more than represent the world. It requires that thought must be objective to count as conceptual. Intellectualism takes the ability to speak a language or appreciate error (*metarepresentation*[3]) to be the mark of conceptual thought.

Elisabeth Camp[4] argues for a sense of 'concept' meant to be a middle ground between minimalism and intellectualism. She hopes to preserve what is good in both while inheriting the pitfalls of neither. She claims conceptual thought does do more than just represent the world—contra minimalism—but, denies that creatures need the ability to speak a language or have metarepresentational abilities to be conceptual thinkers—contra intellectualism. She, instead, supplements representing the world with conceptual thought being *stimulus-independent*, that is, active enough so as not to be wholly determined by the environment. As Camp understands it, *stimulus-*

[1] A note on formatting: I use single quotes to mention a word, double quotes to quote someone, capitals for concepts, square brackets for thoughts, and italics for emphasis or to flag an important term.
[2] There are a lot of things that could be entertained relative to my use of this word. I don't get into them here. For a discussion of some philosophical and methodological issues in the area, see, e.g.; Stich, Stephen., "What Is a Theory of Mental Representation?", *Mind*, Vol. 101.402, April 1992, pp. 243-61.
[3] Metarepresentations are representations of representations, i.e. second-order representations. Metarepresentation, as an ability of the sort the intellectualist is interested in is, roughly, an ability which allows for the check-ability of representations against the world, i.e. to recognize the falsity or lack of warrant for beliefs by use of second-order representations.
[4] "Putting Thoughts to Work: Concepts, Systematicity, and Stimulus-Independence", *Philosophy and Phenomenological Research*, Vol. LXXVIII No. 2, (March 2009), pp. 275-311.

independence expresses the requirement that, *which* thoughts a creature thinks are not triggered by environmental stimuli.

There are two problems with Camp's view. First, I argue that Camp's sense of 'concept' fails to distinguish itself from minimalism in the specific way she requires. Second, it relies on the metaphysically suspicious idea that the activeness of thought is constituted by freedom from triggering. Even so, I show that Camp has insights worth retaining. I conclude by providing an alternative to Camp's view which respects her insights and charts a middle ground between minimalism and intellectualism. I privilege *flexibility*—an open-ended use of cognitive abilities that deals with environmental features in novel ways.

Minimalism

As its name suggests, *minimalism* is a permissive view of conceptuality. The *minimalist* claims that any structured, representational state is conceptual.

The story is roughly this. The function of a thought is to represent the world in a way that leads to action[5]. So, having a thought is just being in a state which represents some feature of the world and can bring about beneficial behavior. The minimalist has another requirement for conceptual thought though—it must be *structured*[6]. Whole thoughts are composed of redeployable concepts. The minimalist claims we can think of concepts as redeployable representational abilities, or representations, which represent objects, properties, etc. These abilities, or representations, compose a whole thought when that thought represents some state of affairs in which the objects, properties, etc., represented by the abilities figure.

[5] I mean 'action' in a relatively thin sense, as in, 'behavior that is beneficial for the organism or system in question'.
[6] The requirement that conceptual thought be structured is most often an appeal to the Generality Constraint as found in Gareth, Evans., (ed. J. McDowell), *Varieties of Reference*, OUP: NY, 1982, p. 104.

Camp summarizes this claim: distinctively conceptual thoughts must be "structured…at least in the sense that the ability to think them results from the exercise of distinct, systematically interacting representational abilities"[7]. Thus, if a creature has the concepts MAC, IS A DOG, and IS A CAT that creature is able to form the thought [MAC, IS A DOG][8] and [MAC, IS A CAT][9]. This creature may not *actually* have either of these thoughts. It does, though, have the ability to have such thoughts.

The minimalist adds the requirement that conceptual thought be structured to support some plausible observations. First, remember thoughts need to represent the world in a way that leads to action. This requires that thoughts connect to one another in some rational way. For example, arguably there must be some rational connection between the belief that there is ice cream in front of me and the desire that I consume ice cream for those thoughts to lead to ice cream consumption. One way to specify this connection, and the one favored by the minimalist, is by sameness of representational ability across thoughts. That is, I use the same ice-cream concept in my belief and desire.

Second, consider a creature called 'Mac'. When I drop a treat on the floor, Mac comes running. But, presumably, Mac's mind isn't all that expansive. What explains Mac's behavior is the added requirement on conceptual thought. Finite though Mac's mind is, he's capable of thinking indefinitely many thoughts. He's capable of thinking those thoughts since his whole thoughts compose using redeployable representational abilities. Mac doesn't need a brand new and distinct ability each time he does this treat-routine. He's just reusing the same abilities to represent novel states of affairs. We can make sense of the treat-routine by appeal to sameness of representational ability across Mac's desires, beliefs, and intentions.

