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Source

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A Hermeneutical Back-and-Forth Between Different Approaches to Agency

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Abstract

Agency can be approached from the human case (anthropogenically) or coming from life in general, with organisms like bacteria in mind (biogenically). Each perspective is biased: the former approach tends to set the bar for agency very high, while the latter invites very liberal attributions of agency. Such a polarisation is epistemically flawed. As a rectification, this paper calls for a hermeneutical back-and-forth between opposite approaches to agency – reducing excessive restrictiveness or permissiveness and combining the unique explanatory strengths of both approaches. Five common research tasks are used to illustrate the merits of such flexibility and the risks of rigidly clinging to any single approach. After questioning the dichotomy between the two approaches to agency, the findings are summed up.

Key Words

Agency; anthropogenic approach; biogenic approach; hermeneutical back-and-forth; flexibility

Research concerning agency is becoming increasingly diverse, the focus is no longer solely on humans or other mammals. The major technical and scientific advances of the past century allow us to study the behaviour of all kinds of organisms. The resulting wealth of empirical data on bacteria, ants, crows, and so forth enables philosophers to form empirically grounded theories on the agency of those organisms.

However, when it comes to phenomena like agency, cognition, or even vision, the field is divided into two main sides. Lyon (2006) speaks of two major approaches: some researchers take the human version of certain abilities as their starting point (anthropogenic approaches, coming from the human case), whereas others investigate how organisms have first developed relevant abilities (biogenic approaches, coming from life in general).

Unfortunately, there is comparatively little exchange between the two groups. The barrier seems to stem from preconceptions about the opposite approach: to anthropogenic researchers, biogenic

research seems far too liberal. As biogenic researchers seem to talk about a wholly different phenomenon – mere biochemical processes – their insights do not seem to apply to work on agency-as-we-know-it (e.g., Adams, 2018, p. 28). Biogenic researchers in turn tend to view anthropogenic research as outdated and overly restrictive. As anthropogenic researchers seem to acknowledge only a limited set of agential phenomena – the one we happen to know from experience – they seem to blind themselves to a more objective assessment of the agential abilities of humans and all other organisms (e.g., Levin 2023).¹ Ironically, by hindering exchange between both approaches these preconceptions potentially reinforce the permissiveness of biogenic research and the restrictiveness of anthropogenic research, dividing the field further and making it harder to find common ground (Furman, 2023, p. 201; Bardón, 2020, p. 25). Let me illustrate the two approaches.

As humans, we are naturally inclined to think about agency from our own subjective point of view: ‘This was an action because my conscious intention

to smile made my muscles move accordingly.’ However, this is a rather special instance of goal-directed behaviour. With that in mind, ascribing agency to other organisms – be it cats or bacteria – seems incoherent. It seems to imply that they are capable of some kind of conscious intention (for a critical discussion, see Glock, 2019, p. 664–5), or at least show similar degrees of freedom, e.g., not to show a certain behavioural tendency (Naragon-Gainey, McMahon, & Chacko, 2017; Bermúdez, 2017).

Then again, if one asks how agentially interesting phenomena first emerged, one is far from assuming conscious intentions, or similarly high degrees of freedom: take bacteria, for example. Unlike mere chemical reactions (say, the oxidation of a copper statue), the organisation of any organism allows them to actively maintain themselves with increasingly complex behaviour. Instead of ceasing their activity once their current environment is depleted of nutrients, *E. coli* bacteria can actively seek out richer feeding grounds in a number of ways, for instance by following gradients of chemicals.² From this perspective, following the biological need to absorb nutrients by actively moving (as opposed to being carried) in the direction in which one detects a higher nutrient density seems agential.

