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Evaluating action possibilities: a procedural metacognitive view of intentional omissions

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Abstract

How do we control what we do not do? What are the relevant guiding mental states when an agent intentionally omits to perform an action? I argue that what happens when an agent intentionally omits is a two-part metacognitive process in which a representation of an action is brought to the agent's mind for further processing and evaluated by her as something not to be done. Without a representation of the action *not* done, the agent cannot further process the possibility of her own action; she cannot intentionally try to not do something, resist performing an action, or decide or choose to not perform an action. The literature on people with frontal lobe damage suggests that without metacognitive control of action, a person automatically follows what the environment affords or what others are doing. Through at least procedural metacognitive control of action, agents are able to intentionally omit. This view has explanatory power over a variety of intentional omissions and over a variety of agents. It answers central questions in the philosophy of intentional omissions: *who* is capable of intentionally omitting, *when* and *where* intentional omissions unfold, and *what* are the relevant guiding mental states on which the control of intentional omissions is based? The answers to these questions contribute in part to naturalizing agency, at least when it comes to *negative agency*, our ability to guide the non-performance of our actions.

Keywords Intentional omission · Procedural metacognition · Omission · Affordance · Action · Negative agency · Metacognitive control

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1 Introduction

When agents evaluate options between different actions, not all items are selected to be done. Some of the actions we consider are selected to be intentionally *not* done. This selection away is commonly called an *intentional omission* in the philosophy of action. Even though increasing interest in empirically-informed philosophy of action has been dedicated to finding out how agents control their actions, less attention has been dedicated to finding out how agents control their intentional omissions. This paper takes up the challenge. Drawing from empirical literature on the structure and function of metacognition of action, I argue that what happens when an agent intentionally omits is a two-part metacognitive process in which a representation of an action is first brought to the agent's mind for further processing and then evaluated by the agent as something not to be done.

I defend this view because without a representation of the action *not* done, the agent cannot further process the possibility of her own action: she cannot intentionally try to not do something, resist performing an action, or decide or choose to not perform an action. The decision not to perform a specific action requires conscious evaluation of a representation of this action. Intentional omissions include a sense of agency and the self-conscious evaluation of the agent's own action, phenomena which have both been deemed to be metacognitive in empirical literature. A confidence judgment is a hallmark of metacognitive control of action in the empirical literature and a condition that entails a confidence judgement is usually seen as a necessary condition for intentional omissions in action theoretical literature. Moreover, the literature on people with frontal lobe damage suggests that without metacognitive control, a person follows what the environment affords or what others are doing, not being able to intentionally omit. Because of these reasons, I argue that through at least procedural metacognitive control of action agents are able to intentionally omit. First, I will clarify what is meant by intentional omission and metacognition and elaborate on the view itself.

1.1 What are intentional omissions?

Intentional omissions are omissions[1] that are consciously initiated and sustained by the agent. They are not accidental or something that merely *happens* to the agent; they involve the agent's intentional guidance and control. However, when an agent intentionally omits, what she does *not* do is intentional: deciding not to go to a party, maintaining a decision not to smoke, reacting to an offensive comment by intentionally staying silent.

[1] There are two ways to understand omissions. In this paper, I use a non-normative definition of omissions, according to which omissions are the agent's actions that are left undone by the agent. This non-normative definition is endorsed in the literature, for instance by Lewis, 1986 and McGrath, 2005. Some philosophers use a normative definition of omission, according to which omissions are the agent's actions that she should have performed or was expected to perform but did not. The normative definition is endorsed, for instance, by Bach, 2010. See Bernstein, 2015 for views based on the non-normative definition and Clarke, 2014, pp. 28–33 for discussion on the normative condition to omissions. Thanks to an anonymous reviewer for pressing me to clarify this.

Following the action theoretical literature on intentional omissions (in action theory discussed by Sartorio, 2009, Clarke, 2010, Shepherd, 2014, as intentionally not doing by Ginet, 2004, as a negative act by Vermazen, 1985, and Davidson, 1985, as a negative action by Walton, 1980, and as refraining by Brand, 1971), intentional omissions are distinct from intentional bodily actions in that intentional omissions do not necessarily include intentional bodily movements. An omission of an agent, however, is a necessary condition for intentionally omitting. Intentional omissions are manifestations of agency but because they do not necessarily contain movements, they also do not necessarily require motor control.[2] Furthermore, intentional omissions of bodily actions are distinct from mental actions in that intentional omissions include an effect on the agent's bodily behavior, not only on her mental behavior.[3] Merely deciding not to do something — a mental action — is not sufficient for intentionally omitting because the agent should also successfully omit following this mental action.[4] As phenomena distinct from unwitting omissions (see Clarke, 2017), bodily actions and mental actions, intentional omissions are something we engage in *knowingly*[5] and *with control*.

[2] Some intentional omissions may include motor schemas, however. Consider, for instance, a tennis player spontaneously intentionally omitting to hit a ball during a tennis match.

[3] Mental actions or activities seem to be needed for an agent to perform intentional omissions of bodily actions, but the omission of an action is also necessary. Why is the intentional omission not reducible to only the mental action not to φ? Let us imagine an agent who decides not to drink alcohol at a party, and when the party starts, ends up drinking alcohol nevertheless. This is not an intentional omission of not drinking alcohol at the party because the intention does not guide the omission, and the relevant omission is missing. Intentional omissions include mental activities, but they also require the actual omission: the agent not performing the action in question. Equally intentional bodily actions include mental activities, intentions, and states of guidance, as well as bodily movements. A similar component view is endorsed by Buckareff (2018), according to whom exercises of agency include an external part of the action, that is, the movement, the intention involved, as well as the acquisition of the intention (Buckareff, 2018, p. 10).