---

[7] Camp: 2009, 277-8

[8] Here's what I don't mean. I don't mean that representational abilities have the predicative structure that can be read off from my above characterization of such concepts. Although, they may.

It seems that minimalism explains how it is that representational states can lead to action, given that they are appropriately structured. That is, whole thoughts are composed of the same redeployable representational abilities. As a pay-off, we can make sense of how representational abilities thus related aid and guide creatures in acting.

I will follow Camp in using "basic cognition"[10] or 'basic cognitive abilities'. These terms are shorthand for something like: a group of abilities/states which fulfill the basic function of thought—representing the world in a way that can lead to action. As discussed, the minimalist claims that thought needs to be structured in order to play the role it does in generating actions. For the minimalist, basic cognition *just is* conceptual thought. Camp says the same: "If this is right, though, then basic cognitive abilities perform all the tasks we originally demanded of concepts"[11].

We can note for now that basic cognition thus construed makes it unclear why we should not think of conceptual creatures as automata—merely passively reacting to environmental conditions. If all that is required for conceptuality is structured representation, then conceptual thinkers don't need to do anything more than differentially respond to their environment, provided their representational states are structured. Call this the *Problem of Passive Reactors*. For example, though honey bees have a "rich and interesting behavioral repertoire", which behaviors they exhibit seems dependent on things like the number of bees in the hive[12]. For a position to differ from minimalism, then, it must identify something more for conceptual thought to do[13]. That is, something more than can be done with representational states.

[10] *ibid.* 280
[11] *ibid.* 282
[12] Alison R. Mercer, "The Predictable Plasticity of Honey Bees", p. 64, in McEachern and Shaw, 2001, pp. 64-81.
[13] However, for an insightful defense of minimalism, see: Peter Carruthers, "ANIMAL MINDS ARE REAL, AND (DISTINCTIVELY) HUMAN MINDS ARE NOT", *American Philosophical Quarterly*, Vol. 50.3, 2013, pp. 233-48.

Intellectualism

Intellectualism requires more of conceptual thought. The *intellectualist* claims that conceptual thought cannot be merely representational. It must also be objective—conceptual thinkers, claims the intellectualist are cognizant of a world independent of their thoughts about it.

Conceptual thinkers need a complex mental life to support this. As before, conceptual thinkers must be able to connect their thoughts in a way that can lead to action but must do so in a way that respects the independence of the world. They must be able to check their thoughts against the world. A requirement like this lends objectivity to conceptual thought.

Intellectualists cash this out by requiring abilities which conceptual thinkers must possess: the ability to speak a language, or to represent one's own thoughts (metarepresentation)[14]. Under the heading of 'intellectualist' Camp cites a variety of thinkers: Davidson[15], McDowell[16], among others. Though there are differences, they agree that the abilities required for conceptuality will distinguish humans from other creatures.

Given this list of intellectualist-leaning thinkers it is no surprise that varied accounts of the view have been given. A characterization of those views is something like what follows. Let's imagine Mac's treat-routine again. I said before that it looked like Mac had some desires, beliefs, and intentions. This is what the intellectualist denies. They deny this since, on their account, Mac is missing something essential. Mac is missing the concept of BELIEF. As Davidson puts it, "…to be a rational animal is

[14] What this amounts to and how best to understand the relationship between objectivity, language, and metarepresentation has spawned a large literature from which objectors are not absent, see: Camp:2009, Hans-Johann Glock, "Animals, Thoughts and Concepts", *Synthese*, Vol. 123, 2000, pp. 35-64., and Ernest Lepore and Kirk Ludwig, *Donald Davidson: Meaning, Truth, Language, and Reality*, OUP: Oxford, 2005, Ch. 22.
[15] See, e.g.: Donald Davidson, "The Emergence of Thought", *Erkenntnis*, Vol. 51 No. 1, (Animal Mind) 1999, pp. 7-17. And Donald Davidson, "Rational Animals", *Dialectica*, Vol. 36, 1982, pp. 317-28.
[16] John McDowell, *Mind and World*, HUP, Cambridge, 1996.

just to have propositional attitudes"[17]. But a creature can't have a genuine propositional attitude without the concept of PROPOSITIONAL ATTITUDE.

