Jacob Browning Forthcoming in Kantian Review

Meier, Reimarus and Kant on Animal Minds

JACOB BROWNING New York University

Email: jacob.browning@nyu.edu

Abstract

Close attention to Kant's comments on animal minds has resulted in radically different readings of key passages in Kant. A major disputed text for understanding Kant on animals is his criticism of G. F. Meier's view in the 1762 False Subtlety of the Four Syllogistic Figures. In this article, I argue that Kant's criticism of Meier should be read as an intervention into an ongoing debate between Meier and H. S. Reimarus on animal minds. Specifically, while broadly aligning himself with Reimarus, Kant distinguishes himself from both Meier and Reimarus on the role of judgement in human consciousness.

Keywords: Immanuel Kant, animal minds, consciousness, reflection, H. S. Reimarus, G. F. Meier, perception, judgement.

> By ascribing senses, imagination and memory to animals as well as us humans, I am only pointing out a general similarity or analogy which does not cancel the particular difference. In fact, not only are all these powers different in kind among the animals themselves, but they are also unique in humans in that they express themselves with a clear consciousness. But it seems animals are not conscious

of the present or the past, neither of themselves nor of other things, as we are.

H.S. Reimarus (1756/1791: 489n.)¹

1. Introduction

The recent interest in whether Kant endorses nonconceptual perceptual content has brought with it an interest in his theory of animal minds, since Kant takes animals to lack conceptual abilities while still possessing representations, sensations and imagination. This has led to three radically different readings of Kant on animals. The first, what I call the Distinctness View, argues that animals have clear and distinct consciousness² of particular objects in the world, while lacking the metacognitive capacities related to self-consciousness, specifically, reflection, concepts and judgement. As Sacha Golob, who attributes this view to Kant, puts it, animals experience 'intuitive particulars presented at a level of visual detail which often far outstrips our own capacities' (Golob 2020: 88). The second, what I call the Indistinctness View, argues that animals have only confused and indistinct consciousness. Hein van den Berg (citing William James) ascribes this view to Kant: 'Kant describes the mental life of animals as a blooming and buzzing confusion' (van den Berg 2018: 2). A third reading, the Non-Consciousness View, argues that animals are wholly lacking in consciousness. This view has recently been ascribed to Kant by Patrick Leland, who states bluntly, 'Kant denies animals possess conscious representations' (Leland 2018: 76).

In this article, I argue that Kant endorses the Non-Consciousness View by focusing on a central text in the contemporary debate, Kant's 1762 *False Subtlety of the Four Syllogistic Figures* (henceforth *FS*). This text has been read in radically different ways by the readings just distinguished, with corresponding disagreements regarding 'inner sense' in that text (a

supposedly uniquely human representational capacity) and animals' capacity for 'physical differentiation' (their ability to differentiate representations without concepts or judgements). I argue that the key to understanding these passages is to situate them in the context of a prominent debate in Kant's day between the rationalist G. F. Meier and the natural theologian H. S. Reimarus. Meier holds the Distinctness View and claims that animals possess phenomenal consciousness of particulars, awareness of objects in the world, and a general capacity to discriminate things. By contrast, Reimarus criticizes Meier and defends the Indistinctness View, according to which animals possess only a 'confused and indistinct, yet very lively' consciousness (Reimarus 1760: 31). After spelling out Meier's and Reimarus's positions, I argue that we can best make sense of the passages in Kant by understanding him as offering a critique of Meier's view, one that is similar to Reimarus's critique yet differs in its understanding of consciousness, judgement and concepts. One crucial point distinguishes Kant from both Reimarus and Meier: whereas they both treat consciousness as the ability to clarify and distinguish representations – and thus disagree principally on how much consciousness animals possess – Kant argues that consciousness fundamentally turns on the ability to judge, and thus that the capacity to consciously distinguish representations requires recognitive, propositional judgements. The upshot of my reading is threefold: insight into a debate between Distinctness and Indistinctness Views in Kant's day; clarification for our contemporary debate regarding Kant's comments on 'inner sense' and 'physical differentiation' in FS; and an argument that Kant, at least in his early period, endorses an idiosyncratic view in his day: the Non-Consciousness View.

In the next section I lay out some main lines of the recent debate about Kant on animals and especially how this relates to discussion of FS. In section 3, I briefly sketch the contours of the

eighteenth-century debate on animal minds and how it turned on a reading of Baumgarten's concept of 'the analogue of reason', the capacity in humans to skillfully perform actions without the use of higher cognitive faculties, with the partisans split on whether or not, and if so in what respect, animals possess a similar capacity. In section 4, I lay out G. F. Meier's Distinct View of animal minds, and in section 5 I present Reimarus's criticisms of Meier's position and his own Indistinctness View. In section 6, I argue that Kant's criticisms of Meier in FS and Herder's contemporaneous lecture notes show that Kant's criticisms of Meier, while inspired by Reimarus, argue that judgement, rather than mere discrimination, is the principal feature of consciousness. In section 7, I return to our contemporary debate and show how my reading informs us about Kant's position on animal consciousness.

2. The Contemporary Debate

Kant's comments on animals have led to radically different views because he seems to ascribe to animals, on the one hand, immaterial mental representations (*Vorstellungen*), sensations, desires and reproductive imagination while, on the other hand, denying them any higher faculty of consciousness, understanding or reasoning. These comments often occur within the same passage (e.g. L-Met, 28: 276-8). The result is that interpretations must address many different abilities, in both animals and humans, to explicate Kant's position.

As noted, what I call the Distinctness reading holds that animals possess an immediate and discriminative awareness of their environment independently of its being conceptualized, judged or reflected upon. As a reading of Kant, it has been endorsed by Karl Ameriks (1981/2000), Steven Naragon (1990), Robert Hanna (2004, 2006), Lucy Allais (2009, 2015), Colin McLear (2011, 2020), Sacha Golob (2016a, 2016b, 2020), Christian Onof (2015) and Roberto Horácio de Sá Pereira (2013). By contrast, the Indistinctness reading argues that Kant denies to animal

representation all but confused and indistinct consciousness. This view has recently been defended by Heather Fieldhouse (2004), Naomi Fisher (2017), Hein van den Berg (2018) and John Callanan (2020). It argues that, since animals lack concepts or judgement, they lack awareness of how any representation differs from any other. Finally, the Non-Consciousness Reading, endorsed by Patrick Leland (2018, 2019a), argues Kant should be read literally when he denies animal consciousness.