[4] In this paper I focus on intentional omissions of bodily actions. We can intentionally omit to perform purely mental actions as well (on these, see Arango-Munoz and Bermudez 2021). However, purely mental intentional omissions seem to work differently than intentional omissions of bodily actions, perhaps due to the spontaneity of mental processes. Consider an agent intentionally omitting to think about a pink elephant. This mental action includes thinking about the pink elephant while forming the intention not to think about it. The same is not true of our intentional omissions of bodily actions. Intentional omission to not perform an action cannot include actually performing the action the agent is intending not to perform: when a person suffering from Tourette syndrome blurts out precisely the expression she intends to not say, we would think that the intentional omission of an action, blurting out that specific expression, was not successful. Intentionally omitting t*o draw* a pink elephant does not include drawing it like intentionally omitting to *think* about a pink elephant includes thinking about it while forming the intention. I think this is because how we control our actions works differently from how we control our mental actions. Our mental lives have a great degree of spontaneity that needs to be indirectly controlled, for instance by focusing on counting numbers so that one would not think about the pink elephant. Responsibility for intentional omissions of actions that entail bodily movement also works differently than responsibility for our own thoughts, which are often beyond our guidance, at least to some extent. Thanks to an anonymous reviewer for pressing me to clarify this.

[5] By saying that intentional omissions are engaged knowingly, I do not mean to claim that mere sense of agency over one's own omission is sufficient to make an omission intentional. I mean that being aware of *which action* the agent is not doing is necessary for her to intentionally omit. Mere sense of agency is not a sufficient condition for intentional omissions, but as is argued in footnote 14, sense of agency being metacognitive is one piece of evidence for thinking that metacognitive evaluative and controlling states are necessary for the control of intentional omissions.

How intentional omissions are controlled,[6] however, is not entirely clear. What precisely are the necessary mental states in intentionally omitting has also not been discussed. Clarke (2010, p. 163) counts as an intentional omission the absence of an agent's action in which the agent has certain mental states.[7] These mental states include some relevant intention together with an awareness that one will not perform a certain action (Clarke, 2010, p. 166). For Clarke, the necessary mental states are not necessarily intentions to not perform an action: intending to *try* to not perform an action is also sufficient (2010, p. 164). In what follows, the aim is to clarify more precisely what are the relevant guiding mental states in intentional omissions. Which mental states do intentions not to do something necessarily involve — considering the variety of ways in which an agent can intentionally omit? Which are the relevant guiding mental states in intentional omissions – taking into account that intentions not to perform the action in question are not always needed?[8] Which capacities are required from an agent to intentionally omit? How do we control what we do not do?

1.2 Which 'metacognitive view' of intentional omissions?

In what follows, I argue that the mental states necessary for intentionally omitting include a representation of the action that is left undone by the agent and a controlling evaluative mental state directed at this representation. Metacognition of action is needed because, through at least procedural metacognitive states, the agent is able to further process the possibility of her own action. I argue that intentional omissions require metacognition of action because without the metacognitive components the agent cannot intentionally try not to do something, resist performing an action, or decide or choose to not perform an action. In my view, what happens is a two-part process in which a representation arises to the agent's mind and is evaluated by the agent as something she intends to not do. This two-part process amounts to intending not to perform an action.

By *metacognition of action* I mean a conscious evaluation of one's own mental states concerning potential actions. In this view, I assume that this conscious evaluation can happen through *procedural* forms of metacognition (in action theory, developed by Proust, 2003, 2007, 2009, 2013 and 2019), which means that the representation of the action not done need not be a linguistically formulated proposition in the agent's mind in order to guide behavior.

[6] My view is largely compatible with Lusson's theory of regulative control in intentional omissions, but it contributes to naturalistic understanding of this control whereas Lusson's view contributes to action theoretical notion of control in intentionally omitting.

[7] Does this mean that there are no basic intentional omissions? Mental states directed toward the agent's action not done are necessary in my view, but there are basic intentional omissions in the sense that the agent does not need to perform some other action, apart from these mental states, in order to perform the intentional omission. On basic intentional omissions, also see Lusson, 2021.

[8] According to Clarke, 2010, 2014, and Sartorio, 2009, standard intention-based accounts about intentional actions are problematic when applied to the guidance of intentional omissions because we do not seem to directly intend not to φ in all cases of intentional omissions. In the PMV, however, it is recognized that an agent can evaluate only the beginning of a sequence of events which would later lead to an action, yet what happens is an intentional omission because the agent evaluates, for instance, her chances in at least trying to get to the voting booth despite a snowstorm. See part 4.4 on cases like this.

The overall view can be described as follows,

> **The Metacognitive View of Intentional Omissions** assumes that all intentional omissions are such that an agent S has a representation of a possibility of φ:ing in her mind, and evaluates φ as something not to be done by her, so that her control of not-φ:ing is based on both S's having a representation of φ as well in her evaluating against herself performing it.

There are two versions of this view:

> **The Linguistic Metacognitive View of Intentional Omissions (LMV)** assumes that S's representation and evaluation of φ happens through a linguistic propositional meta-representation of φ:ing.
> **The Procedural Metacognitive View of Intentional Omissions (PMV)** assumes that S's representation and evaluation of φ can happen through procedural metacognitive processes.

I defend the PMV because it accounts for the role of attention in intending not to do something but avoids the charge of overintellectualizing agency: in it, the action not done need not be represented in the agent's mind as a linguistic proposition. This means that inner speech concerning the action not done need not be present when an agent is intentionally omitting. Successful heuristics-based decisions not to perform an action are also included.

The PMV has explanatory power over a variety of ways in which different individuals represent and guide intentional omissions, but also over a variety of intentional omissions: those that are done for the first time, those that are routine and skillful, spontaneous ones as well as thoroughly deliberated ones. It takes into account that people regulate their intentional omissions not only through linguistic propositions but also through imagistic cognition, and through consciously relating to affordances. The view provides an answer to the question: what is common to *all* intentional omissions?

Furthermore, this view provides answers to central questions in the philosophy of intentional omissions, namely: *who* is capable of intentional omissions, *when* and *where* intentional omissions unfold, and *what* are the relevant guiding mental states on which the control of intentional omissions is based? The answers to these questions contribute in part to naturalizing agency, at least when it comes to negative agency, our ability to guide the non-performance of our actions.[9]

In the next section, I defend the PMV by clarifying and elaborating on the two-part representational structure of intentional omissions. In the third section, I provide further arguments as to why metacognition of action is needed for an agent to intentionally omit. The fourth section answers central objections, and the fifth section concludes what has been found and draws some implications for naturalizing negative agency.

