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Extending the ExM: Extended Emotional Dispositions

1. Introduction

According to the extended mind theory by Clark and Chalmers (C&C, 1998), cognitive processes may exist outside of the body. When the right circumstances are present, external entities can be integrated into an individual's cognitive process, becoming part of their extended mind. This approach gives cognition a central role, especially dispositional beliefs, which ignores the role of emotion in the philosophy of mind. While extending emotion seems counterintuitive, Colombetti and Roberts (C&R, 2014) claim that proponents of ExM should also accept that all affective states (dispositional and occurrent) can extend beyond biological boundaries. The former are long-term dispositions to undergo a certain kind of (occurrent) emotions, while the latter are occurrent states with event-like or temporal structure.

In this short essay, I will focus on emotional dispositions and the ExM by C&C (1998) to argue against C&R's (2014) view that all affective states can be extended based on the extant ExM framework. Emotional dispositions are long-term tendencies to experience a specific type of (occurrent) emotions. I choose them for two reasons: i) As standing and intentionally directed states, they are most similar to the dispositional beliefs in the ExM; ii) C&R (2014) only use the ExM framework by C&C (1998) to analyse the extending of dispositional states, while their arguments for extending occurrent states are based on the further work by Clark.

I will first introduce the ExM with the famous Otto & Inga case. Then, I would look at the cognitivist view of the affective states, explaining two typical affective states (emotional dispositions and occurrent emotions) and their differences in more detail. Thirdly, I would evaluate the analyses of extending emotional dispositions by C&R (2014). I shall argue that the cases they proposed cannot all successfully show the material underpinnings of emotional dispositions extend beyond biological boundaries. In their analysis of emotional dispositions, there seems to be a gap between the extended affective state and the internal one before being extended, which I call "*translation problem*". Lastly, I will focus on my proposal: to fully extend emotional dispositions in the sense of functional equivalence between a coupled affective system and an internal affective system, we need an additional assumption

in the extant condition that the extended emotional disposition is *qualitatively identical* to the internal one before being extended.

2. From Extended Cognition to Extended Affectivity

2.1 The Extended Mind Theory (ExM)

In this section, I would like to clarify the Extended Mind Theory in this essay. There are two targets of the extended mind (Wilson & Clark, 2009): i) standing mental states, such as dispositional beliefs; ii) fleeting or occurrent cognitive processes, such as calculating something. This distinguishment is important because the arguments presented in the literature to support extending (i) and (ii) are different. The affective realm includes dispositional and occurrent phenomena, which require different ExM arguments to extend them.

The arguments for extending standing mental states, especially dispositional beliefs, are provided by C&C (1998) with the famous cases of Otto and Inga below.

Basically, it is the idea that cognitive processes may exist outside of the body. In more detail, they argue that given the proper two-way interaction, any external entity linked with the human organism can create a coupled system that can be considered as a cognitive system in its own right.

Cases of Otto and Inga

Inga, a healthy adult, and Otto, who suffers from mild Alzheimer's, both heard of an interesting exhibition at the Museum of Modern Art (MoMA) and decided to see it. To ensure he does not lose important information, Otto carries a notebook with him no matter where he goes and consults it. Inga quickly remembered that the MoMA is on 53rd Street and headed there, while Otto consulted his notebook to find the MoMA's address before setting out.

According to C&C (1998), these two cases are entirely analogous: Otto's notebook serves the same purpose as Inga's memory; it stores information which can be accessed when needed and helps to guide Otto's intentional behaviour, just as Inga's memory does for her. The entries in Otto's notebook meet the glue-and-trust criteria (Clark, 2010): though they may not always be consciously acknowledged,

they are constant and can be accessed easily when needed. They are also automatically endorsed.