Interestingly, one can recognise agentially interesting phenomena in bacteria without disregarding the vast differences to human agency: Sims (2021) puts the starting points of anthropogenic and biogenic approaches (roughly, humans and bacteria) on opposite ends of a continuum. Whether one initially considers non-human organisms as candidates for agency or not, it is very fruitful to think of agency as a continuum; just like colours, agency seems to come in different degrees, and shades.³ Thinking of the various dimensions of agency – e.g., “passivity, automaticity, rationality, endorsement, freedom-to-choose, and consciousness” (Dattathrani and De’, 2022, p. 47) – it becomes clear that they can be met to various degrees (or not at all). On the other hand, having a continuum of agential abilities but ascribing the same, singular level of agency to all agents, seems incongruous. Both the development of an individual and the evolution of a species make it likely that an individual can acquire higher or lower levels of agency, increasing and finally decreasing

with age, for example (such as the intentional relation of humans, see Barresi & Moore, 1996; Schlicht, 2008), or varying between individuals (i.e., how abstract our thoughts of our actions are, see Vallacher & Wegner, 1989).

Assuming that there are different levels of agency to be reached makes it much easier to consider organisms with different abilities as potential agents. However, we can only find reasons for or against the agency of any given system if we critically, but nonetheless seriously consider the possibility. Arguably, this is where a *back-and-forth* between opposing perspectives can help.

While Sims (2021) points out that biogenic insights are relevant for understanding lower-level processes in human behaviour, he does not explicitly problematise an exclusive focus on either approach. This paper zooms in on the methodological problem of approaching the continuum of agential abilities from either end. To emphasise the problem with a rough analogy: Compared to an adult any child seems immature, whereas compared to an infant every child seems rather capable. For an accurate assessment of the child’s abilities, it can help to compare it to both an infant and a grown-up. This flexible perspective can prevent both a too pessimistic and a too optimistic report of her abilities.⁴ I argue that a rigid insistence on either perspective is likely to result in too restrictive or permissive a notion of agency. In order to form the best possible theory of agency, a back-and-forth between the opposing approaches is advisable.

In stressing the importance of a researcher’s perspective, I am not making a metaphysical claim about the nature of agency – it need not depend on the observer’s explanatory point of view. I largely agree with Teller’s (2019, p. 62) description of a perspective as a “partial and not completely exact representational scheme” we are operating with. Independent of that, agency might as well be an objective mechanism to be discovered by scientific explanations (Coelho-Mollo, 2021). Regardless of one’s metaphysical commitments, a rigid perspective can obscure one’s understanding of an object of investigation. That is, it can result in an incomplete or otherwise flawed theory. Insofar, I advertise flexibility rather than any given perspective.

The self-reinforcing preconceptions about the

permissiveness of biogenic and restrictiveness of anthropogenic research increase the rigidity of both approaches, as they make the opposite perspective seem more problematic than helpful. I argue that either perspective is problematic if it is adhered to rigidly. Going back-and-forth between them can help equalise the bias of each individual project, reducing overly restrictive or overly permissive outcomes. This could help unifying the research on agency, enabling a dialogue between both sides. Eventually, this exchange could lead us towards a more accurate understanding of agency.

Implicitly, some of this is already done. But this paper explicates the need for and the benefits of actively initiating hermeneutical back-and-forths – flexibly taking different perspectives on agency. While the existing literature on perspectivism already engages with integrating diverse perspectives (e.g., Fagan, 2017; Plutynski, 2019), the method I propose provides a concrete way to improve our scientific practice.

For both a critical and a considerate examination of agency, this paper begins with (i) an introduction to the top-down anthropogenic approach, and the bottom-up biogenic approach, as Lyon (2006) distinguished them. It then sketches the risks in rigidly clinging to a single approach. Next, it (ii) explicates and makes a case for flexibility – a hermeneutical back-and-forth between both approaches to agency. After elucidating the implicit back-and-forth in biogenic research, it explicates how to go hermeneutically back-and-forth, explaining its merits for five different research tasks. These tasks are then used to illustrate (iii) what happens when we do not go back-and-forth. After considering whether (iv) the applied dichotomy is a false one, the findings are concluded.