[9] On negative agency, see Clarke, 2022.

2 The two-part structure of intentional omissions

In this section, I first clarify the components of the PMV. Then, I argue that which vehicle is used to represent the action not done does not matter, but what counts is *how* the mental process is structured for it to count as the necessary mental part in intentionally omitting. The third section further clarifies the representational structure of intentional omissions.

2.1 The components

Let us look at various situations in which an agent intentionally omits.

> **AGAINST** The agent refuses to perform an action χ that she perceives as being required of her in that situation.
> **INHIBIT** The agent inhibits herself from performing an action ψ after feeling an urge to ψ.
> **SPONTANEOUS** The agent quickly decides to not perform an action ω based on a hunch of a possibility to ω instead of a well-deliberated plan not to ω.
> **DELIBERATE** The agent carefully considers the consequences of doing $\ddot{\imath}$ and decides not to perform it.
> **AVOID** The agent notices the possibility of action $\ddot{\upsilon}$ in her environment, knows that she is disposed to performing $\ddot{\upsilon}$ if it is available to her and avoids performing it by making the environment such that $\ddot{\upsilon}$:ing becomes impossible, or very hard, for her.

What is common to these various intentional omissions?

In all of these cases, the possibility[10] of the agent's own action is *represented* in her mind. The various cases show that there are several ways in which an action representation can arrive in the agent's mind; because the agent perceives an action as being required of her, because she feels an urge to do it, because she feels a hunch about doing it, because she has been considering doing it for a long time, or because she has performed the action before in similar settings.[11]

In all these situations, not only is a representation of an action present, it is also *evaluated* by the agent.

In all these situations, the agent *attends* to the action representation.[12]

In all these situations, there is some degree of *self-awareness* to intentionally omitting.[13] The evaluation process is self-related: what the agent considers is her own

[10] Omissions in action theory have been seen as non-actualized possibilities (Bernstein, 2014), and in cognitive science, it has been argued that people represent omissions as negated possibilities (see Khemlani et al. 2021).

[11] Furthermore, an action possibility can arise in the agent's mind because there is a norm expecting for her to do something, because others around her are performing a certain action, or because an option for action is explicitly offered to her (see Kärki, 2018 for varieties of intentional omissions).

[12] The role of attention in intentionally omitting is discussed in greater detail in 4.2.

[13] The self-conscious nature of the evaluation of a person's own action possibilities is deemed to be metacognitive in empirical literature. Self-awareness as such has been linked with metacognition especially

possibility of acting. The action not done is evaluated by the agent as something *she* does not do, and it includes at least some degree of sense of agency.[14]

2.2 Different vehicles can bring a representation to evaluation

This section focuses on clarifying why the vehicle through which the representation is brought to consciousness need not be a linguistic proposition when intentionally omitting. This is an important step in elaborating on the PMV because one of its strengths is that it has explanatory power over a variety of intentional omissions and over a variety of agents in different contexts. I argue that what matters for the guidance for intentional omissions is *how* the mental process is structured instead of which precise vehicle is used.

Why I think that a linguistically formed sentence-like structure is not needed to guide all intentional omissions is because, in action guidance, action representations can be formed through non-linguistic means. In action guidance, a non-conceptual meta-representation of the possibility of action can be processed as a motor program or a perceptual affordance (for empirical evidence, see Shea, 2014, p. 323). Guiding action representations can be formed not only through linguistic means but through affordances, signs, or imagistic cognition (Briscoe, 2018). Shepherd, for instance, draws from the research on imagistic cognition (2021) in arguing that mental imagery can be used to represent future action. Mental imagery is deemed to be useful for controlling action fluently because representations based on it are more appropriate for some circumstances than abstract linguistic propositions. For instance, we can imagine different ways to grab a heavy object before embarking on lifting it (Briscoe, 2018). A skilled rock climber relies on perceptual and motor imagery to guide herself along the wall instead of expensively formulating propositionally structured linguistic intentions (Pezzulo et al., 2010).

If actions are guided by mental imagery and affordances, the same goes for intentional omissions. If the agent needed to hold a proposition in mind in order to be able to not do something, spontaneous and fluent yet conscious responses to mere images of an action would not be considered intentional omissions. Motor imagery may be useful for guiding an intentional omission in some contexts. In different contexts,

because uncertainty and doubt, which are central to metacognition of action, are distinctly subjective features of thought (Gallup & Suarez, 1986). Metacognition of action is about the uncertainty of the agent's own performance, or doubt concerning her own success in acting. Such self-directed evaluation is present when an agent intentionally omits: she decides to not perform an action *herself*. The role of confidence judgement in intentionally omitting is further discussed in 3.1.

[14] A phenomenon which is deeply ingrained in intentional omissions and considered inherently metacognitive is sense of agency. It has been seen as arising from metacognitive states and processes (for empirical evidence, see Haggard, 2017), or more specifically from metacognitive fluency signals (for an overview, see Mylopoulos & Shepherd, 2020). Sense of agency, or agentive phenomenology, is itself a complex notion that can refer to, at least, an experienced sense of purposiveness, a sense of mine-ness, a sense of an execution of an action, a perception of an action, a sense of an evaluation of an action, a sense of freedom, or some combination of these aspects (see Mylopoulos & Shepherd, 2020 for different meanings of sense of agency). At least some of these aspects of sense of agency are present in intentional omissions but they are related to sense of agency in *not* doing something instead of doing something. However, intentional omissions include such a degree of agentive phenomenology that if agentive phenomenology is metacognitive, so are intentional omissions.

other perceptual modalities are needed for mentally rehearsing an action sequence. An agent who was born blind does not necessarily visualize an action sequence that she intentionally leaves undone – instead she may utilize tactile imagery (see e.g., Renzi et al., 2013). Especially skillful intentional omissions often rely on heuristics and imagery rather than linguistic propositions.