As McLear writes, 'Kant's position seems not to be that animals are not aware of objects, but rather that their awareness of such objects is importantly less sophisticated than our own discursive awareness' (2011: 5; see also Hanna 2006: 105; Onof 2015: 222). McLear goes on to clarify how animals perceive their world:

In contrast to discursive beings, [animals] have only the fragmented, fluctuating consciousness characteristic of, for example, Humean bundles, while discursive beings have the power to unite the elements of these bundles in a less fragmented, more logically coherent fashion. (McLear 2011: 11)

Golob goes further by providing an example for understanding this capacity:

A gazelle can see multiple particulars, for example approaching lions, arrayed in a three-dimensional egocentric space around it, particulars which are given as standing in at least primitive spatiotemporal relations, such as distance, and which can be tracked in at least a primitive way ('that one is moving closer'). (Golob 2016b: 32)

What is lacking on this view is metacognition, the ability to reflect on experience and synthesize representations according to rules, abstractions and propositional judgements. McLear for example writes:

He is essentially denying [animals] capacities associated with introspection, and Kant associates introspection closely with inner sense. Kant sees animal consciousness as virtually bereft of introspective character, and thus limited to awareness of the world external to the animal. ... What animals lack, according to Kant, is a higher-order cognitive capacity both to reflect on features of their representations (qua representational acts or vehicles) and to unify disparate representational states in an act of self-ascription. (McLear 2011: 11; see also Allais 2009: 410; Hanna 2006: 105; Golob 2016b: 42)

McLear, among others, holds that animals possess consciousness without self-consciousness, awareness of particulars without universal concepts, and some capacity to track objects. What is lacking is the capacity to self-consciously order representations — to place them in a unified cognitive life that represents objects *as* objects by subsuming them under concepts.

The Indistinctness View, by contrast, rejects the claim that animals have clear and distinct consciousness. Such readings of Kant particularly highlight his claims that animals are not aware of the difference between their representations, such as when he notes that 'mere things are distinguished without consciousness of what is distinct about things: oxen can distinguish things without recognition and judgement — they distinguish practically through mere sensation' (L-Met, 28: 87-8; see also 28: 276-7; 29: 888). However, although these passages suggest that animals are not fully aware of how given representations differ, it is unclear what is meant by 'distinguish practically' and 'without recognition or judgement'. Indistinctness readings typically

turn to Kant's contemporaries to make sense of these passages. Van den Berg argues that Kant relies upon Reimarus's discussion of animal differentiation:

Animals ... have an obscure sensible representation of similarity and difference. Thus ... confronted with two humans and two cats, a dog will be confronted with something like the following complexes (unique confused mixes!) of sensible impressions (impressions of necessary attributes in bold): human1 [A, B, C, D, E, F]; human2 [G, H, C, D, E, I]; cat1 [J, K, C, L, M, N], cat2 [O, P, C, L, M, Q]. It is on the basis of this confused cognition of similarity that animals categorize objects. (van den Berg 2018: 8; see also Callahan 2020: 38)

For van den Berg, Kant position is 'virtually identical' (8) to Reimarus's views. He reads Kant as arguing that animals possess only confused mixes of representations and must rely on a 'confused sensible cognition of similarity' — an ability to discriminate indistinct bundles of representations according to some vague awareness of how they differ.

The Non-Consciousness View argues that Kant denies animals are conscious of any of their representations.³ This view has been defended recently by Leland: 'there is substantial evidence in Kant's early writings and *Nachlass* that he denied animals possess conscious representations. I will also argue the preponderance of the evidence from the critical period suggests Kant continued to hold this view throughout his later writings' (2018: 78). Leland notes that Kant consistently throughout his life denies that animals are conscious, and the passages cited in support of the Indistinctness and Distinctness Views are all ambiguous. From the perspective of the principle of charity, the Non-Consciousness View seems to fit most literally and consistently with Kant's claims.

Within this debate, FS has played an important role given its status as Kant's most extended published discussion of animals. The seminal piece for discussions of it is Ameriks's Kant's Theory of Mind (1981/2000), an influential reading for the Distinctness View. Ameriks argues that Kant's claim that animals merely 'physically differentiate' representations (FS, 2: 60) should be read as the claim that 'different behavior is to be explained as being cued by different conscious representations' (1981/2000: 242). He argues this in support of the claim that animals are aware of their environment by way of conscious representations, and this consciousness explains their behaviour. More recently, Golob has argued the passage shows that animals have clear visual consciousness of distinct representations, and what they lack is 'the ability to recognize this mark. ... [to] see the door 'as' a door' (2020: 74). These readings in turn allow Ameriks and Golob to contend that Kant's claim that animals lack 'inner sense' (FS, 2: 61) is only a denial that they possess self-consciousness (as Kant thinks of the latter in the late 1760s and 70s), not a denial of consciousness of clear and distinct representations.

By contrast, Callahan and Leland reads FS as evidence that Kant takes animals to behave in a merely causally determined manner without any consciousness of what is distinct about one state or another: 'physical discrimination [in animals] consists in the exercise of dispositions for reliable differential behaviour' (2019a: 302; see also Callahan 2020: 38). This permits either an Indistinctness or Non-Consciousness Reading, since clear consciousness is not necessary for mere causal responsiveness. Regarding Kant's denial of inner sense in the passage, Leland (pace Ameriks) argues that Kant does not mean by this self-reflective consciousness, but rather 'simply the capacity for possessing representations consciously' (2019a: 298; see also 2018: 92). For Leland, Kant is not just denying reflective self-consciousness to animals, but even the most basic awareness of their own states or conscious awareness of the world.

The result is a marked gap between how the two views read FS and how they understand Kant's comments there on animals, physical differentiation and inner sense. In what follows, I provide a reading that clarifies the passage by putting it into its *own* debate between Meier and Reimarus. While the importance of Kant's critique of Meier in FS has been commented on (e.g. Leland 2018, 2019a), and the importance of Reimarus for Kant's position has been argued (e.g. van den Berg 2018), what has been missed is that Kant's critique of Meier in FS is deeply indebted to, but also distances Kant from, Reimarus's critique of Meier. This allows us to clarify Kant's comments on physical differentiation and inner sense, as well as how he aims to go beyond Reimarus in offering his own view of animal minds.