To have a belief is to be able to tell, among other things, the difference between a true one and a false one. To do this, creatures need to be in a position to delineate between the two and the ability to speak a language provides for such delineation. By having the expressive resources of a language, thinkers better home in on the way the world is or could be. To be in a position to entertain ways the world *could* be is to be not merely at the mercy of the world. They do this by communicating their thoughts to one another making those thoughts subject to revision in answer to the way others think the world is. Humans, for instance, can think about things which are not currently in their environment. Humans also seem to have conceptual thoughts about things which have never been in their environment. So, the intellectualist has identified more for conceptual thought to do then minimalism has.

Intellectualism *may seem* to explain the division between the sort of thinking Mac does and the sort of thinking you do. You are conceptual, Mac is not. But some linguistic creatures, e.g. toddlers, do not seem to have a fleshed-out capacity for metarepresentation. Similarly, some creatures which seem to exercise a metarepresentational ability, e.g. chimpanzees, are not linguistic. Furthermore, it is not clear that giving linguistic creatures metarepresentational ability would qualify them for conceptuality and vice versa. So, as it turns out, it's unclear that the requirements of intellectualism capture the difference between *genuine* thinkers and mere representors. Call this the *Problem of Implausible Requirements*. To avoid it, we need something different than the requirements given by intellectualism[18].

[17] Davidson: 1982, 318.

[18] There are other notable objections to intellectualism to the extent which it endorses holism. I'm not going to get into them here but, see Fodor: 1998, esp. Appendix 5B, pp. 112-9. See also, Jerry Fodor and Ernest Lepore, *Holism: A Shopper's Guide*, Basil-Blackwell Ltd., Cambridge, 1992. (Esp. the preface of the latter.)

Camp's Project

For Camp, if these are the only two views on offer then one is faced with an unsatisfying choice. But Camp charts a third, one that is somewhere between minimalism and intellectualism. I now outline her view.

We should at least want conceptual thought to be active in the sense that it is not determined by its environment. Conceptual thinkers are able to represent plenty of things that they aren't presently bumping into. For instance, I often think about Mac even though he lives in a different state. Camp picks up on this: "genuine thought involves a clear distinction between representation and represented, so that the former can occur in even the latter's absence"[19]. Since minimalism does not satisfy this requirement, it falls prey to the Problem of Passive Reactors. Intellectualism, or at least one prominent variant, meets this requirement by requiring linguistic and metarepresentational ability. It, in turn, falls prey to the Problem of Implausible Requirements.

On Camp's assessment, what leads intellectualism to require linguistic ability is that this is indicative of a creature's representational abilities not being determined by its environment. This is because conceptual thinkers should be able to form judgments about things which are not currently presented to them and these are expressed, corrected, and justified in language. Conceptual thinkers can represent features of the environment independent of the immediate occurrence of those features. Intellectualism's attributions of conceptuality are rooted in stimulus-independence (in one sense). Stimulus-independence, in this sense, is had by creatures when they have the ability to represent a feature of the world when that feature is not in their immediate environment. Call this *stimulus-independence*$_1$.

[19] *ibid.* 288

Camp thinks *something* like stimulus-independence$_1$ is a good replacement for the abilities that cause trouble for intellectualism[20]. It does, however, require some modifications. As it stands, mere stimulus-independence$_1$ won't avoid the Problem of Passive Reactors. For even if a creature *can* represent some particular feature in its absence, that has nothing to do with *which* feature it does represent[21]. By way of illustration, we can consider Mac again. He represents treats when none are in his immediate environment. But he never *actually does* represent treats unless he sees one of the humans he lives with walking toward the kitchen—where the treats are kept. So, the environment still determines how he exercises his representational abilities. Mac *can* think of treats when they're not around, it's just that he only ever *does* when his family is approaching the treats-room. That is, it's the stimulus (the seeing someone walking toward the kitchen) that determines whether he represents the treats. Now it looks like Mac's a passive reactor. So, if there were another notion in the area that could be attributed to creatures with basic cognition Camp should want it. It would give creatures more to do with their thoughts, without saying anything about the abilities favored by intellectualism.