They can justify their ExM by appealing to the parity principle, which introduces the functionalist credentials. Basically, the upshot is that the function rather than the location of a process matters when determining whether a process is cognitive. In more detail, if a process is considered cognitive when conducted internally (within the body), it should similarly be recognised as cognitive when conducted externally (in the external world). It is worth clarifying the functional equivalence here because their original passage is potentially misleading to think about the similarity between an external and an internal process. The required functional equivalence is not the one between the external process itself and the internal process, although certain expressions in C&C (1998) might imply that the external element must independently possess functional equivalence to the internal component to be considered a part of an extended mind. For instance, “the entries in Otto's notebook play the same role as Inga's memory”.

The proper interpretation is that, for a process to be considered as a component of the system of processes required for an individual to complete a cognitive task, it should fulfil the appropriate functional role and be causally integrated with other cognitive processes (Menary, 2010). Thus, what is necessary is functional equivalence between a coupled system composed of inter-plus-outer processes and an entirely internal system. For example, Otto and his notebook work together to be functionally equivalent to Inga's internal memory system. In this way, his dispositional belief that the MoMA is on 53rd Street, or more precisely, his cognitive system implementing this belief, can thus be perceived as extended into the external world.

To end up, I will not respond to the criticisms of this ExM in this essay but based on its framework to discover the possibility of extending emotional dispositions. By introducing a novel application of ExM, this essay might contribute to the ongoing discussion on ExM, to some extent, providing clarity on its fundamental commitments.

2.2 The Affective States: Cognitivist View

To avoid potential ambiguity brought by the word “emotion”, the affective states can be organised into two types: an occurrent state and a dispositional state (Goldie, 2000). For instance, if we learn that Lucy fears public speaking, we can interpret this information in two ways. On the one hand, we may conclude that Lucy is currently undergoing an episode of fear when faced with public speaking, accompanied by visible signs of anxiety and physiological changes like an increased heart rate. On the other hand, we might say that Lucy possesses a persistent disposition of fear regarding public speaking, leading to experiences and expressions of fear whenever confronted with such situations.

There are more complex categories under each type; for instance, the paper of C&R (2014) includes i) occurrent states: occurrent emotions and moods, and ii) dispositional states: emotional dispositions, sentiments, temperaments, and character traits. As I mentioned in the introduction, I will focus on the emotional dispositions in this essay. They are long-term tendencies to experience a certain type of (occurrent) emotions, which potentially lasts an individual's entire lifetime (Scarantino & de Sousa, 2021). For example, Eve's dispositional resentment toward her parents. In contrast, occurrent emotions are occurrent states characterised by an event-like or temporal structure, typically lasting for a brief duration, usually a few seconds or minutes. For instance, Eve is currently undergoing an episode of resentment.

2.3 Hypothesis of Extended Affectivity (HEA) & Analyses by C&R

After looking at the ExM and the affective states, we can briefly propose the hypothesis of extended affectivity (HEA): that the physical realisers of *affective states* may exist beyond biological boundaries. According to C&R (2014), HEA can apply to all affective states, including both dispositional and occurrent states. Specifically, emotional dispositions can be said to have a physical basis shared across the human organism and the external entity. In more detail, they can be extended in the sense of functional equivalence between a coupled affective system and an entirely internal affective system.

To extend emotional dispositions, C&R (2014) try to see if it is possible to *directly* construct an extended emotional disposition case along the lines of Otto and his notebook case. Because emotional dispositions are standing and intentionally directed states, they are most similar to dispositional beliefs in the ExM. The original case they use to extend emotional dispositions is Eve's dispositional resentment toward her parents.

Case i: Eve and Her Diary

Eve often records her parents' actions that make her angry in her diary, such as "my mother does not care about my feelings" and "my father always criticises me and does not appreciate my achievements". Even when she is not consciously exhibiting resentment, after reading these entries, she will. When she re-reads these entries, her resentment is reignited, even during periods of her life when her relationship with her parents is not a significant factor. Without the diary, it is possible that she could forget her negative experiences with her parents, fostering more positive memories and feelings towards them, which may help her avoid manifesting parent-directed resentment.