3. The Analogue of Reason

Discussions of animal minds in the Modern period were often positioned relative to Descartes. In his 1637 letter to Plempius, Descartes denied that animals possess immaterial souls and held that they are mere machines, with 'material ideas' located in their nervous system and corporeal imagination, operating entirely according to the laws of mechanism (Descartes 1984-91: III, 61-2, 65). This was taken in contrast to humans, who possess an immaterial soul capable of perceiving, thinking and judging via immaterial ideas. The implication is that immaterial souls, immaterial ideas and thinking are intertwined for Descartes; as he puts it in his 1646 letter to the Marquess of Newcastle, '[humans] are not just a self-moving machine but contains a soul with thoughts' (III, 303). As such, his conviction that animals cannot think – evidenced by their lack of speech or ability to fluidly interact with any situation (III, 302-3) – is therefore taken by him as indisputable evidence that they lack souls and ideas.⁵

For later philosophers, Descartes's position seems to run together two separable issues: do animals possess immaterial souls, and do they have the capacity to think? It seems possible to

deny either while affirming the other: a materialist can argue that animals can think while lacking immaterial souls, and a dualist or idealist can argue that animals possess immaterial souls without thinking. This resulted in more subtle positions in the eighteenth century in discussions of animals. As Leland (2019b: 4-6) shows, eighteenth-century Germans inspired by Leibniz and Wolff broadly held that all living beings – from plants to people – possess an immaterial soul and respond to immaterial ideas (*Vorstellungen*). They argued that plants and animals are self-moving – driven by their own representations, desires and instincts – rather than simply impelled by physical impacts.

Within this tradition, many philosophers distinguished between animals possessing an immaterial *soul* (*Seele*) and those with an immortal *mind* (*Geist*) (e.g. Kant L-Met, 28: 278, 29: 1026-7). For those granting animals an immaterial soul and representational capacities, the dispute turned on where mere sensibility ended and where some kind of mind began: are there subtle gradations all along the spectrum of living beings, or is there a sharp break – an 'essential difference' or 'difference in species' (e.g., Reimarus 1760: 272-3) – between the merely ensouled and the minded? Animals became an essential concern, not because of a doubt whether they possess souls or representations, but because they possess more abilities than merely ensouled plants but fewer than fully minded humans.

A common way of understanding animal minds is by assuming they operate akin to human minds when humans engage their world nonconceptually. A touchstone for this approach is Alexander Baumgarten's idea of 'the analogue of reason' in humans, which he defines as 'the collection of the soul's faculties for representing a nexus confusedly' (1737/57: §§640-8). Baumgarten explains that this analogue relies solely on the 'inferior faculty' in humans, which can grasp the 'correspondence' and 'difference' between representations, reproduce, invent and

anticipate 'sensitive' representations, and can even engage in 'sensitive judgement[s]' and 'sensitive characterization[s]' (§640). Baumgarten's point is that there is a broad set of abilities humans possess to skillfully engage with their world at the level of sensibility, without calling upon the higher faculty's resources of introspection, propositional judgement and abstract thinking. Baumgarten later argues that animals also possess the same lower faculty present in humans: 'they are equipped with sensation, imagination, foresight, and the rest of the faculties that must be actualized without distinct knowledge' (§793), though he notes that these are 'impelled by sensitive desire and aversion, choice, instincts, flights, and stimuli, and even by affects' (§793). This means that animals also possess a non-rational but skilful way of engaging with their world. The question for those following Baumgarten is just how similar the analogue of reason in humans is to that capacity.

But Baumgarten's analogue of reason in humans is itself somewhat vague: how *do* humans skilfully but confusedly engage with their environment? Before we can use human non-rational coping as a model, we need to understand how much consciousness it requires: are humans utterly unaware when coping with their environment, running on autopilot so to speak, or do they possess clear and distinct but uncritical awareness, as when we are intently focused on some task? For eighteenth-century German philosophers, the way of adjudicating this issue turned on the *degree of consciousness* to be ascribed in these circumstances, where the question was how much clarity one's representations possessed in operations of the analogue of reason. The standard way of carving it up after Leibniz ordered these thusly: 'obscure' representations are unconscious and capable of being conscious only through inference; 'confused' representations are disordered and undistinguished; 'clear' representations are distinguishable; and 'clear and distinct' representations are fully distinct from other representations — we not only distinguish a

representation, but also grasp how it differs from other representations (Leland 2018: 78-84). Using Kant's frequently proffered example (e.g. L-Log, 9: 40-2, 24: 35, 120), when we stare at the Milky Way, we clearly see a swath of light and colour, and thus we can *infer* we obscurely represent an untold number of individual stars, but we must attend to some part of it to pick out a confused group of indistinctly-seen stars, and we need to attend further – possibly with a telescope – to transform the swath of colour into individual stars distinct from their close neighbours.

In this context, Meier, Reimarus and Kant are all addressing the issue of animal consciousness as the question of what degree of consciousness (if any) is present in animals. All three endorse an anti-Cartesian view, denying that biological life is reducible to matter and that animals are mere machines. The dispute turns on how similar the animal's analogue of reason is to the human's analogue: Meier endorses a Distinctness View where animals possess clear and distinct representations, and the analogues of reason in humans and animals are broadly similar; Reimarus endorses an Indistinctness View where animals have only confused and indistinct consciousness, and the analogue of reason in animals bears only a superficial similarity to the analogue in humans. Notably, both views share the notion that the issue fundamentally concerns the ability to clarify and distinguish representations, as well as the notion that animals possess at least some degree of consciousness. The conflicting answers from Meier and Reimarus resulted from their diverging views on how we should explain complex animal behaviours. After pursuing this in the following two sections, I show in sections 6 and 7 that Kant endorses — against both Meier and Reimarus — the Non-Consciousness View.

4. Meier's Distinctness View

Meier grants animals the lower faculty: sensations, desires and those representations connected with the reproductive imagination, such as memory and anticipation; and grants at least some animals limited capacities of the higher faculty: consciousness, concepts, judgements, understanding and reasoning. He uses this to explain how animals can possess degrees of consciousness: their lower faculty consists of a mix of 'obscure' and 'confused' representations, and the higher faculty is identified as the capacity for clarifying and distinguishing representations — consciousness just is clarifying representations (1750: 69):¹⁰

We represent many things such that we are conscious of this representation; that is, we represent not only how things are in general, but also how things differ from each other.

... [Consciousness] distinguishes me from objects, and from what is next to me, and these objects from others. (Meier 1750: 66-7)

Meier defines consciousness not so much as a *state* but as a *function*: the whole higher faculty centres on the capacity to make the obscure, confused and indistinct representations of the lower faculty clearer and, in the process, distinguish them from each other (Meier 1750: 66-9; see Leland 2019a: 292). The different degrees he introduces into understanding and reason are just progressive clarifications and distinctions, moving from concrete particulars and discrimination of perceptual properties and objects up to highly abstract universal concepts deployed in propositional judgements and syllogisms.