To avoid this difficulty Camp identifies the activeness of conceptual thought with its being free from triggering by the environment. She calls this *stimulus-independence$_2$*. Stimulus-independence$_2$ is something like: the capacity for systematic representational recombination to produce goal-oriented action that is not triggered by the environment[22]. What Camp wants is a means by which conceptual thinkers exhibit activeness and rationality in thought, in the sense that which thoughts they do in fact think is not determined by their environment. According to Camp, stimulus-independence$_2$ is what

[20] *ibid.* 287
[21] *ibid.* 291
[22] Elsewhere (Camp, "A Language of Baboon Thought?", 2009, 114, fn. 7 in Lurz, Robert W., *The Philosophy of Animal Minds*, CUP, Cambridge, pp. 108-27), Camp defines stimulus-independence as "the ability to compile information from multiple sources and occasions, and to apply it in flexible ways in various contexts". I am more amenable to this way of thinking about stimulus-independence$_2$ and this may show that Camp anticipates some of my negative argument.

shows the most promise for adding theoretical utility to her view. It accommodates the insights of its competitors and, as we'll see in the next section, should provide traction with behavioral evidence.

Detailing Camp's View

Having outlined these views, I now distill that discussion. Camp takes seriously minimalism and intellectualism. She uses the upshots of each view to inform her own. She also engineers her view with the aim of avoiding the problems of each. Here are Camp's three desiderata:

1. Avoid the pitfalls of minimalism (the Problem of Passive Reactors) and intellectualism (the Problem of Implausible Requirements).
2. Keep the benefits of minimalism (Basic Cognition) and intellectualism (More to do with Thoughts).
3. Provide better traction with respect to behavioral evidence than competing views.

The first two desiderata are made clear by previous sections. The third is a guiding principle of sorts throughout but has not yet been discussed. To provide the most theoretically useful sense of 'concept', she claims that it must satisfy '3' as well. Call the issue that satisfaction of '3' avoids *the Problem of Unconstrained Attribution*. That is, any attribution of conceptuality need be constrained by behavioral evidence.

The Problem of Unconstrained Attribution illuminates a distinction. It is one thing to possess an ability and another to exercise it. Observable behavior is taken to be exercise of possessed ability. But, in the absence of behavior to evince ability possession, it is at least intuitive that we lose warrant for attribution of ability. So, in order to behaviorally constrain attributions, mere possession won't do. Camp thinks minimalism runs itself into these cases since it identifies conceptuality with possession of basic cognitive abilities.

To illustrate, we can consider a case of the type that Camp thinks is problematic for minimalism. Honey bees communicate with one another via what is called "the waggle-dance".[23] This routine is used to share information primarily about food sources. However, when the food source is placed in a body of water—a place where there is usually *not* food, forager bees not trained to locate the novel food source failed to respond to attempted communication. As discussed in Brockman, et. al.: "This was not because the trained scout bees ceased to dance once the feeder was over the water; they continued to dance with high vigor, and their waggles encoded a position over the water"[24]. Camp points out that the minimalist is faced with a choice: either the bees have the thought that there is nectar in the water and ignore it or the bees are incapable of thinking the thought that there is nectar in the lake even when it is communicated to them. No matter how it turns out, since the bees do nothing, minimalism fails '3'. That is, there is nothing about what the bees do—their behavior—which helps adjudicate whether they are conceptual thinkers. In short, the behavior in scenarios like this does not give us a way to tell if the creature is a conceptual thinker.

Stimulus-independence$_2$, as Camp would have it, avoids the Problem of Unconstrained Attribution. Activeness is identified with freedom from triggering. Notice that more instances of recombinability will accompany greater stimulus-independence$_2$ since freedom from triggering allows creatures to *actually* recombine more. If a creature is stimulus-independent$_2$, then it will exercise its abilities in a way that evinces the ability to recombine its concepts. This is what the minimalist is missing. Since Camp's view requires exercise of ability and not just, in principle, possession it is

[23] Andrew B. Barron and Jenny Aino Plath, "The evolution of honey bee dance communication: a mechanistic perspective", *Journal of Experimental Biology*, Vol. 220, 2017, pp. 4339-4346. For a classic treatment of these phenomena see: Karl von Frisch, *The Dance Language and Orientation of Bees*, HUP, London, 1993.
[24] Axel Brockman, Aung Si, Johannes Spaethe, Mandyam Srinivasan, Juergen Tautz, and Shaowu Zhang, "Honeybee Odometry: Performance in Varying Natural Terrain", *PLOS Biology*, Vol. 2.7, 2004, pp. e211.

behaviorally constrained in a way that competitors are not. It thereby provides better traction with respect to behavioral evidence, and so satisfies '3'.

It looks like Camp is in a good spot. She has made a unique contribution with her preferred sense of 'concept' and has engineered it to grip behavioral evidence better than competitors. She has made good on her promissory notes. However, in the next section, I argue that even given the full resources of her view, it fails to deliver.