C&R (2014) argues that if we endorse ExM, we should also acknowledge that Eve's diary is part of the coupled system that enables her to experience ongoing resentment towards her parents. They suggest that the entries in her diary satisfy the criteria of glue-and-trust: they are consistently and readily available to her; she can access them effortlessly during her daily activities; and she does not question their contents but trusts them as she reads them. Also, the parity principle applies here: if an entirely internal system of Eve caused herself to experience resentment, we would readily recognise her as being in a state of dispositional resentment towards her parents.

3. Evaluation of the Analyses by C&R

In this section, I will evaluate the cases and arguments they use to extend emotional dispositions, demonstrating that the cases they proposed cannot all successfully show that the material underpinnings of emotional dispositions extend beyond biological boundaries.

Initially, I shall argue that case (i) does not demonstrate extended emotional dispositions but further reflects extended dispositional beliefs. In other words, what Eve put in her diary is merely sentences that record dispositional beliefs like Otto and his notebook, rather than something that genuinely records her resentment towards her parents. Suppose the activation of Eve's occurrent resentment requires her to treat specific externally recorded contents as accurate. In that case, it might be plausible to consider those externally recorded contents only as part of the foundation of dispositional belief. In this case, there is no more evidence to show that Eve indeed extends her resentment towards her parents into her diary. Just like Otto merely finds the sentence about the address in the notebook, it is highly possible that Eve merely extends the dispositional belief such as "my mother does not care about my feelings". Therefore, it is possible that an internalist approach to the relevant emotional phenomena is still maintained in this case.

Furthermore, someone might suggest using images rather than written texts to avoid the problem above because images reduce the inclination to *construe* the situation as endorsing a specific external proposition as true. For example, we can think about a new case (ii), in which there is no change in other things as in case (i), but Eve might draw a few images to record her parents' actions that make her angry. However, using images is still unsuccessful in extending emotional dispositions. Although this new case can avoid the problem that merely further reflects extended dispositional beliefs, it still cannot avoid what I call the "translation problem". It is the idea that there seems to be a *gap* brought by *translation* between the extended emotional depositions and the internal one before being extended. This problem might make them unable to function equivalently.

In detail, in the extant condition, there is no approach for us to record emotion itself directly. People simply rely on other objects to translate emotion (E), no matter the languages or images, and then extend these expressions that have been translated from emotion (TE). The translation process might lose some information about E; thus, TE is not equal to E, or in my view, TE cannot even count as a kind of emotion. Thus, TE needs to be translated back to E to be understood in the sense of emotion itself rather than those expressions. For example, in this new case, if these images

trigger Eve's resentment, what she is first doing is still translating TE back to E. However, the second translation process might again lose information, after which we can get might not be E, but the emotion translated back from TE (ETE). Thus, there might be a gap between the extended emotional disposition and the internal one before being extended.

As I mentioned in section 2.1, for the final functional equivalence, the glue-and-trust criteria should be met by the entries in the external affective realisers. Namely, though they may not always be consciously acknowledged, they are constant and can be accessed easily when needed. They are also automatically endorsed. C&R (2014) argues that the entries in Eve's diary/image meet the glue-and-trust criteria. I would say this is because the thing they actually extended here is those expressions of emotional dispositions (TE). However, the proper entries to be extended should be the emotion itself (E). If we merely extend those expressions rather than emotion itself, we can conclude that merely those expressions can be extended. An internalist approach to the relevant emotional phenomena is still being maintained in this case. As E and ETE might not be qualitatively identical, I would argue that the glue-and-trust criteria cannot be met in the extant condition, which means not all emotional dispositions can be successfully extended in the sense of functional equivalence between a coupled affective system and an entirely internal affective system.

However, they might suggest constructing cases in which the emotional disposition is completely subserved by non-representational artefacts, such as the resentment control ball in case (iii) below.