The challenge facing Meier's account is explaining how animals can have some capacities of the understanding, those necessary for consciousness of their world, while lacking those necessary for abstraction or metacognition. But he argues that we can see similar cases in humans who do not use reason, such as infants or drunks (1750: 75). Meier's description of animal capacities

suggests animals possess an analogue of reason similar to the one Baumgarten ascribes to humans: for Meier, animals can clearly and distinctly represent, imagine, use sensible concepts, and make sensible judgements. Meier takes this to mean animals share with humans some degree of understanding, though notably only the lowest two (out of four) degrees. The first degree encompasses simply having clear but indistinct representations, as when we are passively overlooking a valley with trees, stream and village without attending to anything in particular (1750: 70). The second degree involves comparison and differentiation of parts of the scene, which Meier argues is necessary for an animal to differentiate, for examples, their owner from a stranger or an owner's face from their hand: 'if [my dog] had a confused concept of me he could not distinguish my face from my body ... if I look at him, he at once makes a joyful movement, therefore he must be aware of the movement and direction of my eyes' (79). This implies that the dog consciously discriminates between objects and parts of objects. The third and fourth degrees of understanding – which animals lack – concern the capacity for abstraction and judging particulars as falling under abstract concepts.

While the first stage might be considered pre- or nonconceptual, the second stage does require some concepts for Meier. But Meier clarifies that animals possess only those concepts necessary for discriminating one thing from another in the broadest sense, what he calls 'individually clear concepts that are not abstract concepts' (1750: 72). These are not logical concepts of the kind used in propositional judgements, but instead the perceptual concepts requisite for distinguishing one thing from another — a kind of indexical *this-object* or *this-property*. As Leland puts this, 'all that Meier requires for distinct concept possession is the ability to distinguish one or more constituent representations within a complex representation' (2019a: 293). These non-abstract concepts allow the animal to differentiate those representations — as well as what they represent —

that are given to them through their senses. He argues that this allows for 'singular judgements' (*iudicia singularia*), such as when animals judge their food to taste good (71), or where 'dogs will pursue this deer and no other' (77) or 'a cow stares in astonishment at its new stall door' (79). Meier's point is that much of our knowledge of the external world relies solely on perceivable properties, objects and so on without relying on abstraction, propositional judgements or syllogistic reasoning.

The broader point here is that Meier's Distinctness View of animal consciousness makes two major assumptions: first, a normal, awake animal is passively given some representations clearly, and second, distinguishing any representation from any other implies a non-abstract, perceptual concept. The two points together form an account of how the analogue of reason should operate in animals, as roughly akin to how humans engage with their world in an embodied, skilful, but unreflective way. Meier takes this kind of engagement to entail *only* those concepts requisite for perceptual awareness of particulars and deciding between representations: segmenting the visual scene, discriminating one object from another, discriminating perceptual properties, tracking persisting bodies through changes and even grasping some spatio-temporal relationships (all of which he identifies with the first degree of reason). As one of his central examples, he tells the story of a cow that, after watching someone open a door to the feed, 'tried to lift the bolt with her horn. She eventually became so good at it that they finally had to find some other way of locking the door' (1750: 78). Meier takes this to show that the cow differentiates the bolt, door and feed, and also grasps the basic sequence connecting the representations into a whole. For Meier, any attribution of animal awareness of these behaviours would require a clear capacity to distinguish between different representations, and this is evidence that they possess some level of concepts

necessary for distinction. But he contends that they lack the reflective capacities for generalizing or forming propositional judgements about these experiences.¹¹

The upshot is that Meier regards animals as possessing capacities necessary for being conscious of their world, distinguishing properties and objects and interacting successfully with their world. What he denies to animals is the distinctive capacities needed for propositional reasoning: abstract concepts, propositional judgements and logical reasoning. The next section presents Reimarus's criticism of this position: even basic discriminations depend on abstract concepts.

5. Reimarus's Critique of Meier

Reimarus's 1760 *On the Drives of Animals* (henceforth, *Triebe*) was one of the most significant and widely read texts on animals in the late eighteenth century. The overall argument of *Triebe* turns on what makes humans and animals distinct: whereas human behaviour is the result of reflection, animals operate according to innate drives. Reimarus defines reflection as the capacity to compare and distinguish different representations. In this regard, he and Meier share an understanding of consciousness and concepts: the higher faculty is fundamentally concerned with introducing increasing degrees of clarity and distinctness, and distinguishing representations requires concepts. But, against Meier, Reimarus takes this to provide an essential difference – a difference in kind, not degree – between animals and humans:

Everything [in humans] comes from the capacity to compare one separate representation against another, that is, from reflection; therefore the animal has no faculty nor power to compare one with another separate representation — that is, to reflect. ... Their confused imagination (*Vorstellung*) without reflection ... is essentially different from ours and bears only an analogy or general similarity with our reasoning. (Reimarus 1760: 49; 272)

Whereas humans rely on comparison and distinction to accomplish their actions, animals are only analogous to humans in a qualified way: there is only a 'general' (*allgemeine*; 1760: 49, 1756/1791: 489n.) or 'distant' (*entfernte*; 1760: 272) analogy. The focus of his discussion of animals is laying out the narrow ways animals and humans are similar, but especially accentuating their overwhelming differences.

A full discussion of drives would require a much longer paper. 12 But Reimarus provides a brief explanation at the beginning of the text explaining his Indistinctness View of animal minds. He contends that animals are self-moving beings, animated by innately specified associations between internal representations — between sensations as stimulus and the desires and images necessary for responding. These are animal drives: 'the regular succession of actions for each species of animals for their own good ... an art (Kunst) implanted by the Creator' (1760: 238). Reimarus argues that these are analogous to recalled concepts in humans (36-7; 271-2), which unconsciously compel us to react 'before all thought and decision' (17), such as when we duck for cover when hearing a nearby gunshot (18). Animals encounter every representation in this way: 'we can grasp how animals are acquainted with (kennen) and distinguish between things, or how they are conscious of themselves and how they represent: everything is only indistinct and confused, yet very lively' (31). Again, as van den Berg puts it, animals possess a blooming, buzzing confusion, but one in which certain representations trigger automatic, concept-like drives implanted in the animals' reproductive imagination. The result is an impressive, but potentially deceptive, illusion — that in this respect animals possess the same capacities as humans: '[animals] are able to act as if they can separate representations in their imagination and compare them with each other' (49). They can do no such thing; the behaviour occurs by unconscious drives implanted by their Creator.

This broader project leads Reimarus to criticize Meier's view that animals might operate by means of clear and distinct representations. In his rebuttal to Meier (1760: 260-76) – a numbered, 24-point argument in the centre of the text – he specifically cautions against overestimating the analogy between animal and human cognition as, he contends, Meier does. In the middle of the argument (§§13-16, 268-70), Reimarus clarifies how his overall critique of Meier is itself a discussion of concept-formation in humans. While, as adults, we differentiate representations using automatically recalled concepts, this 'originally cost much time and reflection' on the part of infants (§15, 269). Pointing to Cheselden's newly sighted patient, Reimarus notes that he could not discriminate the different bodies represented in a painting until eight weeks after surgery (§13, 268). He takes this as evidence that even basic discriminations – the kind Meier grants to animals – are not immediate but instead acquired by practice. While both newborn and animal experience is characterized by a blooming, buzzing confusion, these are fundamentally dissimilar because infants have the capacities needed to create their own inner life.