Minimalism and Metaphysical Suspicion

For Camp's project to succeed, her view must meet her three desiderata. I now argue that Camp fails '3' and so does not meet her overall goal. That is, the view introduces a requirement which cannot be satisfied by the view. More than that, I argue that the metaphysical implications of stimulus-independence$_2$ are suspicious.

Camp puts weight on behavioral evidence for adjudicating between competing theories. For Camp to satisfy '3', she must have stimulus-independence$_2$ give us a handle on behavioral evidence that systematicity, by itself, does not. If stimulus-independence$_2$ does not provide a better handle than systematicity, we are free to ask whether Camp has actually provided a more theoretical useful sense of 'concept'. We should expect that stimulus-independence$_2$ gives us some kind of explanatory power that systematicity does not. Unfortunately for Camp, it does not; since it does not, Camp's view ends up being no better off than minimalism.

The present point is not so much that Camp is wrong for positing stimulus-independence$_2$ as it is that she is wrong for thinking that stimulus-independence$_2$ is more behaviorally tractable than the ability to recombine concepts. Since she places the evidentiary load on behavior, stimulus-independence$_2$ does not provide a satisfactory answer to the Problem of Unconstrained Attribution.

What Camp wants from stimulus-independence$_2$ is an empirical criterion for attribution of conceptuality. But by identifying activeness with freedom from triggering she has set herself up such that no behavior will evince active thought.

It is suspicious to think that behavioral evidence, as such, will provide evidence for freedom from triggering, in the sense required by stimulus-independence$_2$. If we observe some creatures doing more than others, in the sense of exhibiting behavior which evinces more recombination, there is nothing about that which shows they possess freedom from triggering. Although some creatures exhibit a range of apparently undetermined behaviors, this may just point to a more complex causal chain.

There is something about these behaviors, however, which suggests they recombine more and to diagnose that ability the resources of minimalism do just fine. Since systematicity is interdependent with stimulus-independence$_2$ any exercise of ability which evinces one likewise evinces the other. According to Camp, a greater degree of stimulus-independence$_2$ underwrites a greater degree of systematicity. But since any behavior that speaks to one also speaks to the other, there is nothing about *behavior as such* that differentiates the resources of Camp's view from the resources of minimalism. So, each view ends up indeterminate with respect to the extension of 'concept' since neither is behaviorally constrained in the way Camp wants. That is, Camp's criticism of minimalism hinges on its failure to provide a criterion by which we can adjudicate between conceptual thinkers and passive reactors in certain cases. But her criterion fares no better since it is interdependent with the criterion of minimalism. Stimulus-independence$_2$ does not afford any additional resources in the way of an empirical probe and so justification of its attribution rests on the same grounds as does the criterion of minimalism.

There is a second worry for those who find a Camp-style view appealing. Stimulus-independence$_2$ is metaphysically suspicious. Since it has been defined to involve freedom from triggering, problems of how to understand this freedom from determination are not far off. It looks like Camp's view takes on board an objectionable conception of freedom. It is one thing to claim that conceptual thinking is free from determination, in the sense of a one-one correspondence. It is another, entirely, to claim that conceptual thinking is free from triggering. Minimalism, in this sense, looks preferable by comparison. Its requirements are applicable, it gains as much traction with behavior as Camp's view, and it does this without taking on board metaphysical baggage.

In sum, Camp cannot complete her project by the lights of her project. But this is not the end for Camp's view. There are valuable insights contained in it. Her view and my critical stance toward it also elucidate some issues of a more general sort. It is to those that I now turn.

A Response from Camp?

Having said what, I think is insightful and untenable about Camp's view, I'd now like to motivate a proposal. There are two considerations which serve to do this. The first is that cases of instrumental reasoning are supposed to evince the presence of stimulus-independence$_2$. I argue that this means that, in the end, Camp appeals to stimulus-independence$_1$, which she disavows, and not stimulus-independence$_2$. The second is that the Problem of Unconstrained Attribution returns for cases of instrumental reasoning. I examine each in turn.