Furthermore, linguistically formulated propositions are not necessary for representing actions because inner speech is not endorsed similarly by everyone – and not at all by some agents. This does not mean that they are not capable of intentionally omitting. The amount and kind of inner speech differs a great deal between individuals (see Loevenbruck et al., 2018 for a review). Some people even report a total absence of inner speech. Deaf people's inner speech has been found to consist of signs instead of words (Loevenbruck et al., 2018). Equally, people suffering from aphasia may still be able to maintain agency even though their ability to *describe* an action with words is diminished.

I have argued that for an agent to intentionally omit, which vehicle is used to bring the action representation to consciousness does not matter, as long as it is brought to further processing. One role of consciousness may be that it integrates different kinds of representations in an intelligent way, so that the agent can act (Shepherd, 2017). According to Shepherd (2021), cognition uses representations from perceptual or motor systems in a flexible way to solve cognitive tasks, not necessarily in the same representational format. In his view, action guidance and control require the ability to deal with mixed representational formats that include map-like formats as well as conceptual formats (Shepherd, 2021). As well, according to Shepherd and Mylopoulos (2021), recent work on metacognition points towards it being responsive to a wide range of evidence. Metacognition, on the other hand, may be necessary precisely for integrative work with different kinds of representations and propositional states. In the case of intentional omissions, this means that metacognition of action is useful for the agent to deliberate on the action representation or connect it to her other goals.

2.3 The representational structure of intentional omissions

Instead of the precise vehicle that is used, I have argued that the function of the action representation is what matters for the guidance of intentional omissions, that the representation it brought to the agent's mind for further processing, and that the representation is about the action *not* done.[15] Next, I will further clarify the representational structure of intentional omissions, argue why a representation is necessary, why its treatment needs to be *meta*-cognitive, and why *procedural* metacognition suffices.

The representation of the action not done is necessary because if the agent does not process a representation of an action not done, it is impossible for her to control impulses to do something — to prevent automatic behavior. In impulsive-compulsive behaviors agency is deemed to be impaired precisely because of a deficiency in the representation of an action. According to Ricciardi and colleagues (2017), this is because when normal regulatory signals for action are weak or absent, salient out-

[15] This last claim is discussed with more detail in 4.3.

comes can capture behavior more fluently, so that behavior follows automatically, without voluntary control.

Metacognition of action is needed to guide the monitoring and control of intentional omissions once the representation has been brought to consciousness. Metacognition is linked in empirical literature with representations that are brought to consciousness for further processing. Shea and Frith (2019), for instance, argue that conscious representations are characterized by global availability and metacognition. In their view, if an agent is not able to reflect on a particular mental state, then this state is not conscious. When the agent does not have a representation of an action, she cannot evaluate it as something she does not want to do.

Why is it important that this process is distinctly *metacognitive*? There is disagreement in empirical and philosophical literature as to what precisely is meant by saying that a process is *meta*-cognitive. The notion of metacognition has been criticized for being over-inclusive, having varying meanings, and for being used differently in different studies (see e.g., Moritz & Lysaker, 2018, p. 21). On the one hand, 'metacognition' can be used to refer to higher-order cognition of a person's own first-order cognitive processes necessarily requiring meta-level representation.[16] On the other hand, 'metacognition' can refer to any process that *supervises* regular cognitive processes, for example when the agent is consciously monitoring the progress of a task, irrespective of the kind of meta-representation, or whether meta-representation is involved at all (Shea, 2014, p. 232). In my view, any meta-representational controlling and monitoring functions of a person's own actions are considered metacognitive.

If an action representation need not be a linguistic proposition, procedural forms of metacognition are also included. According to Proust, metacognition is procedural "when it results from non-conceptual predictive processes" (2019, p. 311). Procedural metacognition is metacognition that is non-conceptual – it does not require linguistic meta-representations but is not entirely non-representational (e.g., Proust, 2007).[17] However, commitment to the PMV does not imply commitment to a view about whether action representations include propositional states. Some think that affordances are, to some extent, propositional. Even though linguistically formed, sentence-like meta-representation is not necessary for intentional omissions, this does not necessarily mean that metacognitive feelings are not propositional.[18] However, they are not fully formed sentence-like structures.

Procedural metacognition is sufficient for intentional omissions if we want to develop a theory of intentional omissions that is inclusive of all kinds of intentional omissions. The PMV allows the action not done to be represented and evaluated in a variety of ways, be it linguistic meta-representation or a mere affordance. Through procedural forms of metacognition, the possibility of acting can be evaluated quickly and efficiently, without necessarily forming inner speech about it. A metacognitive evaluation of an action representation can amount to merely a feeling towards an action that the agent does not want to perform.

[16] What kind of representation is necessary has been, however, contested.

[17] Evidence for procedural forms of metacognition include phenomena such as metacognitive feelings.

[18] On whether feelings are propositional see Baars (2009) and whether perception is a propositional attitude, see Crane (2009).

This is in line with many intuitions about the nature of intentional omissions. Often, agents react by intentionally not performing actions that have not been fully linguistically formed in their minds. Inhibiting an urge to give one's opinion in a Zoom meeting, for instance, does not necessarily include a detailed conceptualization in the form of 'I intend to not φ', so that φ is a specific instantiation of a linguistic action.[19]

Another strength of including procedural forms of metacognition in the guidance of intentional omissions is that the PMV is inclusive regarding *who* is capable of intentionally omitting. Full-blown reflective metacognitive capabilities in humans develop only after 6 to 7 years of age or later (Beran et al., 2012, p. 12). There is a great deal of variation in the metacognitive capabilities of adults without cognitive impairments. According to Carruthers (2009), not all adults have these skills in action guidance. If linguistic meta-representations were required for agents to intentionally omit, this would mean that many healthy adult humans would not be able to intentionally omit. We want to consider all adults humans without cognitive impairment as being capable of agentive phenomena – to intentionally act and intentionally omit – so the theory of intentional omission should allow for multiple ways to exert conscious control of action, regardless of the specific way that actions are represented within that control.

How fine-grained does an action that is rejected need to be for it to count as part of an intentional omission?[20] In the PMV, this depends on the content of the agent's representation. The agent's mental content determines in part what the relevant omission is. My intending to not drink this alcoholic drink is a different intentional omission than my refusal of alcohol altogether, and the PMV recognizes this. The agent's conscious evaluation also picks out the relevant omission when it comes to the temporality of the omission. The first intentional omission ends once the particular drink is poured into the sink, whereas the second one goes on after that. The agent's intention determines what she is not doing.