Two Opposing Approaches to Agency

Before elaborating on the cost of limiting oneself to a single approach to agency, this section provides an overview over the two relevant approaches, highlighting their differences. This should clarify why clinging to one of these approaches without considering the other perspective could lead to an epistemic disadvantage that blindsides those who rigidly hold their favoured perspective.

The Top-Down Anthropogenic Approach

Investigating the broader domain of agency with the aforementioned anthropogenic (‘coming from the human case’) conception of agency in mind might be considered a *top-down* approach: we first form a theory about our own, rather sophisticated human agency, before looking at other potential agents – infants, embryos, animals, and so forth. In and of itself, the dominance of this approach is no surprise, since the human perspective comes to us naturally and is arguably that which we know most intimately. It becomes more problematic when researchers cling to this perspective and always have the human case in the back of their mind as a paradigmatic example against which all other instances of a certain feature (say, the visual system, or agency) must be measured. This blinds them to many other ways visual or agential processes might be instantiated – ultimately barring them from gaining a deeper understanding of vision or agency. The polarisation not only divides researchers, but also pushes their theories towards extremes (Furman, 2023, p. 201).

Being on the lookout for any resemblance to human agency guides attention to certain features and away from others, and makes it harder to discover agential abilities that are unlike our own, but nonetheless relevant. It may even lead to a misconstrued explanation of an agentially interesting phenomenon, if one interprets it in a fashion in which human agency would be explained, although it might warrant a very different explanation altogether. Overall, this paper focusses on the general tendency to favour an overly restrictive notion of agency. Thinking back to the continuum of agency, one could say that human agency comes in (varying shades of) a certain colour, and focussing on that specific colour could keep one from acknowledging all the other colours that make up the colour spectrum, all the other varieties of agency that could be found in other systems. As such, an anthropogenic approach comes with the general tendency or bias towards a restrictive notion of agency.

Furthermore, psychological terminology on the personal level (i.e., about what one experiences as a person) tends to be developed and applied carefully, while the underlying mechanisms are at best gestured at (e.g., making use of not more than

“toy models,” like List, 2014, p. 166). Anthropogenic researchers tend to shy away from deeper engagement with mechanistic or even statistical vocabulary, leaving their elaborate personal-level theories hollow and closed to scrutiny.

The Bottom-Up Biogenic Approach

An especially promising way to gain a fresh perspective on agential phenomena is approaching them from the other direction: from the *bottom-up*. Lyon (2006) advertised this as the biogenic approach. The name already suggests that mental phenomena are seen as originating from life. Here, biological facts build the foundations for further research. Starting with single-celled organisms, the idea is to learn more about behaviour at a given scale and construct viable explanations for it: how did it evolve, and why did it persist? Looking at increasingly complex organisms, one might find out at which point of (individual or evolutionary) development an additional theoretical concept (e.g., agency) is needed to make sense of the organism’s organisation and behaviour. Even when psychological phenomena arise, Lyon (2006) suggests sticking with the kind of questions commonplace in the biological domain.

However, this approach comes with the inverse bias to that the anthropogenic suffers: measured against dead matter, any living organism seems to possess remarkable levels of agency (Fulda, 2017; Walsh, 2018; Newman, forthcoming). Taking the humble beginnings of agentially interesting phenomena seriously can lead to overrating their agential implications. Furthermore, the interest in processes of life – the underlying ones, not mainly their experience – guides the attention towards biochemical processes, mechanisms, and statistical relations. Thus, biogenic agency is usually discussed on a level of organisation that is far from the psychological, personal level on which anthropogenic theories are often discussed. The relevant biochemical processes tend to be examined in detail, but implications for organismal-level behaviour are often treated as an afterthought, resulting in a vague and broad application of terms like “regulating,” “need,” or “sense” (for example in Egbert et al., 2023, p. 9-15).