A brief word on the role of instrumental reasoning in Camp's view is in order. Camp claims that the "most minimal and plausible way for a creature to achieve greater stimulus-independence[25] is through instrumental reasoning"[26]. So, any instance of instrumental reasoning is supposed to evince

[25] And here, she means what I have been calling "stimulus-independence$_2$".
[26] (Camp: 2009, 292)

stimulus-independence$_2$. Camp settles on instrumental reasoning since it avoids the Problem of Implausible Requirements while identifying more for thought to do than can be done with basic cognitive abilities. For Camp, it is also important that instrumental reasoning occur through "spontaneous 'insight'"[27]. We can think of spontaneous insight as cognitive activity that makes use of representational abilities such that those abilities are deployed, more or less, independently of features of the world at a time. Camp seems to think this because she identifies activeness of thought with freedom from triggering.

One way to cash out instrumental reasoning is in terms of its structure. This seems to be Camp's favored route. A creature occupies some actual state of affairs and desires to bring about a goal state. In order to bring about the goal state the creature must represent some nonactual intermediary state of affairs. The creature must represent a nonactual (i.e. absent) state of affairs in order to bring that state about such that it can achieve its goal. Camp draws on various studies to substantiate her claim that some nonhuman creatures do exhibit behaviors which evince a capacity for instrumental reasoning. This is an odd move to make, since it seems like the structure of instrumental reasoning would evince, if anything, stimulus-independence$_1$since it seems to require only that creatures represent in the absence of a feature. But Camp has claimed that this version of stimulus-independence isn't the relevant one to conceptuality.

Second, you might think that this should not worry us since Camp requires spontaneous insight, or that the intermediary state is sufficiently "disconnected"[28] from the current state. On the one hand, what is meant is clear. If we think of instrumental reasoning as a chain of inference[29], we can imagine the intermediary state as a sort of clever move. On the other hand, how can we tell the

[27] *ibid.* 292
[28] *ibid.* 296
[29] Elisabeth Camp and Eli Shupe, "Instrumental reasoning in animals", *The Routledge Handbook of Philosophy of Animal Minds*, eds. K. Andrews and J. Beck, Routledge, UK, 2017. pp. 100-108.

difference, behaviorally, between a clever move which is untriggered, and one which is triggered, but involves a more complex causal chain from environmental stimulus to representation?

Let's consider Mac again. Mac wants a treat. There's a treat on the counter. There's a stool near the counter, where there usually isn't. Mac jumps on to the stool and then on to the counter. He gets the treat and jumps down. But it was just as much the features that triggered their representation, it would seem, as it was Mac who figured out how to make use of them. Stimulus-independence$_2$ comes in degrees, but which intermediary states that are represented would still seem to be triggered by the initial environmental conditions. Now, the Problem of Unconstrained Attribution returns since it's not clear, from the behavior, if it is spontaneous.

Gradable Agency

Even though I have argued against Camp, there is no sense in throwing the baby out with the bathwater. There is something in Camp's view worth saving—the connection between conceptuality and *agency*. I claim that this is the insight of Camp's view. Further, her view makes conceptuality an explicitly gradable affair[30]. By being gradable, such a view can accommodate a variety of nonlinguistic creatures as conceptual thinkers to *some extent*. Both the connection with agency and *inclusiveness*, though not gradeability, are benefits I will preserve.

Camp's connection between conceptual thought and stimulus-independence$_2$ suggest a connection between conceptuality and *freedom*. I've so far argued that the sort of freedom Camp appeals to is problematic. But, her view does point to a more apt connection between conceptuality and *agency*. Her insight is that what we *look for* when we look for conceptuality are behaviors that suggest agency.

[30] See, *ibid.* 305

Camp's willingness to make conceptuality *inclusive* is also a point in her favor. Observations of animal behavior increasingly make it harder to say that anything without a language is not conceptual, full-stop. Thinking about conceptuality in a way that is inclusive promises to capture more data about non-human animals and what they do with their concepts, given that one can be inclined to think some of them do have some. So, this too ought to be saved and applied to further research. If attributions of conceptuality and agency are tied, as I have suggested, and conceptuality a gradable affair, then agency follows suit. Where I arrive, unlike Camp, is not a gradable view in the same sense, but it is one which preserves the conceptuality-to-agency connection and is inclusive.

What we should be looking for is a philosophically robust, though not so metaphysically suspicious, sense of agency which retains inclusivity as a feature. This is the real upshot of Camp's discussion. How to engineer such a sense of agency and what could act as evidence for it is suggested by the next section.

Flexibility Privileged

To recap, Camp identifies the activeness of thought with freedom from triggering. I have argued that this does not end well. This identification prompts the engineering of stimulus-independence$_2$ and the privileging of instrumental reasoning. Both create problems which cannot be solved without significantly reworking some baseline desiderata for a theory of concepts. So, to preserve what is worthwhile in Camp's project something else must be offered. This is a rough outline of a viable way to preserve inclusivity and the conceptuality-to-agency connection.