I have argued that intentional omissions include a two-part process, a representation of an action and an evaluation of it. How are the two levels of mental states coordinated? According to Mylopoulos and Pacherie (2017, p. 321), the role of intentions is to integrate conceptual information about the intended action with perceptual information arising from the current environment, so that a more situated, specific action representation is created. In their view, concerning bodily intentions, the representational format of the potential action is necessarily indexical – including "pointers to the elements of the environment" (Mylopoulos and Pacherie, 2017, p. 321). Although the intention is propositionally formatted, in order to guide action, it needs to coordinate with motor representations that have a motor format.[21] This challenge,

[19] It could be contested whether speech is ever metacognitive in the first place, even when it is intentional action – that we need not form a meta-representation of what we are going to say in our minds before saying it. Carruthers (2009, p. 125), for instance, thinks that speech is not metacognitively controlled. However, cognitive scientists studying speech have thought that speech nevertheless starts from an idea of what the agent wants to say (e.g., Levelt, 1989), or an intention to say what one thinks. Then it is still metacognitively controlled to an extent, even though the specific instances or words arise automatically.

[20] I thank an anonymous reviewer for pressing me to clarify this.

[21] This is often called the "interface problem". For discussion, see Shepherd, 2021.

however, arises especially in the context of bodily actions. In these, intentions must coordinate with motor commands in a specific situation. However, when it comes to intentional omissions, a similar relation to indexical motor representation is not necessary, nor does the representation of an action need to match with a current motor representation. Intentional omissions may be about deliberating on actions far in the future, not tied to the agent's immediate surroundings at all, and they do not necessarily require motor control. The interface problem does not arise in their case — at least the same way as it does in cases of intentional bodily action.

3 The function of metacognitive control and monitoring in intentional omissions

In this section, I argue that a person is able to intentionally omit through metacognitive monitoring and control of action. First, I show that because a confidence judgment is a hallmark of metacognitive control of action in empirical literature, and a condition that entails a confidence judgement is usually seen as necessary to intentional omissions in action theoretical literature, the presence of uncertainty monitoring in intentional omissions suggests that they are metacognitively controlled and monitored. Then, I present evidence for thinking that a person who lacks metacognitive control is not able to intentionally omit, that is, without the ability for metacognitive control of action, a person follows what the environment affords or what others are doing. This data stems from studies on people with frontal lobe damage.

3.1 Confidence judgement and uncertainty monitoring in intentional omissions

A phenomenon deeply ingrained in intentional omissions is a confidence judgement. One of the main functions of metacognition is uncertainty monitoring – an example of which is forming a confidence judgement.

When studying metacognition in learning, it has been assumed that students are able to respond adaptively to learning challenges when they can both recognize and monitor their own uncertainty about mental states concerning what they know (Couchman et al., 2012, p. 21). Similarly, metacognitive control of action has been studied by examining situations in which agents recognize and monitor their own uncertainty about attaining a goal. According to Couchman et al. (2009, p. 142),

> "Animals often encounter doubtful and uncertain situations in which their habitual stimulus-response associations do not clearly indicate a safe and adaptive response. They would benefit enormously in those situations from having an online cognitive utility that will let them assemble the relevant facts and recollections and choose an adaptive course of action. Metacognition provides exactly this utility."

One form of uncertainty monitoring is forming a confidence judgement. Confidence judgements are states through which an agent evaluates whether she is herself able to do something or whether she knows something. Making such judgements is consid-

ered a refined sign of uncertainty monitoring because, the agent not only has to detect her own uncertainty, but also to be able to *evaluate* the level of her uncertainty about doing something (Call, 2012, p. 71).

A condition that entails a confidence judgement is often seen as a necessary condition to an intentional omission in the action theoretical literature.[22] An ability condition or a belief condition of an agent's success in performing a task is often seen as necessary to intentionally omitting. Clarke (2010) defines intentional omissions as omissions that include awareness of the agent being, at least, able to try to perform the action that is omitted. This includes a confidence judgment in the form of the agent's awareness of her own ability to at least try to perform an action.

Intentional omissions have been defined in a way that includes a confidence judgement, perhaps because it is considered impossible for an agent to intentionally omit doing something she herself considers as impossible. I cannot intentionally omit flying to the moon, for instance.[23] Through a confidence judgement, the agent performs an evaluation of her own ability to perform the action. Perhaps this state can be based on mere feeling – but a feeling that is about one's own abilities in performing an action would amount to a metacognitive feeling.

Are *all* intentional omissions then instances in which the agent monitors her own certainty about attaining a goal? Meaning, are all intentional omissions about a task that the agent abandons as too difficult?

Not necessarily. Some intentional omissions seem to be reactions to an uncertainty response, after which the task is rejected. I can omit going to the bank when I do not think I would succeed due to an upcoming snowstorm. Uncertainty responses, or confidence judgements, however, in the sense that the agent expresses doubt about the success of the action represented in her mind, are not the only thing that an agent deliberates on when considering whether to intentionally omit performing an action. Confidence judgements can concern the intentional omission itself instead of the action not done. Some intentional omissions are *difficult* for the agent – intentionally not smoking a cigarette during a flight, for instance, can be very difficult for a smoker. She can form a confidence judgement of her own omission in that she evaluates her own ability to refrain from smoking during the flight. Moreover, undesirable actions can be intentionally omitted. Agents can decide to not perform an action that they think is easy and that has previously been successfully performed several times. An intentional omission can even be a guiding mechanism for other long-term goal-oriented actions. For instance, an agent can intentionally omit to smoke so that she will be able to enjoy her son's graduation party 20 years later.

Even though intentional omissions include some assessment of whether the action not done would be possible for the agent, they are not necessarily about avoiding a task deemed as too difficult. Instead of the action not done, the intentional omission itself may be difficult and the task that the agent wants to perform may be the end-

[22] See Chapter 4, in Clarke, 2014, for an overview of the ability condition and the belief of an ability condition to (intentional) omissions.

