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## BCI-Mediated Action, Blame, and Responsibility

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Rainey et al. (2020) discuss the complications that arise with assigning responsibility for brain computer interface (BCI)-mediated actions. Because BCI-mediated actions can differ from non-BCI-mediated actions in terms of control and foreseeability, the authors suggest that our ethical and legal evaluation of these actions may differ in important ways.

While we take no issue with the authors' discussion or conclusion, we also recognize the difficulty of grappling with the relationship between control, foreseeability, and moral responsibility practices, even *without* the additional complications introduced by BCI-mediation. Indeed, before the advent of BCI technologies, philosophers had long wrestled with which standards for control and foreseeability are necessary for holding someone morally responsible. They had also wrestled with the question of what counts as an ethically-relevant action in the first place. The waters into which Rainey et al. wade are murky indeed.

In this commentary, we, therefore, consider BCI-mediated action against the backdrop of a different – perhaps less murky – normative framework: blame. Blame and responsibility are intuitively related: Most agree it is appropriate to blame people for their actions relative to their approximated moral responsibility for those actions. For some, the relationship between blame and responsibility is more concrete, as in Strawson's (1962) notorious argument that the former is in part constitutive of the latter. Here, we need not take a stance on the *precise* relationship between blame and moral responsibility, but merely observe that the two are intimately related, such that examining the intersection of blame and BCI-mediated action can provide insight into how BCI-technologies affect our practices of holding individuals morally responsible. In what follows, we, therefore, consider one way in which blame has been explored in the literature: that it is productively thought about as proportional (Smith 2007; Tognazzini and Coates 2018). This observation, we contend, may be clarifying for the issues Rainey et al. bring to our attention.

Blame, it would seem, is productively thought about as *proportional* (Smith 2007; Tognazzini and Coates 2018). As Tognazzini and Coates put it:

... blame must, in some sense, fit the transgression ... What will count as a proportional blaming response to a transgression will no doubt vary with different relationships and

transgressions, but there will likely always be some responses that take the transgression too seriously, and some that don't take it seriously enough. (Tognazzini and Coates 2018, 2.2.1)

For example: it may be appropriate to blame a careless pedestrian for ignorantly stumbling into you, but inappropriate to blame the person *as much* as someone whose push was intentional. Likewise, if I'm stood up for a coffee date by an old friend, it would be inappropriate to withhold blame altogether, but also inappropriate to end our relationship permanently over the slight (cf. Tognazzini and Coates 2018, 2.2.1).

There are a variety of factors that affect the proportionality of blame. For example, context matters. Consider an example Smith (2007) offers concerning "excusing conditions": Some may consider it perfectly excusable for you not to notice someone waiting to use a computer at a public terminal, whereas others may argue that – given the fact that it was a public terminal – your failure to notice is inexcusable, since you ought to have been aware enough of your surroundings to account for others who may have needed to use the computer (471). The proportionality of blame may likewise be influenced by factors often considered under the heading of 'moral luck' (cf. Nagel 1979). If Rafael and Tricia both drive drunk and Tricia strikes a pedestrian while Rafael makes it home safely, we may blame Tricia more than Rafael, even though the difference in outcomes depends purely on factors outside Tricia and Rafael's control. Finally, it would seem that the proportionality of blame is in part dependent on how transgressors relate to their own transgression. As Smith observes:

If someone has an objectionable attitude toward me ... but is already reproaching herself for it and making efforts to change, then I may judge that I have no reason to adopt or express any blaming attitude toward her at all ... the agent is already responding appropriately ... and therefore there may be no grounds for further criticism on the part of others. (Smith 2007, 482)

In light of the various factors which affect the proportionality of blame, consider how these observations map onto cases of BCI-mediated and non-BCI-mediated action. For example, consider Rainey et al.'s cases of Necessary Nina and Recreational Rick, in which individuals using BCI-technology (Nina for medical reasons; Rick for recreational reasons) run into somebody with a BCI-wheelchair. As Rainey et al. present the case, Nina needs the wheelchair and has no other way of independent movement, while Rick could have done without the wheelchair (i.e. could have walked, and thus could have avoided the risk of hitting someone). For Nina, the risk is similar, but less

avoidable. This factor, it would seem, affects the proportionality of blame we direct toward her – we may blame Nina less than Rick because she needed the BCI-device in a way that Rick did not.

Likewise, consider the *preparedness* of an individual to use BCI-technology. Rainey et al. state that, given its complexity and fallibility, effective use of a BCI-device (such as a “neuro-controlled limb prosthesis”) requires *weeks* of skill-training. While this implies training would be obligatory for individuals who receive BCI-devices on the basis of need, it remains unclear if recreational users of similar BCI-technology would be required to undergo training before being allowed to purchase/use it. This difference surely affects the proportionality of blame we direct to Nina and Rick. Nina, with her training, is attentive to workings of the BCI device. *Sans* training, Rick seems akin to the inattentive user of the public terminal, unaware that his cluelessness is inconveniencing those around him. And this, it would seem, would account for some difference in the degree of blame we assign Nina and Rick, when things go wrong.

*Moral luck* may also affect the proportionality of blame. For instance, if Necessary Nina accidentally ran into someone and caused a minor sprain to the person’s ankle, we might hold her responsible, but not blame her harshly. By contrast, if the person whose ankle she sprained was a pro-marathoner with a big race the next day, we may cast more blame on Nina, despite this factor resting outside her control.

Finally, *the offenders’ attitudes toward themselves* may affect the proportionality of blame we assign. If Necessary Nina is flippant toward the accident she causes, we will blame her more than if she is remorseful.

From these brief examples and reflections, what we hope to offer is simply the following observation: in cases of both BCI- and non-BCI-mediated action, there are contextual factors that intuitively and appropriately influence the proportion of blame we assign.

This observation gains significance when considered in conjunction with two others:

*First*, as we’ve seen, blame and responsibility are intimately related. We can, therefore, use our analysis of the proportionality of blame to reflect on responsibility in BCI-mediated and non-BCI-mediated actions. A greater proportion of blame may not *entail* a greater degree of responsibility, but is certainly indicative of it.

*Second*, the factors that influence the proportionality of blame are often more transparent and less philosophically complex than those factors considered by Rainey et al. in their analysis. For example, it is much easier to reflect on the training Nina received (or didn’t receive) for her BCI-

mediated device, the contextual factors surrounding the accident, and her own self-evaluation than to determine the extent to which she was ‘in control’ of a particular action.

The upshot is that reflecting on blame in cases of BCI-mediated action may be an especially effective way to evaluate moral responsibility for these actions. By asking questions about whether and how much we should *blame* individuals for BCI-mediated actions, we gain a framework that is easier to navigate than the one Rainey et al. choose. Since blame and holding responsible are intimately related, the framework also allows us to ask the same kinds of questions Rainey et al. hope to address: questions about the conditions in which individuals can be held responsible for BCI-mediated actions. When investigating the nature of moral responsibility in BCI-mediated action, our recommendation is to start with blame, and responsibility will follow.

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