First, my claim is that we should take concepts to be tied to agency. I also claim that the behaviors which we take to be evidence for concept use are behaviors which are suggestive of agency. This is the sense in which conceptual thinkers are not automata. But, this sense of agency, and so conceptual thinking, need not require freedom from triggering. So, the activeness of conceptual

thought must be identified with something other than stimulus-independence. This identification provides for a philosophically robust though not so metaphysically suspicious sense of agency and so conceptuality.

I identify the activeness of thought with an open-ended use of basic cognitive abilities which, relative to the representational repertoire in question[31], deals with environmental features in novel ways. Call this *flexibility*. Creatures with flexibility exercise the same cognitive abilities on different occasions to deal with novel features of the world and the same features of the world can result in exercise of differing cognitive abilities on different occasions. Remember, flexibility ought to be behaviorally constrained. It is, since behavior can permit us to infer the presence of cognitive abilities in the first place.

What we're tracking when we're attributing conceptuality has more to do with the various ends a creature is capable of pursuing, not just its means. Here, the conceptuality-to-agency connection becomes prominent. By way of illustration, consider what humans do when navigating their world. We are all limited by time, resources, our representational repertoire at a time, and have many things we would like to get done. I have a meeting for most of the afternoon, so I have to be in my office, but I have class most of the evening, so I'll have to go to that. But I also would like to get lunch, and I'll probably want some coffee. Let's say these are all ends. I behave flexibly to achieve my various ends. I eat lunch in the office, I buy a coffee pot, I call a friend to bring filters of which we're out, etc. Exercising flexibility allows me to pursue more ends at a time, since I have multiple ways to achieve those ends. To contrast, we can imagine me again, but without flexibility. Now, for instance, any time

[31] For the difference between this, broadly, holistic point and the sort of holism advocated by proponents of intellectualism see: David Finkelstein, "Holism and Animal Minds", in Crary, 2007, pp. 251-278. Finkelstein is, there, interested in distinguishing the sort of holism Wittgenstein endorses from the sort of holism Sellars/Rorty endorse. As I read the distinction, it has much to do with what is discussed regarding the idea of a middle ground between minimalism and intellectualism. Though, Finkelstein does not use those words.

I want coffee I go to the café but when the café is closed, I'm out of luck. Also, if I don't have time to go to the café because I have other things to do, I won't be able to achieve one of my ends: getting coffee. I seem incapable of pursuing a broad spectrum of ends due to my lack of facility with means, I only have one way to get coffee and when that way is frustrated somehow, I don't get coffee. We can also consider foraging behavior in ants which want to get to their nest but only have one way of doing so—path-integration[32].

You might think I make room for conceptually impoverished creatures to be conceptual thinkers. You're right. A creature who has relatively few representational abilities but can use them flexibly, will count as conceptual by my lights. But notice that in defining flexibility I did so relative to a representational repertoire. Flexibility, though inclusive, asks us to consider creatures in light of the use they make of attributable representational ability. So, creatures might not have a large range of representational abilities but may still count as conceptual since what they and the way they do, relative to those abilities, evinces flexibility. Although chimpanzees are not human, their use of cognitive abilities relative to their representational repertoire is flexible and so conceptual. Ants, however, are too rigid to count. I don't pretend to be capable of adjudicating prior to some observation between which creatures are conceptual and which are not, but flexibility promises to provide a guide. This is, I take it, what we were after in engineering the most theoretically useful sense of 'concept'.

Conclusion

In conclusion, I have argued that our attributions of conceptuality ought to behaviorally constrained. I have presented a view which differs from minimalism in that it requires thinkers to

[32]See, e.g.: Müller, M. and Wehner, R., "The hidden spiral system: systematic search and path integration in desert ants, *Cataglyphis fortis*", *Journal of Comparative Physiology*, Vol. 175.5, Nov. 1994, pp. 525-30. And Räber, F. and Wehner, R., "Visual spatial memory in desert ants, *Cataglyphis bicolor* (Hymenoptera: Formicidae)", *Experientia*, Vol. 35.12, Dec. 1979, pp. 1569-71.

make use of their thoughts in a way that minimalism does not. Namely, by an explicit requirement that conceptual thinkers make variable use of their cognitive abilities on the model of flexibility. So, its theoretical resources serve to sort phenomena differently than minimalism. It differs from intellectualism in that the requirements on conceptuality are different—less restrictive. They are, though, not implausible especially given the role concepts typically play in theories and empirical support from the behavioral sciences. Finally, it differs from Camp's view in locating a different diagnostic tool which does not run into problems of behavioral constraint, at least not straightforwardly, since flexibility is relative to a representational repertoire. In tying agency to conceptuality it also suggests—contra Camp—that where minimalism goes wrong may not be in falling prey to the Problem of Passive Reactors but rather in making too many creatures agents given its requirements.