[23] This is not just because the agent is likely to evaluate that they are unable to do it. It is also because impossible actions cannot be omitted; there is no action that could be done by the agent in these cases. Bernstein, 2016, for instance, discusses an agent's impossible omission to prove that $2+2=5$. On impossible omissions, see Bernstein, 2016, and Sartorio 2011.

result of a successful intentional omission. Consider, for instance, the achievement of intentionally not leaking a piece of information during intense questioning by the police. Uncertainty in succeeding in a task that is considered is thus not the only thing that agents adaptively respond to when deliberating on what to do. Conscious deliberation on an action takes into account all kinds of considerations, not only the difficulty of a task.

So far, it has been argued that how we intentionally omit requires metacognitive monitoring and control of action. However, because intentional omissions are such a ubiquitous part of our conscious agency, it is unlikely that they all serve a single function in governing human behavior. Yet, inhibiting an action and abandoning a task after an uncertainty response are genuine instances of intentional omission – instances that have been thoroughly studied empirically, for instance when trying to find out which non-human animals are capable of metacognitive control of action.

3.2 A person without metacognitive control of action cannot intentionally omit

Another set of evidence on the role of metacognitive control and monitoring in intentional omissions comes from studies on people who have suffered frontal lobe damage.

People who suffer from so-called *utilization behavior* are completely affordance-driven. This disorder is seen as arising from a loss of the "working supervisory system" (Iaccarino et al., 2014, p. 4). The sight of a triggering stimulus, such as a pair of scissors or a cup, triggers a schema in the agent, who immediately starts to perform a related behavior – cutting with the scissors, or drinking from the cup. L'Hermitte who discovered the syndrome, originally described a meeting with a patient suffering from utilization behavior who, on coming to an appointment at a doctor's office with the usual equipment, proceeded to take L'Hermitte's blood pressure, test his reflexes with a reflex tester, and examine his throat with a tongue depressor (L'Hermitte 1986).

Utilization behavior often coincides with *imitation behavior*, in which the agent automatically follows what others around her are doing. Both behaviors are seen as stemming from frontal lobe damage, due to, for instance, middle- to late-stage Alzheimer's disease (for an overview, see Morris & Worsley, 2002).

How do these symptoms increase our understanding of how intentional omissions are controlled? Even in the first reports of these behaviors L'Hermitte (1986, p. 36) described them as stemming from loss of autonomous decision making due to increased dependence on external stimuli. Not only is a patient suffering from utilization behavior incapable of consciously evaluating between different options to act, but she is also not able to perform other metacognitive tasks. Alzheimer's patients rely extensively on external stimuli and also have problems with switching attention at will (Morris & Worsley, 2002). Equally, in imitation behavior the agent cannot intentionally omit because the neurophysiological capacities necessary for metacognitive control of action are damaged. These patients also often suffer from apathy and a lack of initiative when external cues are missing – which is seen as stemming from a deficit in internally initiated and sustained action in the first place.

Agency, even if it is a rare event, seems to require upstream cortical phenomena on top of downstream processes such as perceiving affordances. What makes a person an

agent instead of a zombie is that she is capable of guiding her own behavior through conscious choices instead of being automatically led by her environment.

Merely perceiving an affordance – perceiving a cup as drinkable, a path as walkable – is not an intentional omission even when the agent does not follow it. This is in part because an affordance needs to be brought to the consciousness of the agent for her to intend to not do something. Similarly, in case of an unconscious pain, a metacognitive deficit in which the agent does not become aware of being in pain prevents her from taking the pain into account in conscious decision making. The central executive is needed, for instance, to evaluate potential action sequences in relation to other factors – long-term plans, goals of the agent, the difficulty of the task, or whether the agent needs more information before making an informed choice. What matters is what comes along with metacognition, that is, the central executive and working memory resources – the agent herself consciously choosing what to do and what not do to.[24] This process is possible only after the input has been globally broadcast to her conscious decision-making system.[25]

4 Objections

Next, I will answer potential objections in order to further clarify the necessary features of intentional omissions and their connection to metacognition of action.

4.1 Cognitive control is enough

Why is cognitive control not enough to account for the necessary mental states in intentional omissions? What precisely makes intentional omissions *meta*-cognitive?

When studying how different animals are able to pass metacognitive tasks in comparative cognition research, metacognitive tasks and cognitive tasks are clearly distinguished. This division is upheld because not all animals are able to pass metacognitive tasks. In metacognitive tasks, the agent has to be able to evaluate the success and viability of a potential task. Curiosity, for instance, is considered metacognitive because it involves an evaluative feeling toward a representation of an information-seeking task.

Intentional omissions cohere with *meta*cognitive tasks – in which the agent is able to consider an option for action and consciously reject it. Furthermore, intentional omissions require metacognitive control and monitoring of action because they are not about general first-order avoidance behavior, but about an agent's avoidance of her own *action*. A simple organism that avoids certain contexts is not able to regulate its own tasks metacognitively. Without first representing an action in her mind, the agent cannot intentionally decide to not perform it. Nor can the agent be said to have intentionally controlled its non-performance without evaluating against the action possibility.

[24] On the role of the central executive in agency, see Buehler, 2018 and, 2022.

[25] Furthermore, if global broadcasting is metacognitive, as Shea and Frith (2019) suggest, so are intentional omissions.

4.2 Attention is enough

If an action representation must be attended to by an agent for her to intentionally omit, why is attending to an action representation not enough for the guiding mental states in intentional omissions? Why can the same function as metacognition of action not be served by attending to what is not done instead?

According to Wu, intention-guided attention is necessary for the control of action (e.g., Wu, 2016). Wu (2016) has argued that the so-called Many-Many Problem is solved by attention. The Many-Many Problem arises from the fact that agents are constantly encountering situations in which they have endless possibilities to act. Intention-guided attention, as Wu has argued, is what selects the relevant action.