Our language makes it tempting to describe every behaviour of living systems in active (instead

of passive, statistical) terminology. However, as pioneers, it is unfortunate that biogenic researchers tend not to pause long enough to critically discuss when it is justifiable to describe something as an active doing as opposed to a passive happening. Such hasty coating hides the rich, uncovered mechanisms away from those who are more interested in careful applications of elaborate personal-level terminology – and from those who judge from the cover, whether they want to follow up on a theory.

The Cost of Rigidity

What is so bad about limiting oneself to a single approach to agency? For starters, the debate on agency is far from settled – there is still no real consensus about what agency entails. While agency is commonly linked to *goal-directed behaviour*, there are vastly different interpretations of ‘goal-directedness’. Softening, but not quite releasing the traditional requirement of belief-desire pairings (Davidson, 1963), some anthropogenic researchers demand belief-goal pairings (Castelfranchi, 2014), or the abstract representation of a goal state (Pacherie & Haggard, 2010, p. 82). Some biogenic theories on the other hand include all need-directed, adaptive behaviour (Fulda, 2015; Fitch, 2008; Walsh, 2018). The best theory of goal-directedness with regard to agency is yet to be found. At this point, focussing on a single approach prematurely could create blind spots, resulting in an incomplete or even inaccurate theory.

In particular, rigidly sticking to either an anthropogenic or a biogenic approach prevents knowledge transfer. The aforementioned preconceptions about the permissiveness or restrictiveness of the opposite approach impede the exchange between the two (diverse) camps, shielding them from relevant objections and discussions. Rigidity and its resulting preconceptions can also cause researchers to create strawmen if they do engage with the opposite approach, keeping much of the exchange on a shallow level. This is an epistemic flaw, since a less tested theory is less likely to be as good as it could be.

This particular flaw comes with being within an “epistemic bubble,” surrounded by sources of information that provide “inadequate coverage” and where other relevant information happens to be ex-

cluded (Nguyen, 2020, p. 143). Being emerged in anthropogenic research on agency could create such a bubble, where biogenic theories on agency are omitted. What I call rigidity is analogous to staying within an epistemic bubble.

Nguyen (2020, p. 154) even speaks of an epistemic duty to seek out exposure to information one's epistemic bubble normally precludes (see also Furman, 2023). Rigidly restricting oneself to a single perspective on agency and mainly to literature from likeminded researchers at least creates an *epistemic disadvantage*: it blinds one towards philosophical insights and challenges from different perspectives on agency. Luckily, this can easily be fixed by "proactively gathering relevant data" (Nguyen, 2020, p.154). But what does this entail?

Flexibility: a Hermeneutical Back-and-Forth

Both top-down and bottom-up approaches have their assets and drawbacks. Lyon stresses that we do not have to decide between them. For a full understanding of agency, not only do we need to understand our own psychological experience of it, but also the natural phenomena we call 'agential' (Lyon, 2006, p. 26).

To try and equal out both biases – being especially restrictive and overly permissive –, a hermeneutical back-and-forth seems advisable. This thought is inspired by De Haan (2020, p. 258). But whereas she is concerned with enactive psychiatry, advertising a hermeneutical back-and-forth between a whole *person-world system* and its co-constitutive dimensions, I call for switching back-and-forth between different perspectives on agential phenomena.

The Implicit Back-and-Forth in Biogenic Research

As we are all humans, one might say that we all start from a top-down perspective at some point, so doing research from the bottom-up implicitly involves some back-and-forth. Moreover, the philosophical terminology on agency is derived from a top-down perspective. This makes it necessary for biogenic philosophers to closely engage with, if not temporarily adopt, an anthropogenic perspective on agency when reviewing theoretical literature. When looking at biological research and empirical data on the other hand, they are inclined to adopt a biogenic

perspective. If the researchers are flexible enough, this gives them the advantage of a less rigid, and therefore often more reflective perspective on agential phenomena, reducing single-laned biases.