The central and most basic capacity infants possess that animals lack is voluntary attention, the capacity to selectively clarify and distinguish one representation at the expense of all others. He argues that representations are often obscure (*dunkel*) until attention is given to them (§§1-2, 265), and initially given representations – sense, memory, anticipation, recollection and so on (§3, 265) – form a confused and incomprehensible mush. Reimarus takes comparison to involve distinguishing one representation from all others (§2, 265), then distinguishing another, then comparing both and only then differentiating them. This is a *temporal* process, moving from a present sensation to a recalled memory, and then returning both to the present to relate them. Thus Reimarus argues that the first distinction, as the condition for all other distinctions, is to develop a basic notion of memories and sensations: '[without] separate representation of the past

as something distinct from the present', there is not even 'separate comparison of the present with the present' (§§5-6, 265-6). Even the process of comparison and distinction depends on the infant gaining some understanding of its own inner life, how present sensations constantly become memories which, in turn, pile up as potentially recallable representations for comparison. As Udo Thiel puts Reimarus's argument, 'consciousness, even of the present, can exist only in a being that remains identical through change and is conscious of its identity' (Thiel 2011: 337). For Reimarus, the minimal self-identity provided by classifying memories as memories precedes, both logically and chronologically, any distinctions between the content of representations — such as between colour and sound.

The remaining arguments up to §18 (270-1) can all be understood as specifying other abstract, formal features infants must learn before they can be aware of their world. In section §8 (266) Reimarus notes that without comparison of past and present, 'there is also no insight into the resemblance or difference between things'. In §§9-10 (267), he argues that similarity and difference relationships in turn depend not only on being able to abstract differences, but also on a word or 'other sign' to symbolize the abstract relationship between representations. This distinction, in turn, is key for distinguishing 'things' and 'oneself' (§11, 267), and thus distinguishing between thoughts, concepts and the things they represent (§12, 267), and without this there is no understanding of spatial properties, like extension, and relationships, like distance (§13, 268). At §§16-7 (269-70). Reimarus finally draws all these points together. As he notes, even if an infant discriminates representations from each other – and even grasps them as all related to the senses – there is a further step requisite for treating them as *objects*:

All the connected representations of the different properties of a thing is not the same as a judgement about the thing. ... If everything that arises in the senses from a single thing is

presented – as colour, extension, figure, movement and that which arises in the imagination from it – is represented at the same time and together, then it is merely an indistinct representation of many things at once. ... If one makes a judgement about an individual thing, it cannot happen without having distinct, general concepts, as is clear from the example. (Reimarus 1760: §§16-17, 269-70)

The argument is that, even if infants possess a heap of contemporaneous representations of colour, shape, movement and so on, they still need concepts for distinguishing all these representations, plus concepts of subject-predicate and property-object, in order to make the basic judgement: 'This is an object.' Meier simply has it backwards on Reimarus's account: even simple discriminations in regard to objects ultimately depend on the acquisition of a battery of general, abstract concepts, such as self, world, time, space, properties and objects.

The final part of Reimarus's critique of Meier is a summary of the overall argument of the book: that animals *act* the same as humans in certain ways does not mean they have anything similar to human capacities. He notes that 'the confused representation of present and past' in animals simply produces the same effects as 'the higher power of a separate representation of the past, memory, reflection, insight into similarity, abstraction, speech, wisdom, reason, art, science, selection and freedom' (Reimarus 1760: §23, 272-3). He concludes by noting that the difference between animals and humans is not a difference in degree (*Stufenunterschied*), where we could imagine a spectrum of increasingly more rational beings between plants and humans, but rather constitutes an 'essential difference' where rationality is wholly present or wholly absent (§24, 273). The presence of genuine reason in humans is transformative, making even the lower faculties in animals and humans dissimilar.

The upshot is that Reimarus argues that numerous abstract concepts must be acquired, both logically and chronologically, before conscious discriminations of objects in their world is possible. As such, claims that animals must possess degrees of consciousness to explain complex behaviour are improper anthropomorphizations that fundamentally misunderstand the analogy between animals and humans.

6. Kant's Critique of Meier (and Reimarus)

The last two sections laid out the debate between G. F. Meier and H. S. Reimarus. In this section, I argue that Kant, in his critique of Meier in FS, is endorsing many of Reimarus's arguments on animals. However, Kant also stakes out his own position against both Meier and Reimarus: all conscious discrimination *just is* judgement, and thus for Kant judgement is constitutive of consciousness and the connected capacities of the higher faculty.

FS takes up an esoteric issue: the different forms of syllogism taught in eighteenth-century Germany. At the end of the text, Kant provides a concluding remark that connects his argument about syllogisms into a broader account of consciousness and judgement. The target, not named but alluded to, is Meier, who holds that concepts, judgements, understanding and reason all come in degrees. But unlike Meier and Reimarus, who regard the higher faculty as principally the capacity to distinguish representations, Kant argues that 'the higher faculty of cognition rests absolutely and simply on the capacity to judge' (FS, 2: 59). He thus frames all abilities, including distinguishing one representation from another, in terms of propositional, recognitive judgements. In short, consciousness and judgement are two sides of the same coin.

It is in this context where Kant alludes to Meier, 'a man of renown and learning' (FS, 2: 59), who ascribes concepts to animals. He summarizes Meier's argument about an ox distinguishing its stall and notes:

The distinctness of a concept does not consist in the fact that that which is a characteristic mark of the thing is clearly represented, but rather in the fact that it is recognized as a characteristic mark of the thing ... only the being who forms the judgement: *this door belongs to this stable* has a distinct concept of the building, and that is certainly beyond the power of animals. (*FS*, 2: 59)

Meier argues that merely discriminating one representation from another is sufficient for concept possession. While Kant's counter shares with Reimarus the idea that merely discriminating one thing from another involves a whole suite of cognitive capacities and abstract concepts, Kant clarifies that the central ability of the higher faculty is judgement. This means that even distinguishing one representation from another depends on the capacity to subsume them under abstract concepts and connect them to other representations, not just an ability to clarify and distinguish them. Thus – since recognitive judgements are, even for Meier, beyond the powers of animals – animals lack discrimination.