Intentional omissions do contain attention to what is not done. But intentional omissions require metacognitive monitoring and control because what is not done is not only attended to but also evaluated by the agent. Not every action that comes to an agent's mind is an action she consciously decides to not perform. Perhaps attending to the possibility of doing something brings the action up for conscious selection – which is necessary for further executive processing of a potential action. But consciousness is needed to pick out and monitor the action chosen (e.g., Shepherd, 2015; Shepherd, 2017). Empirical evidence has not questioned whether consciously encoded information is used to control conscious bodily actions (Shepherd, 2021). According to Shea and Frith (2019), for instance, consciousness is required for the representation to enter into a form of working memory that allows representations to be compared and manipulated (Shea & Frith, 2019, p. 2). Globally available representations in working memory can be compared and contrasted – the agent is able to deliberate on whether it is possible for her to not do something and why, after the representation of the action is attended to.[26]

4.3 Guidance control is enough

Another candidate for the control of intentional omissions is guidance control. According to Fischer and Ravizza (1998, p. 39), an agent exhibits guidance control over an action insofar as the mechanism that issues in the action is his own reasons-responsive mechanism. Why is guidance control not enough to guide intentional omissions, if it is enough for the responsible guidance of action?

Let us consider an agent driving home from work who has guidance control over her behavior.

[26] Different theories of action have addressed the role of attending in action selection, but they disagree about the other mental components required for action. Castañeda (1975) argued that intending must have a property of focusing or attending to the object of intending in addition to the property of immediacy. He called this act of attending *practition* and argued that it is what causes the action in question. William James (1980) called a similar act *fiat*, the focusing of attention on memory traces of the kind of action that is to be performed. Whereas James takes the object of attending to be another mental event, Castañeda takes it to be an abstract entity.

DRIVER The agent has guidance control over her driving in following the road to her home. She does not consider driving anywhere else but keeps the car on the road until she arrives at home.

DRIVER is being responsive to reasons in her driving home. Her driving is guided by a mechanism that is her own and that is fully responsive to reasons. DRIVER shows that if the action not done, driving to the shop instead of home, is not even considered, mere guidance control is not enough for the agent to *intentionally omit*. Guidance control is too weak a condition for intentional omissions because it does not include any representation of the action not done. If the possibility of turning at an intersection and going to the shop does not arise in the agent's mind and she does not form an evaluation against performing an action, she is not intentionally omitting to drive to the shop. Intentional omissions are omissions that are intended, not only actions that are not intended. The form of an intentional omission is 'S intends to not φ' – instead of 'S does not intend to φ'. So an agent who has guidance control over her actions may commit to several intentional *actions*, but she does not intentionally omit unless she at some point takes, or has taken, a conscious relation to her own possibility of doing something.

It could be further argued that automatic, especially skillful, omissions do not include executive resources or metacognition but nevertheless belong to the agency of human agents. It has been argued, for instance, that empirical research on automaticity means that conscious deliberation or choosing is not necessary for agentive behavior (see e.g., Wilcox, 2020).

In the PMV, the challenge of automaticity in behavior[27] is answered by considering how an intentional omission *starts*. In the case of intentional omissions, the act of attending to a representation of an action, and the evaluative state regarding this representation, are needed *before* the omission. Once the action or omission has started, agents often let automatic processes take charge, especially when it comes to skilled action and omission. Not appealing to executive processes makes it very difficult to distinguish agentive phenomena from non-agentive phenomena. In skilled intentional omission, automaticity takes place, but it is a matter of *intentional* automaticity. The omission is something that the agent has at some point consciously chosen. If a conscious evaluation is not present at any point, the omission is not *intentional*.

So-called zombie actions, behavior that is fully governed by the environment, are not usually considered manifestations of *agency*. It is possible, however, that in intentional omissions, some accompanying mental states are not conscious. According to Wu, the thesis that all mental states which guide action could be unconscious is not supported by compelling empirical arguments, at least not yet (2013, p. 228). Here it is only assumed that the representation of the action not done needs to be globally broadcast at some point, but not throughout the omission. According to Shea and Frith's review (2019), there is little evidence of it being possible to manipulate

[27] The distinction between fully automatic and non-automatic processes has been challenged because, according to Shepherd and Mylopoulos (2021, p. 7), automaticity comes in degrees, the cluster of properties ascribed to automatic processes do not always co-occur, and the same activity can be automatic relative to some features but not to others.

a representation in working memory – and to base action initiation, reasoning, and decision on this representation – without it having ever been globally available. An important function of global broadcasting is that it allows representations from different domains to be in contact with each another and be processed together in the global workspace (Shea & Frith, 2019).

4.4 Knowingly allowing something to not happen

What about situations in which an agent knowingly allows something to not happen without any commitment to prevent or stop it from happening in case it was to happen?[28] Consider an agent forgetting to put something in the mail in the morning which occurs to her only after she gets to work. She decides to be satisfied with this but later in the day, her roommate tells her that she could put the item in the mail on her behalf. The agent does not prevent the roommate from putting the item in the mail. Is this case not an intentional omission because the agent's commitment to prevent or stop the action from happening is missing?

In this case, at first what happens at home is an omission that is not intentional, namely that the agent forgets to put the item in the mail. She remembers that she was supposed to do it only at work. Perhaps she evaluates that it would take too much effort in the middle of the workday to go back home and put it in the mail. Here she commits an intentional omission, because the potential action, putting the item in the mail, is considered by the agent, and evaluated negatively. It is important to note that at work the action that is omitted has become more difficult, and the difficulty of the task is evaluated by the agent, including a confidence judgement.[29]

What about cases in which an agent is knowingly allowing something to happen or to not happen without forming any views about their own contribution to the events? Is knowingly refraining from forming an intention to do something considered an intentional omission according to the PMV? For instance, an agent can knowingly do nothing to prevent climate change from getting worse without forming a representation of what she could have done to prevent it.

If the agent knowingly decides to not do the relevant research to find out how she could try to prevent climate change from getting worse, what happens is an intentional omission of a kind (Sartorio, 2009, p. 523 discusses similar cases in which the agent voluntarily fails to form an intention to φ). In cases where the agent is allowing something to not happen, and what is not happening is her own action, what happens, according to the PMV, is an intentional omission when some evaluative and representative parts of the omitted action are present in the agent's mind.

Cases in which an agent allows something to happen or to not happen without forming a representation of her own action that is left undone are not intentional

[28] I thank an anonymous reviewer for bringing up this objection.