Many researchers are already doing this implicitly. Those from the biogenic camp are especially inclined to do so, because they are nudged into different perspectives by consulting anthropogenic philosophical and biogenic biological literature. Biogenic researchers furthermore have the epistemic advantage of being in the minority: this further exposes them to the widely held anthropogenic perspective on a regular basis, both in the traditional literature on agency and everyday interactions. While some might have a rigid perspective, others temporarily take the perspective of their interlocuters. What is more, as humans we naturally adopt a human perspective from time to time – making an unconscious, temporary switch to anthropogenic approaches very likely. Therefore, even the strictest biogenic endeavour must necessarily have been preceded by some kind of anthropogenic theorising. It is even interrupted by anthropogenic discussions with friends, colleagues, or on the media. Instead of tacitly neglecting this point, I suggest embracing it: it would not only be more transparent, but also more fruitful, to explicitly go back-and-forth between both approaches.

In this regard, rather than being an advantage, an anthropogenic perspective puts researchers somewhat at a disadvantage, as it is the more widely and traditionally held perspective, its origins in Western philosophy dating back at least to Aristotle. Therefore, these researchers are generally not forcibly confronted with the opposite biogenic point of view. They are even more epistemically disadvantaged by not actively seeking out opportunities for a temporary change of perspective to reduce biases. With that said, how would one go about reducing those biases?

How to Go Hermeneutically Back-and-Forth

How would one explicitly go hermeneutically back-and-forth between different approaches? It has already become clear that biogenic researchers investigate agency with bacteria and the like in mind, whereas anthropogenic researchers have humans in mind. The latter starting point raises the bar for ag-

agency much higher than the former.

But a hermeneutical back-and-forth might benefit even more from another difference: their *level of description* (see Lyon, 2006, p. 12). Biogenic researchers focus on biochemical processes and their organisation. While they also investigate the relation to observable behaviour of the whole organism, most attention is typically given to the biochemical level. Anthropogenic research on the other hand is about *psychological phenomena*. The biochemical processes it takes into consideration are mostly those in the brain and even then, anthropogenic theories generally refer to the personal, psychological level (see Adams & Aizawa, 2001, p. 48; p. 53; – using notions like “content” and “representations” to enquire whether “a state in a human brain is part of a person’s thought that the cat is on the mat”).

This further difference creates yet another opportunity: switching back-and-forth between both approaches forces a researcher to engage with their object of investigation now on the psychological, then on the biochemical level, keeping her from losing sight of either the agential powers of the organism as a whole, or the concrete mechanisms behind them.

That said, the continuum of agency might have appeared earlier in evolution than psychological abilities. In bacteria, it might be fruitful to look at their equivalence to a personal level: the organismic. While biogenic researchers naturally do so, they rarely focus. their theoretical investigations on that level, thus failing to capitalize on the fact that an anthropogenic description of what is happening in chemotaxis could provide insights into what is lacking either in the bacterium or in the biogenic theory to make it agentially interesting: pointing out relevant explananda, for instance if a bacterium as a whole can actively influence its biochemical processes – does that entail some kind of a point of view?⁵ This example highlights the importance of a back-and-forth: while an anthropogenic perspective is helpful in generating the explanandum, answering the question on that level bears the danger of extrapolating from us to bacteria. Thus, the search for an empirically grounded explanation could benefit from happening from a biogenic perspective, looking for specific mechanisms or general principles that could enable something like a point of view in

a bacterium.

In dealing with each other’s work, researchers could develop a more unified terminology, wherein coarse-grained descriptions are linked to the respective fine-grained underpinnings and vice versa, making the one more accurate, the other more tangible, and generally fostering the connectivity between various research projects across disciplines (see Gallagher, 2000 for an impressive example of research that is rich on both levels).