Case iii: Eve and Her Resentment Control Ball

Eve is disposed to be angry at her parents. However, she decides at some point to change this affective outlook. She uses a resentment control ball to regulate her resentment whenever she detects or predicts that her occurrent emotion will be anger at her parents. After a period of adjustment, the use of this resentment control ball enables Eve to undergo fewer occurrences of anger at her parents.

According to someone who thinks these non-representational artefacts can successfully extend the emotional dispositions, if one endorses ExM, one should say that the resentment control ball is part of the supervenience base of Eve's less resentment. Eve's resentment control ball meets the glue-and-trust criteria due to its stable availability, proficiency and uncritical deployment. The parity principle also applies: If the regulation of resentment took place entirely within Eve's body and led to a disposition for reduced resentment, we would readily interpret the process as a demonstration of Eve experiencing less resentment towards her parents.

I would argue that although the use of non-representational artefacts seems to avoid translation problems, C&R (2014) suggest it without explicitly noticing the significant translation problem rooted in cases (i) and (ii). The use of non-representational artefacts is aimed to merely avoid the first problem I mentioned above: further reflecting extended dispositional beliefs rather than truly extended emotional dispositions. In their view, the results of using image (ii) and non-representational artefacts (iii) should be the same, which is a reduction of the inclination to construe the situations as endorsing specific external proposition content as true, as there is no candidate proposition. With this intention, they directly cut out the need for individuals to record or understand the emotion, which excludes the translation processes. However, the important point is that the proposition is one of the manifestations of those expressions translated from emotion (TE). In other words, they do not recognise the translation problem that there might be a problematic gap between E and ETE because of the unavoidable use of TE in the extant condition. This problematic gap is the essential point behind the problem that they focus on. Except for this point, case (iii) demonstrates a positive case that can support my proposal in the next section. As in the extant condition, we cannot really have a resentment control ball; thus, there needs to be an additional assumption to play the same role.

4. New Proposal

As I argued in section 3, it is better to add an assumption to avoid translation problems in their arguments: the extended emotional disposition (ETE) is *qualitatively identical* to the internal one before being extended (E). I would demonstrate case (ii*) to see an example of this assumption. It differs from case (iii),

where an imagined resentment control ball cut out the translation process, as it still includes the translation process but no translation problem with this additional assumption in the extant condition.

Case ii*: Eve and her drawings

Eve records her resentment through detailed drawings. These drawings become external representations (TE) of Eve's internal emotional dispositions (E). Nevertheless, the extending target is not the representations (TE) but her resentment itself (E). Assuming qualitative identity ensures Eve creates drawings that faithfully reflect her resentment, which means, for example, it can ensure Eve chooses colours and forms that perfectly record her internal resentment, and understands it without qualitative information loss, thus bridging the gap between E and ETE. In other words, this additional assumption makes Eve avoid the inherent translation problem brought by the ineffable core of her resentment, successfully extending her resentment.

Someone might argue that the parity principle itself does not require this assumption because it merely requires functional equivalence between a coupled affective system and an entirely internal affective system (Menary, 2010). In more detail, this view might imply that the external processes themselves may not necessarily possess a phenomenological or embodied character. However, I would argue that it is a necessary assumption that could make the parity principle work in the context of emotional dispositions.

It is true that the parity principle does not explicitly require this to extend dispositional beliefs. However, I want to compare the affective and cognitive processes to see why this additional assumption is genuinely needed in the context of emotional dispositions. The content of cognitive processes does not need that kind of translation to be recorded or understood. In other words, we can directly record and understand the dispositional belief itself; thus, there is no gap between the extended dispositional belief and the internal one before being extended. For example, the sentence that the MoMA is on 53rd Street is constant before and after putting it in the notebook. It automatically satisfies the glue-and-trust criteria without other explicit explanations. The notebook's readiness for reliable deployment by Otto

contributes to the coupled system's distinct dispositional profile, which characterises the dispositional belief. Then, the Otto-plus-notebook can be considered to function as equivalent to Inga's internal memory system. Thus, this is why, for cognition, no other requirements need to be met to be extended in the sense of functional equivalence.