The next paragraph is meant to make clearer why Kant thinks this, as well as show his commitment to Reimarus's understanding of animal 'mentality' as reducible to drives. Kant begins simply by repeating Reimarus's arguments: animals differentially respond to representations without judgement, what he calls 'physical differentiating'. As Kant notes, 'physically differentiating means being driven (*getrieben*) to different actions by different representations' (*FS*, 2: 60). In a footnote, he clarifies this by connecting it to Reimarus's claim

that animals lack consciousness of how any representation differs from any other: '[animals lack] the act of cognition (*Handlung der Erkenntnißkraft*) of the agreement or conflict between what is in one sensation and what is in another, and are [not] conscious of and therefore [do not] judge (*bewußt sein und also urteilen*)' (60n.). For Kant, animal responses are to be explained without appeal to conscious comparison, distinction or judgement. He then clarifies how this process differs when humans 'differentiat[e] logically', which consists in a capacity for judging, 'recognizing that a thing A is not B; it is always a negative judgement' (60). Kant takes all discrimination to involve a propositional judgement involving multiple concepts and a logical operation. Thus Kant is arguing here against *both* Meier's and Reimarus's theory of consciousness.

Kant concludes the argument in FS by arguing that judgement ultimately depends on inner sense, the capacity which marks the 'essential difference' between animals and humans. He defines inner sense as the capacity to 'mak[e] one's representations the objects of one's thought' (2: 60). This is, notably, similar to Reimarus's first point in his criticism of Meier: only a being who can voluntarily differentiate representations can form concepts. Kant's central revision of Reimarus is making explicit that this process turns on the ability to judge because differentiating representations just is judgement. Inner sense here is being taken as, minimally, the capacity to judge two representations as different — the negative difference between oneself and one's thoughts. This draws a clear line between animals and humans around how differentiation works.

While his discussion in FS is brief, Herder's contemporaneous lecture notes record him as discussing similar issues at further length. No lecture notes, especially Herder's fragmentary ones, are fully reliable guides to Kant's views. However, even in their fragmentary form, the influence of Reimarus on Kant's lectures is obvious: far more than later lectures, he discusses

animals and drives at length and in multiple contexts. Thus we find in L-Met (28: 60-117) an overview of the analogue of reason in humans (83-88) and, within this discussion, Kant suggests that animal 'distinction without recognition or judgement' might be analogous to when humans deep in thought differentiate 'without consciousness' (88). He later provides a long discussion on how different skilful animal behaviours 'can entirely be explained without consciousness ... See Reimarus' (116). Within this argument about animals, Kant rejects the argument put forward by some (like Meier) 'per analogiam rationis' that animals differ only in degree from humans, and instead argues that animals and humans are 'completely heterogenous' (völlig heterogeneisch) due to the presence of inner sense (117). The lecture notes show that Kant connects the uniqueness of human reason in similar ways as Reimarus: he makes explicit that the ability allowing us to judge is bound up with voluntary attention and, without it, no representation can be clear or distinct:

Voluntary attention [and abstraction] is possible only through inner sense, and only through voluntary attention are clear concepts possible ... distinctness is the clarity of marks as marks, and therefore the clarity of concepts through judgements — without judgements representations cannot be clear. (L-Met 28: 79-80)

Kant also notes that human infants must learn to differentiate and judge representations, and what we treat as the product of mere sensation are in fact the product of judgement (28: 60).¹⁴ Finally, in two places Kant argues that humans must acquire the concept of temporality as part of their self-development (84, 87), because without it 'we lose ourselves without memory of the same state', and without grasping these memories 'we would be new beings' at each moment (84). While we cannot be sure Herder's notes properly capture Kant's views here, the parallel between the lecture notes and Reimarus's views are clear, and the parallel between these

passages and Kant's argument in FS provides good grounds for taking these views as, broadly speaking, in line with Kant's own thoughts. In the early-1760s, Kant is clearly fascinated and inspired by Reimarus's arguments and position on animals and claims about what makes humans distinct from animals.

The upshot is that Kant's comments on animals, and his critique of Meier, rely heavily on Reimarus. But it also shows that, in *FS*, Kant differs from Reimarus on the relationship between consciousness, concepts and judgement: consciousness now finally turns out to *be* the capacity to judge, where all awareness of any difference in representations involves a propositional judgement relating one concept to another — if only minimally as 'A, not B'.

7. Our Contemporary Debate

The last section showed the debt Kant owes to Reimarus in the early-1760s. In this section I show how Kant's reliance on Reimarus in *FS* clarifies disputed passages concerning physical differentiation and inner sense in our own contemporary debate between Distinctness and Indistinctness readings of Kant on animals.

A central contention of the Distinctness reading is that Kant allows animals to be conscious of clear and distinct representations, and that it is by means of this consciousness that they act skilfully. Golob especially makes this case: 'The ox has a clear – where that term is understood phenomenologically – visual awareness of some property or 'mark' of the stall. ... This clear representation is the basis for both differential reaction [. . .] and for association' (2020: 74). In context, however, Kant cannot be making the argument Golob ascribes to him by contrast with Meier, because it *is* Meier's position: animals possess clear and distinct consciousness of representations and their properties and this consciousness underlies their skilful action. Kant's

response is that animals cannot possess clear and distinct representations without a broad suite of cognitive capacities, central to these being judgement. Moreover, Kant holds that animal behaviour is causally triggered by drives to respond appropriately, which occurs without any awareness of how representations differ. Kant's criticism of Meier and his discussion of the ox and physical differentiation provides no support for the Distinctness reading on this point.

But the Distinctness reading is right to treat Kant's 'inner sense' to refer to self-consciousness. Leland argues that Kant does not here use this expression to mean self-consciousness, as he will in the 1770s, but 'simply the capacity for possessing representations consciously' (2019a: 298). A major reason for this is that, if inner sense meant self-consciousness, then Kant would hold that 'every act of judgement would be a self-conscious mental state' (298-9). Leland regards this as 'implausible both as an account of the nature of judgement and as an interpretation of Kant' (299). But Leland's reading is difficult to square with Kant's comments in FS; Kant's claim that inner sense involves 'making one's representations the objects of one's thought' (2: 60) is both voluntaristic (machen) and possessive (seine), implying not mere consciousness but the selfconscious voluntary attention specified by Reimarus. But Kant's reliance on Reimarus here also explains why Kant need not hold that all discrimination depends on an explicit selfrepresentation — an 'I think' appended to every distinct representation. For Reimarus, the mere capacity to voluntaristically distinguish anything – even present and past – depends on a tacit self-consciousness, a very basic sort of differentiation between a self-identical representer (and their store of memories) and the present representations they are attending to. Since Herder records Kant as making Reimarus's memory argument at two points (L-Met, 28: 84, 87), it makes sense that Kant regards inner sense as voluntaristic self-consciousness: he is endorsing Reimarus's notion that the tacit self-consciousness in question – formed in infancy but rendered

automatic by habit – is requisite for differentiating any representation from any other. The difference is that Kant takes all discrimination to involve not just concept-possession but judgement (as Leland shows). The Distinctness reading is right that 'inner sense' here means self-consciousness.