[29] The action's circumstances can change so that the ability conditions of the omission also change. In this case, all the agent has to do in order to continue the omission is to stay at work. Even though the action of putting the item in the mail has become more difficult, the omission has become less so. All the ongoing guidance of the omission needed in the work context is for the agent to think that it is too laborious to go home and put the item in the mail during the workday. Still, in this scenario, she relates to her own action representation and evaluates the action as not to be done by her right now.

omissions according to the PMV. This is because if the agent does not, for instance, consider preventing climate change from getting worse, but merely monitors its progression and feels bad about it, what is going on may be an exercise of agency of some kind but it is difficult to pinpoint the relevant omission if the agent is merely allowing something to happen or to not happen without formulating any way in which they could have interfered.

The upshot of this view is that it recognizes that we do notice and evaluate happenings around us without actually forming guiding intentions about our own contribution to preventing them from happening or allowing them to happen. We have opinions about happenings around us without forming intentions about our own place among such happenings. Such active monitoring of our surroundings, however, is not sufficient for intentional action or intentional omission, according to the PMV.

Metacognitive control of action requires the agent to predict: if I perform action φ, then event Y happens. The agent can inhibit her own predicted action by manipulating her circumstances and control her predicted behavior adaptively. For instance, an agent can anticipate her later urge to browse the news while working, which is why she decides to leave her smartphone at home. This is a standard case of metacognitive control of action and a standard case of an intentional omission – intentionally omitting to browse the news. Similar Ulysses cases, originally drawing from Ulysses tying himself to the mast in order to prevent himself from following the song of the Sirens, are often used to constrain the agent's immediate options, or make it difficult to do something, in order to preemptively prevent oneself from doing something that is not desired.

However, without evaluating our own contribution to our own bodily activities, monitoring happenings may be morally blameworthy, and it may be knowingly endorsed by the agent, yet not sufficient to fulfill the conditions for intentional bodily action or intentional omission because the agent's own contribution to happenings around her is not in any way attended to or evaluated.

5 Conclusion

I have argued that empirical research on the structure, role, and function of metacognitive monitoring and control of action supports the view that a person is able to intentionally omit through metacognitive control and monitoring of action. This means that the necessary mental states in intentional omissions include a representation of the possibility of an action and evaluative states toward this representation. The representation of the action not done is needed to recognize, or pick out, the action that is not done from all possibilities to act. Otherwise, the agent cannot intentionally omit to perform a specific action but simply acts, intentionally or not intentionally.

The mental components are not, however, sufficient conditions for an intentional omission. The action that is evaluated by the agent also needs to be successfully left

not done by her.[30] The necessary mental states need to be such that they successfully control the agent's behavior in interacting with the world – otherwise we are only talking about separate mental states and the omission of an agent. To be effective, they must be accompanied with the agent's *control* in intentionally omitting. Metacognitive control, as has been argued, is the best candidate for this control in intentional omissions.

This view allows us to explain various intentional omissions being represented through various vehicles. It provides an explanation as to how agents control their intentional omissions and accounts for the role of attention in intentionally omitting without overintellectualizing agentive processes. Highly developed and uniform inner speech or refined conceptual thought is not required for an agent to intentionally omit, but fluent heuristics-based decisions not to do something are accounted for by the PMV. The view includes spontaneous acts of agency and takes into account that agents evaluate action representations in the form of an image of an action, a linguistic proposition, or an affordance.

Furthermore, because of the emphasis on how the intentional omissions *starts*, the PMV also answers puzzles in the philosophy of action on how intentions to not φ are not always necessary for an agent to intentionally not φ: trying to not φ may be sufficient as well.[31] This is because the PMV recognizes variety in which intentional omissions can guide the agent's behavior. It recognizes how preemptively intentional omissions are often controlled, for instance, through Ulysses contracts.

Why does it matter how agents control intentional omissions? If what happens when agents intentionally omit is better known, it will be possible to empirically study intentional omissions further. Metacognitive strategies are studied empirically even though there is significant disagreement on, for instance, how uncertainty responses in non-human animals should be interpreted. Tracking the relevant metacognitive states helps us pinpoint *when* and *where* intentional omissions happen; they happen (or at least start) in the agent's mind when the relevant metacognitive states are present. This helps us build an empirically-informed philosophy of agency that is more useful, for instance, for social science explanation than one that ignores intentional omissions (Kärki, 2023).

Metaphysically, it matters because it shows that *something* happens when an agent intentionally omits. Even if omissions are absences of an agent's action (see Clarke, 2010, 2014), *intentional omissions* have different temporal and spatial boundaries and include at least something, that is, an organism with the relevant guiding mental states.

The PMV may also provide satisfactory criteria for determining what kinds of organisms are capable of agentive behavior – being those that successfully pass metacognitive tasks. The PMV implies that an agent is a living organism capable of metacognitive control of action through at least procedural metacognitive states,

[30] Buckareff (2018, pp. 8–9) calls the problem of *mentalizing* intentional omissions, that is, when the truthmakers for claims about agency in omitting only concern mental items, the actual behavior of the agent is not considered sufficiently. The mental parts of intentional omissions are not sufficient conditions for intentional omissions, for instance, because the agent is seen as culpable for her *omission*, not only for those mental states that were involved when intentionally omitting (Buckareff, 2018, pp. 8–9).

[31] See influential cases in Clarke, 2010, Clarke, 2014, and Sartorio, 2009.

not necessarily through linguistic meta-representations. An agent is not only someone who intentionally acts but someone who is capable of intentionally omitting, of regulating her behavior intentionally and deliberating on it, not merely automatically following urges or affordances to do something.

Naturalizing agency is a complex effort. One needs to discover the necessary features of various manifestations of agency, agree on what precisely is meant by the notion of agency (for complications, see Kärki, 2023), determine what is in common with different manifestations of agency, as well as determine their relation to what actually happens in the world. Intentional omissions are complex and varied phenomena that are unlikely to serve a single function in human behavior. The PMV, however, answers by *whom*, *when*, *where* and *how* they unfold, increasing our understanding of how to naturalize agency, at least when it comes to our *negative agency*, our ability to guide the non-performance of our actions.

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