However, suppose we want to fully extend all emotional dispositions in the sense of functional equivalence. In that case, we must add an assumption that ETE is qualitatively identical to E to revise the ExM framework to accommodate all emotional dispositions. The parity principle refers to functional equivalence that needs to be achieved between a coupled affective system and an entirely internal affective system. As I mentioned in section 3, this requires the entries in Eve's diary or image to meet the glue-and-trust criteria. These criteria implicitly indicate what in Eve's diary/image is always the one that has been put in the diary/image, which means the E should be the E itself. In an entirely internal affective system, the stored emotional dispositions do not experience the translation process to be recorded or understood, so the E is the E itself. By contrast, when we want to extend emotional dispositions, these criteria may be unable to be met.

It might be essentially because the emotional dispositions appear to contain some ineffable phenomenal core in affectivity that cannot be transferred or replicated (Slaby, 2014), which makes *themselves* cannot be directly and fully recorded or understood. Or worse, all extant mediums might not achieve the accuracy of expressing the remarkable depth and richness of emotional experiences. In other words, these emotional dispositions must experience the translation process, whether from E to TE or from TE back to ETE. However, due to the ineffable phenomenal core, the translation process might lose some information about E. Thus, what I call the translation problem occurs- there might be a gap between E and ETE. Although both are emotional dispositions for the same individual to record or understand, the extended emotional disposition (ETE) is *not qualitatively identical* to the internal one before being extended (E). Namely, the entries in external affectivity realisers cannot meet the glue-and-trust criteria in the extant condition. Therefore, we need to add the additional assumption to extend the emotional

dispositions, in the sense of functional equivalence between a coupled affective system and an entirely internal affective system.

Lastly, I want to clarify the aim of this proposal by responding to some potential criticisms. Someone might argue that emotional experiences differ significantly between individuals, which makes it challenging to establish a universal standard for qualitative identity. However, this proposal does not aim to provide a single, universal definition of qualitative identity. Instead, what is important is to recognise the translation problem and make sure what is extended is E itself in each specific case. Therefore, with an ideal tool that considers the range of phenomenal and embodied characteristics of emotional dispositions, we can still honour individual variability of emotional experiences.

5. Conclusion

To conclude, I explore the possibility of extending emotional dispositions based on the ExM framework by Clark and Chalmers (1998). The ExM successfully extends cognitive processes; however, emotional dispositions, characterized by an ineffable core, present an inherent "*translation problem*". Specifically, I argue that most cases by Colombetti and Roberts (2014) cannot successfully demonstrate extended emotional dispositions in the sense of the functional equivalence required by the parity principle, due to this translation problem in the extant condition. Although one of their proposed tools could avoid it, they achieve this result without noticing this underlying translation problem, and this tool is unrealistic.

I propose to add an assumption *in the extant condition*: the extended emotional disposition (ETE) must be *qualitatively identical* to the internal one before being extended (E). This addition is significant to bridging the gap caused by translation, ensuring the glue-and-trust criteria can be met by external affectivity realisers. Then, we can successfully extend the emotional dispositions in the sense of functional equivalence between a coupled affective system and an entirely internal affective system. Additionally, it is important to emphasise that this additional assumption does not attempt to provide a standard definition of qualitative identity. Instead, the essential point is to make us recognise the translation problem and ensure that what is extended is E itself in each specific case.

Summarily, this essay might contribute to the ExM discussion by emphasising the unique problems of extending emotional dispositions and proposing an essential assumption to avoid them. This proposal seeks to refine the existing ExM framework, preserving the distinctive features of emotions, thus leading to a more nuanced understanding of extended emotional dispositions.

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