There is a final point worth noting from Kant's discussion in FS and the contemporaneous lectures — specifically, a striking *omission*: Kant never mentions animals possessing confused and indistinct representations, nor does he ever qualify his denial of consciousness to them as a lack of 'clear' consciousness. Despite numerous opportunities, Kant consistently avoids making this claim at the exact point where it is common to find it in others, such as the Baumgarten text he is teaching from or the Reimarus text he is citing in his discussion of animals. The most plausible reason for this absence is simply that Kant endorses a Non-Consciousness View and does not think animals possess any kind of consciousness at all. This follows from his overall argument: if the higher faculty is the capacity to judge, and animals lack judgement, it does not make sense to ascribe any of the related capacities – such as some degree of awareness – to them either. If they lack the essential part, they lack the whole thing. Arguably, the same is true of Reimarus, since he also regards the higher faculty as all-or-nothing and treats animals as essentially different from humans insofar as their behaviour is fully explicable without consciousness (1760: 273). But whereas Reimarus relies on questionably coherent phrases like 'confused and indistinct, yet very lively' (31), Kant seems to bite the bullet and deny animal consciousness without qualification — leaving animals as possessing only unconscious representations. While Kant makes similar claims to Reimarus, their views are not identical, even in the period in which he is most inspired by Reimarus's work.

The upshot is that it should at least have been clear to his contemporaries that in *FS* Kant rejects Meier's hope of making sense of consciousness of differences between representations in the absence of abstract concepts and propositional claims, as well as Reimarus's contention that animals might possess confused and indistinct consciousness in the absence of inner sense. For Kant, the whole of cognition – even concerning the most minute consciousness of any representation – rises and falls together; if animals lack it, they *wholly* lack it.

Conclusion

This article has shown that Kant participated in a rich debate taking place in the 1750s and 1760s concerning animal consciousness. On the one hand, figures like G. F. Meier argued that animals possessed a minimal kind of consciousness, had spatio-temporal awareness, could perceive and track particulars and understand basic causal interactions — all without the metacognitive capacities of self-reflection, subsuming particulars under universals or discursive judgements. On the other hand, those following Reimarus held that, where there were no metacognitive capacities, there could only be confused and indistinct representations which the animal does not differentiate except causally.

The main takeaway for our contemporary debate concerning Kant's comments on animals is thus that he is intervening in the Meier-Reimarus conversation — and carving out his own position within it. He is expressing deep scepticism of the idea that animals possess any consciousness without the full suite of cognitive capacities: concepts, judgements and abstractive abilities. Kant argues that animals lack the capacity to be aware of how representations are similar or different precisely because all recognition of difference depends on the abilities found in subsuming particulars under general concepts in the form of propositional claims. Moreover, given how closely he hews to Reimarus's text, Kant would have expected his readers to grasp his view as an

endorsement of this perspective on animals — while also rejecting Reimarus's theory of consciousness. This clarifies why, despite Kant's adherence to Reimarus, he does not follow him in arguing that animals possess 'confused and indistinct, yet very lively' representations; he is silent on the matter because he does not agree with it. The upshot is that Kant, at least in the early 1760s, ascribes no consciousness to animals.

Notes

- ¹ All translation for Wolff, Meier, Reimarus, and Herder's metaphysics lecture notes are my own. All citations to Kant refer to the Akademie edition, with translations from the Cambridge editions of Kant's works (Kant 1991) where available. Abbreviations: *FS* = 'False Subtlety of the Four Syllogistic Figures'; L-Log = Logic Lectures; L-Met = Metaphysics Lectures; Refl = Reflections (on metaphysics).
- ² The concept of consciousness is confusing and has multiple different meanings (McLear 2011: 3-5). For this paper, I always use consciousness to refer to *phenomenal consciousness*, either the awareness of the qualitative character of an experience the 'redness of red' or 'painfulness of pain' or any sort of awareness of the world, or of objects in the world, of a sort to which awareness of the qualitative character of experience is integral. Although I regard the concept of 'phenomenal content' as anachronistic, I argue that whatever Kant is denying in claiming animals lack consciousness includes phenomenal consciousness.
- ³ Despite Kant's consistent denials of animal consciousness, it is surprisingly difficult to find readers who endorse the Non-Consciousness View though most interpreters simply do not discuss his comments on animals. Historically, the Non-Consciousness View has been defended by Kemp Smith (1913: liv) and Bennett (1966: 105-6). Some contemporary conceptualist readings, such as Ginsborg (2008), Grüne (2014) and Land (2018), discuss why animals are not a

problem for their reading while also carefully avoiding commenting on whether animals are conscious or not.

- ⁴ Similar interpretations appear in other Distinctness Views, such as Allais (2009: 406, 2015: 8), Allison (2015: 218), Golob (2016a: 374, 2020: 74), Hanna (2015: 107), and de Sá Pereira (2013: 235).
- ⁵ There are many discussions of Descartes on animals. For a thorough discussion of Descartes on mechanism, and how this relates to thinking, see Wheeler (2008).
- ⁶ For a broader discussion of the nature of life in the eighteenth century, especially Germany, see Zammito (2018).
- ⁷ Kant expresses this clearly in a remark: 'When a dog ravages some carrion, movement begins in him which is not caused by the odor in accordance with mechanical laws but through the arousal of desire. In animals, however, this is just as much of an external necessitation as it is in machines; thus they are called *automata spiritualia*' (Refl 3855, 17: 313-4; see also L-Met, 28: 99). For discussion of the notion of spiritual automata, see Riskin (2016).
- ⁸ Meier, in a bit of revisionism, even argued that Descartes *would* have endorsed animals possessing immaterial souls if he had this distinction; see 1750: 28.
- ⁹ For a discussion of this spectrum of representations and its usage in eighteent-century French and German philosophy, see Wunderlich (2005). Kant taught from an abridged version of Meier's *Vernuftlehre* logic text and discusses this spectrum of representations in multiple places in the logic lectures; see L-Log 9: 33-5, 24: 34-6, 702-3, 805-6. Although in his early writings he took 'confused' and 'indistinct' as separate, he came to treat them both as the same, preferring 'indistinct' (e.g. L-Log 9: 35).