More concretely, the hermeneutical back-and-forth is relevant for at least five different research tasks:

(1) Literature review: When engaging with her opponent’s work (i.e., research from a different perspective), a researcher can benefit from trying to take it seriously, making it her own for the time being, and taking the chance to look at the object of investigation from the perspective of her opponents. After reading her opponent’s work – or during breaks –, she can still switch to her usual perspective and attack it from there. But temporarily taking the other’s perspective can grant unexpected insights into both her own and her opponent’s theories.

(2) Theory formation: When working on her own theory, she might stop every now and then and try to look at it from the opposite perspective: how would her opponent describe her object of investigation? How would they explain the phenomenon? Ideally, she does not stop at suppositions (in order not to create a strawman), but actively searches for work from the opposite approach to agency. If she cannot find relevant papers, she might look for conferences, where she can get more interactive feedback, and generate questions and answers tailored to her research. This does not only help to motivate her research further but can also give it an interesting new spin.

(3) Considering objections: Furthermore, actively seeking exchange with researchers who are not likeminded could challenge her own perspective and point out loopholes in her line of argumentation. Within a philosophical theory, it is even expected to engage with possible objections. Sticking to potential questions of likeminded researchers normally allows for more detailed explanations. However, engaging with objections her opponents might voice can lead to more general support for her theory. It could even

expose a crucial asset that sets her theory apart from similar ones.

(4) Interaction with colleagues: On a broader level that concerns more than her own research, she could establish regular exchange with her opponents. One way of doing so is engaging in a joint reading or research group and exchanging thoughts on relevant papers, or even providing feedback on each other's work. This more intimate form of contact might make it easier to actually take the other's perspective for a while. What is more, the influence goes both ways, encouraging every member of the group to exit her epistemic bubble and engage with another approach to agency on a regular basis. If taken seriously, this kind of exchange could even help bridge the gap between anthropogenic and biogenic research, creating more feedback loops that enable researchers to update one another's work, leaving both sides of the debate on agency better informed.

(5) Demonstration and advertisement of one's (flexible) perspective: Finally, this exchange could involve even more people through workshops, conferences, or media activity (interviews, videos, blog posts, etc.) that not only include both perspectives on agency, but also encourage active exchange between them. Ideally, a researcher could even explicitly invite the audience to go hermeneutically back-and-forth between different perspectives on agency, in order to reduce the risk of an overly permissive or overly restrictive theory. This could help create a more uniform notion of agency across the debate, and possibly even in the wider public – or at least, a more uniform way to think about it: as flexibly as possible. Raising awareness for the fact that there is not only one perspective on agential phenomena could keep people from prematurely settling for one approach, or at least make them question their own perspective more seriously every now and then – taking alternatives into consideration.

What if we do not Go Back-and-Forth?

If there is more than one perspective on agency, can we not find out which is the best, or at least preferable, and adopt it alone? Why not focus on cases in the middle of the continuum of agency, comparing them to each other? Well, the first problem is that we need to know more about either

end of the continuum to be able to identify cases in the middle ground. To locate any instance of agency on the continuum, one needs to compare it to other instances of agency, which brings us back to the initial problem: do we look for more demanding or less demanding comparisons?

If researchers do not flexibly change their perspective on agency, they risk producing unbalanced theories. Anthropogenic and biogenic approaches are especially in danger of holding an either overly restrictive or overly permissive notion of agency, since they compare phenomena in question either to very basic or very sophisticated phenomena. Just like the merits of hermeneutical back-and-forth in the previous section, the dangers of a rigidly held perspective can appear in at least five different research tasks.

(1) Literature review: Rigidly holding on to her own perspective, even when she happens to engage with her opponent's work (i.e., research from a different perspective) can impede a researcher's understanding of her object of investigation. This can blind her towards relevant insights, if she is unwilling to seriously consider that not only certain notions her opponents introduce, but their perspective has something to offer.