Along the way, various competing views on the matter were entertained. The insights from these were picked up in order to present a rough outline of a view which provides for a potentially novel program—one that both acknowledges the complexity of human agents but attempts to situate them amongst agents not wholly unlike themselves. I leave it open what consequences such a view might have.

References

1. Andrews, K. and Beck, J. *The Routledge Handbook of Philosophy of Animal Minds*, Routledge, UK, 2017.

2. Barron, Andrew B. and Plaith, Jenny Aino. "The evolution of honey bee dance communication: a mechanistic perspective", *Journal of Experimental Biology*, Vol. 220, 2017, pp. 4339-4346.

3. Brockman, Axel., Si, Aung., Spaethe, Johannes., Srinvivasan, Mandyam, Tautz, Jeurgen., and Zhang, Shaowu. "Honeybee Odometry: Performance in Varying Natural Terrain", *PLOS Biology*, Vol. 2.7, 2004, pp. e211.

4. Camp, Elisabeth. "Putting Thoughts to Work: Concepts, Systematicity, and Stimulus-Independence", *Philosophy and Phenomenological Research*, Vol. LXXVIII No. 2, (March 2009), pp. 275-311.

5. - and Eli Shupe, "Instrumental reasoning in animals", in Andrews & Beck. pp. 100-108

6. - "A Language of Baboon Thought?", in Lurz. pp. 108-127.

7. Carruthers, Peter., "ANIMAL MINDS ARE REAL, AND (DISTINCTIVELY) HUMAN MINDS ARE NOT", *American Philosophical Quarterly*, Vol. 50.3, 2013, pp. 233-48.

8. Crary, Alice and Reed, Rupert. *Wittgenstein and the Moral Life: Essays in Honor of Cora Diamond*, MIT, Cambridge, 2007.

9. Davidson, Donald. "Rational Animals", *Dialectica*, Vol. 36, 1982, pp. 317-28.

10. -"The Emergence of Thought", *Erkenntnis*, Vol. 51 No. 1, (Animal Mind) 1999, pp. 7-17

11. Evans, Gareth., (ed. J. McDowell), *Varieties of Reference*, OUP, NY, 1982.

12. Finkelstein, David. "Holism and Animal Minds", in Crary. pp. 251-278.

13. Fodor, Jerry., *Concepts: Where Cognitive Science Went Wrong*, OUP, NY, 1998.

14. Fodor, Jerry & Lepore, Ernest. *Holism: A Shopper's Guide*, Basil-Blackwell Ltd., Cambridge, 1992.

15. Glock, Hans-Johann., "Animals, Thoughts and Concepts", *Synthese*, Vol. 123, 2000, pp. 35-64.

16. Lepore, Ernest and Ludwig, Kirk., *Donald Davidson: Meaning, Truth, Language, and Reality*, OUP: Oxford, 2005.

17. Lurz, Robert W. *The Philosophy of Animal Minds*, CUP, Cambridge, 2009.

18. McDowell, John. *Mind and World*, HUP, Cambridge, 1996.

19. McEachern, Jill C. and Shaw, Christopher A. (eds.). *Toward a Theory of Neuroplasticity*, Psychology Press, KY, 2001.

20. Mercer, Alison R. "The Predictable Plasticity of Honey Bees", in McEachern and Shaw, 2001. pp. 64-81

21. Müller, M. and Wehner, R., "The hidden spiral system: systematic search and path integration in desert ants, *Cataglyphis fortis*", *Journal of Comparative Physiology*, Vol. 175.5, Nov. 1994, pp. 525-30.

22. Räber, F. and Wehner, R., "Visual spatial memory in desert ants, *Cataglyphis bicolor* (Hymenoptera: Formicidae)", *Experientia*, Vol. 35.12, Dec. 1979, pp. 1569-71.

23. Stich, Stephen., "What Is a Theory of Mental Representation?", *Mind*, Vol. 101.402, April 1992, pp. 243-61.

24. von Frisch, Karl., *The Dance Language and Orientation of Bees*, HUP, London, 1993.