- ¹⁰ Meier notes that in a being without *any* higher faculty's representations, their field of representations would be wholly confused, and each individual representation would be obscure (1750: 75).
- ¹¹ Whether concepts are necessary for distinction or whether there is a nonconceptual kind of distinction remains a live issue. See, for example, Burge (2010) and Fodor's (2015) response. ¹² See Jaynes and Woodword (1974) and Richards (1979).
- 13 In the *Jäsche Logic*, Kant lays out a similar notion of 'acquaintance' (*kennen*), which he ascribes to animals, while differentiating it from 'acquaintance with consciousness, or recognition' (*mit Bewußtsein etwas kennen. d. h. erkennen*), found only in humans (L-Log, 9: 65). See also section 5, where I highlight similar points in the Herder lectures. The general ability comparing without awareness of difference is mentioned often throughout his record of Kant's lectures (e.g. L-Met, 28: 276-8, 449-50). Van den Berg (2018: 4-6) provides an excellent discussion of how this process works for Reimarus, especially in complex cases.

 14 These passages also show the influence of French sensualists, especially Rousseau, on Kant's thinking in this period.

References

Allais, L. (2009) 'Kant, Non-Conceptual Content, and the Representation of Space'. *Journal of the History of Philosophy*, 47(3), 383-413.

Allison, H. (2015) Kant's Transcendental Deduction. Oxford: Oxford University Press.

Ameriks, K. (1981/2000) Kant's Theory of Mind. 2nd edn. Oxford: Clarendon Press.

Baumgarten, A. (1739/2013) *Metaphysics*. Trans. C. D. Fugate and J. Hymers. New York: Bloomsbury Academic.

Bennett, J. (1966) Kant's Analytic. Cambridge: Cambridge University Press.

- Burge, T. (2010) Origins of Objectivity. Oxford: Oxford University Press.
- Callanan, J. (2020) 'The Comparison of Animals'. In J. Callanan and L. Allais (eds), *Kant and Animals* (Oxford: Oxford University Press), pp. 19-41.
- de Sá Pereira, R. (2013) 'What is Nonconceptualism in Kant's Philosophy'. *Philosophical Studies*, 164, 233-54.
- Descartes, R. (1984-91). *The Philosophical Writings of Descartes*. Trans. J. Cottingham, R. Stoothoff, D. Murdoch and (vol. III) A. Kenny. Cambridge: Cambridge University Press.
- Fieldhouse, H. (2004). Status of Animal Minds in Kant. *Philosophical Writings*, 25, 3-18.
- Fisher, N. (2017) 'Kant on Animal Minds'. Ergo, 4(15), 441-62.
- Fodor, J. (2015) 'Burge on Perception'. In E. Margolis and S. Laurence (eds), *The Conceptual Mind* (Cambridge, MA: MIT Press), pp. 203-22.
- Golob, S. (2016a) 'Kant as Both Conceptualist and Nonconceptualist'. *Kantian Review*, 21(3), 367-91.
- (2016b) 'Why the Transcendental Deduction is Compatible with Nonconceptualism'. In D. Schulting (ed.), *Kantian Nonconceptualism* (New York: Palgrave Macmillan), pp. 27-52.
- (2020) 'What Do Animals See? Intentionality, Objects, and Kantian Nonconceptualism'. In J. Callahan and L. Allais (eds.), *Kant and Animals* (Oxford,: Oxford University Press), pp, 66-88.
- Grüne, S. (2014) 'Reply to Colin McLear'. Retrieved from *Virtual Critique*: https://virtualcritique.wordpress.com/2014/08/20/reply-to-colin-mclear/
- Hanna, R. (2004) *Kant and the Foundations of Analytic Philosophy*. Oxford: Oxford University Press.
- Hanna, R. (2006) Kant, Science, and Human Nature. Oxford: Oxford University Press.

- Jaynes, J., and W. Woodward (1974) 'In the Shadow of the Enlightenment: II. Reimarus and his theory of drives'. *Journal of the History of the Behavioral Sciences*, 10(2), 144-59.
- Kant, I. (1991-) The Cambridge Edition of the Works of Immanuel Kant. Ed. P. Guyer and A.Wood. Cambridge: Cambridge University Press.
- Kemp Smith, N. (1918) *A Commentary to Kant's Critique of Pure Reason*. London: Macmillan and Co., Limited.
- Land, T. (2018) 'Conceptualism and the Argument from Animals'. In V. Waibel, M. Ruffing and D. Wagner (eds), *Natur Und Freiheit. Akten des XII. Internationalen Kant-Kongresses* (Berlin: De Gruyter), pp. 1269-76.
- Leland, P. (2018). Kant on Consciousness in Animals. Studi Kantiani, 31, 75-107.
- (2019a) 'Kant and the Primacy of Judgement'. *Journal of the History of Philosophy*, 57(2), 281-311.
- (2019b) 'Kant, organisms, and representation'. *Studies in History and Philosophy of Biology* and Biomedical Science, 79, 1-10.
- McLear, C. (2011) 'Kant on Animal Consciousness'. Philosophers Imprint, 11, 1-16.
- (2020) 'Animals and Objectivity'. In J. Callahan and L. Allais (eds.), *Kant and Animals* (Oxford: Oxford University Press), pp. 42-65.
- Meier, G. (1750) Versuch eines neuen Lehrgebäudes von den Seelen der Thiere. Halle: Carl Hermann Hemmerde.
- Onof, C. (2016) 'Is There Room for Nonconceptual Content in Kant's Critical Philosophy?' In D. Schulting (ed.), *Kantian Nonconceptualism* (New York: Palgrave Macmillan), pp. 199-226.

- Reimarus, H. (1756/1791) Abhandlungen von den vornehmsten Wahrheiten der natürlichen Religion. 5th edn. Tubingen: Frank und Schramm.
- (1760) Allgemeine Betrachtungen über die Triebe der Thiere. Hamburg: Johan Carl Bohn.
- Richards, R. (1979) 'Influence of Sensationalist Tradition on Early Theories of the Evolution of Behavior'. *Journal of the History of Ideas*, 40(1), 85-105.
- Riskin, J. (2016). The Restless Clock. Chicago: University of Chicago Press.
- Thiel, U. (2011) The Early Modern Subject. Oxford: Oxford University Press.
- van den Berg, H. (2018) 'A blooming and buzzing confusion: Buffon, Reimarus, and Kant on animal cognition'. *Studies in History and Philosophy of Biology and Biomedical Science*, 72, 1-9.
- Wheeler, M. (2008) 'God's Machines: Descartes on the Mechanization of Mind'. In P. Husbands,O. Holland and M. Wheeler (eds), *The Mechanical Mind in History* (Cambridge, MA:MIT Press), pp. 307-30.
- Wunderlich, F. (2005) Kant und die Bewußtseinstheorien des 18. Jahrhunderts. Berlin: De Gruyter.
- Zammito, J. (2018) The Gestation of German Biology. Chicago: University of Chicago Press.