(2) Theory formation: Never looking at her object of investigation from a different perspective can furthermore bias a researcher's perspective on it. A certain theoretical background guides her attention to certain aspects on certain levels of investigation – making it unlikely to discover features that were at centre stage would she take a different approach.

(3) Considering objections: Never switching to the opposite perspective can furthermore keep a researcher from discovering potential loopholes in her line of argumentation. Certain gaps or even flaws in her theory might only be visible from outside her favoured approach to agency.

(4) Interaction with colleagues: If researchers never seek exchange with those outside their epistemic bubbles (comprised of likeminded researchers and research), the unpublished part of the debate on agency only happens within epistemic bubbles. That creates epistemic disadvantages (Nguyen, 2020, p. 154; Furman, 2023, p. 201), leaving the participants of the debate less informed than they could be. Scientifically, this would make

a divide in their theory formation even more likely since they cannot be updated on each other's recent (unpublished) insights and thoughts. This divide could even result in separate machineries, creating and discussing separate theories on agency, making a unified notion that is informed by the insights of both sides of the debate(s) near impossible. As such, the resulting theories would never be optimised, since at least some relevant, available information from opposite approaches would be ignored.

(5) Demonstrate and advertise one's (flexible) perspective: Not showing the advantages of a hermeneutical back-and-forth in workshops, conferences, or media activity (interviews, videos, blog posts etc.) fails to encourage a wider audience, both academic and general, to seriously consider alternative perspectives on agency every now and then. The result might be rigidly holding on to prematurely acquired approaches to agency. In such a setting, agency cannot be freely discussed in a way that leaves each participant better informed. Rather than talking with each other, rigidly clinging to a single perspective would leave people talking at each other, with much less hope of seriously updating each other's knowledge about agency. While there could still be some exchange, not taking each other's perspective into account is likely to keep the exchange on a shallow level. This would leave them far from a unified theory of agency, each rigid researcher limiting herself to elaborating on a single given perspective on agency instead of approaching the object of investigation from several perspectives. This kind of research would be more about where she is coming from, and less about what she is looking at.

A False Dichotomy?

That said, the debate on agency is not as black and white as I painted it for the purpose of this paper. Any continuum contains not only two opposite ends, but many points in between. While Lyon (2005, p. 50) anticipated "borderline cases and anomalies," she did not seem to consider that, similar to an anthropogenic approach, serious research into the driving forces of organism X could finally result in an X-genic approach. How would that fit into the picture?

Many researchers who are interested in agential

phenomena concern themselves with the study of specific organisms for decades, e.g., octopi (Mather & Anderson, 1993; Mather, 2019), ants (Reid, 2011; 2023), or plants (Calvo & Keijzer 2009; Lee, Segundo-Ortin, & Calvo, 2023). I would argue that they are still approaching the respective agency from either end of the continuum: either they have the human case in mind, searching for rationality and the like (Glock, 2019; Adams & Burbeck, 2012), or they have basic processes of life in mind, investigating the additional abilities a given organism has acquired (Wan & Jékely, 2021; Levin, 2023). It is hard to think of a current theory of agency which originates from the middle ground – trying to measure the abilities of an organisms seems to imply measuring them against something either further down or higher up in the continuum of agency.

But once it is formed, any theory could provide the starting point for another approach. Just like the anthropogenic approach originates in our theories about humans, deep knowledge of species X could inspire an X-genic approach to agency.⁸ It might happen to originate from the middle of the continuum of agency, but that species might also exceed human agency (on individual dimensions or in total).

Regardless, such an approach would still benefit from a flexible perspective in order to improve its line of argumentation. The further aim to equal out possible biases would still suggest a back-and-forth between the opposing approaches, in order to measure the theoretical claims against both ends of the continuum of agency. In the end, an X-genic approach would have much the same epistemic flaws as an anthropogenic one. Remember that human agency just constitutes one colour on the continuum of agency; a theory built upon an understanding of the agency of ants or octopi would, again, tend to focus on their specific colour. In order to avoid becoming lost within that perspective, those researchers would also benefit from a hermeneutical back-and-forth between their theory and at least one other point on the spectrum. In that, they would share an epistemic advantage with biogenic researchers: they would implicitly take the anthropogenic perspective every now and then, when engaging with the traditional philosophical literature. What is more, the more flexible one's perspective is, the better: epistemic-

ally, it would be worthwhile to go back-and-forth between several different perspectives on agency.

on agency.

In a nutshell: yes, the dichotomy is a false one, but it seems to be of theoretical benefit. The more opposing the approaches are, the greater the negative effects of polarisation and thus the need for a hermeneutical back-and-forth. Thus, concentrating on the two opposite ends of the continuum of agency helped illustrate the purpose of flexibility. After all, even when taking various perspectives, one always goes from one to the other. While including even more perspectives in between is epistemically advantageous, this should eventually result in a back-and-forth, nonetheless.

Conclusion

Where Lyon (2006) and Sims (2021) acknowledge that both anthropogenic and biogenic approaches are valuable in and of themselves, I go one step further in claiming that a hermeneutical back-and-forth between them is even more beneficial – and called for.

While some researchers already switch from one theoretical perspective to another implicitly (e.g., when seriously engaging with literature from opposite camps), there is an epistemic need to actively and explicitly do so: to overcome the polarisation of the debate into distinct epistemic bubbles. Moreover, it would help combine both a critical application of agential terminology and attention to underlying biochemical details. Anthropogenic researchers especially are not exposed to opposing perspectives by default, which leaves them at a disadvantage. To make it easier to actively reduce impending biases, I explained how one can explicitly go back-and-forth between different perspectives on agency, during at least five different scientific tasks: (i) literature review, (ii) theory formation, (iii) considering objections, (iv) interaction with colleagues, and (v) demonstration and advertisement of one's (flexible) perspective. These tasks were then used to illustrate the dangers of not going back-and-forth, i.e., rigidly clinging to one perspective on agency.

Finally, I dissolved the dichotomy between the two approaches to agency, bringing in other potentially upcoming approaches (e.g., originating from insights on organism X) as further stops along the hermeneutical loop between various perspectives

Notes

1. Some artificial systems might also be able to display agency, but this paper focusses on organismal agency.
2. For biological details of chemotaxis, see Alexandre and Zhulin (2001, p. 4681), for a philosophical analysis, see van Dujin, Keijzer and Franken (2006, p. 161–4).
3. While Sims introduces a continuum of *intentionality*, it does not seem farfetched to adopt the same framework for agency, especially since intentionality seems to enable agency – as Sims himself acknowledges (2021, p. 16). In fact, the continuum he introduces can be seen as one dimension of agency. The more relevant dimensions an agent covers, and the stronger they do so, the higher their level of agency.
4. By ‘perspective’, I do not necessarily mean something else than ‘approach’. It is rather meant to emphasise the selective, attention-guiding side of it: the fact that coming from a certain theoretical starting point highlights specific features of one’s object of investigation. I try to show that if rigidly held, this can result in an incomplete, inaccurate theory.
5. *Active* as opposed to passive influences through mere structural constraints.
6. The *zoomorphism* Nanay (2018) proposes goes in that direction, arguing that we first form theories about mental states of the animals we study (like the mental maps Tolman ascribed to rats in 1948), to then apply them to human beings. Nanay (2018, 176) stresses that after the initial theory formation on animal behaviour, we need to refine and possibly expand the conceptual apparatus to adequately explain human behaviour. As I strongly suspect that the idea of mental maps was anthropogenic (since humans use concrete and memorised maps all the time), the result is not the one-lane trip from animal minds to human minds Nanay seems to suggest, but a hermeneutical back-and-forth between them.

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