



Probing folk-psychology: Do Libet-style experiments reflect folk intuitions about free action?



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ABSTRACT

There is an ongoing debate in philosophy and psychology about when one should consider an action to be free. Several aspects are frequently suggested as relevant: (a) a prior intention, (b) a conscious action-related thought, (c) prior deliberation, (d) a meaningful choice, (e) different consequences of the action, and (f) the duration between intention and action. Here we investigated which criteria laypeople adopt and thus probed their intuitions about free actions in three surveys based on daily life scenarios. First, our results indicate that laypeople consider a conscious intention important for an action to be free. Second, laypeople consider spontaneous actions without consequences to be freer than actions with prior deliberation. Third, laypeople consider proximal rather than distal intentions relevant when it comes to judging actions as free. Taken together, these results suggest that simple laboratory experiments on action choices reflect laypeople's intuitions of free actions to a considerable degree.

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1. Introduction

The problem of “free will” has been intensely debated among psychologists, neuroscientists, philosophers, and lawyers (Batthyany, 2009; Haggard, 2008; Libet, Gleason, Wright, & Pearl, 1983; Mele, 2009; Wegner, 2002). A main point of discussion is which implications can be drawn from Libet-style free choice experiments (Libet et al., 1983). The original study by Libet measured the relationship between the onset of brain activity and the timing of a conscious “urge” to move prior to an action. They found that the brain activity precedes the urge to move by around 350 ms. Similar findings were subsequently reported by other groups across delay periods of up to several seconds (Soon, Brass, Heinze, & Haynes, 2008; Soon, He, Bode, & Haynes, 2013). The fact that the brain activity predicts an upcoming decision even before the person consciously believes to be making it has often been interpreted to undermine free will (Bargh, 2008; Haggard, 2008; Harris, 2012; Wegner, 2002). This and similar experiments have led to considerable debates not only within the scientific disciplines involved, but also in the media and general public. In response to this public debate, philosophers have frequently criticized that the simple

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experiments used in neuroscience do not match typical concepts of free will held by laypeople (Mecacci & Haselager, 2015; Pauen, 2008, 2009; Roskies, 2011; Schlosser, 2014). Some philosophers have claimed to use definitions of free will that better approximate lay concepts (e.g. Mecacci & Haselager, 2015). However, there is considerable conflict between concepts of free will used by different philosophers and also by neuroscientists (Mecacci & Haselager, 2015; Pauen, 2008, 2009; Roskies, 2011; Schlosser, 2014). In an interdisciplinary debate with many divergent definitions, using a joint definition of free will that is maximally close to lay concepts is crucial in order to avoid misunderstanding. This is especially important if the debate extends into the general public. Thus, we sought to investigate the beliefs of laypeople regarding several aspects of free will. However, without direct empirical support it is unclear what beliefs laypeople hold about free will (Mele, 2001; Monroe & Malle, 2010, 2015; Nadelhofer & Nahmias, 2007; Nahmias, Morris, Nadelhoffer, & Turner, 2006; Stillman, 2011). Recently, a subfield on the border between philosophy and psychology, called experimental philosophy, has started to systematically investigate the beliefs of laypeople regarding philosophical questions (Knobe, 2007; Nahmias, Coates, & Kvaran, 2007; Sommers, 2010; Stillman, 2011). One focus of this research was on whether laypeople believe that a determinist universe allows for free will, a position termed “compatibilism” (Knobe, 2007; Knobe & Nichols, 2008; Nahmias, Stephen, Thomas, & Turner, 2005; Nahmias et al., 2006, 2007). Please note that the compatibilist claim is very generic. It pertains to whether free will is compatible with a purported general property of the universe, i.e. its deterministic nature. However, besides these theoretical positions people also judge whether everyday actions are free or not depending on the presence or absence of certain cognitive processes (e.g. Stillman, 2011). For example, people might consider an action to be free if a person was consciously thinking about the action (e.g. Matsushashi & Hallett, 2008) or had an intention before engaging in it (e.g. Mele, 2009). Another factor might be whether a person spent time deliberating about the action beforehand, rather than acting spontaneously (e.g. Roskies, 2011). The attractiveness of the alternative options, and their potential consequences might also play a role (e.g. Schlosser, 2014). Finally, the relation between short-term (“proximal”) intentions to long-term (“distal”) intentions might be important (e.g. Nahmias, 2005). Our goal is to contribute to this debate by empirically investigating the beliefs of laypeople, as has been previously done for compatibilism (Knobe, 2007; Knobe & Nichols, 2008; Nahmias et al., 2005, 2006, 2007).

Here, we used three surveys to assess whether laypeople believe several factors to be relevant in order for an action to be considered free. In the first survey we investigate the role of consciousness, prior intentions, and action type (Levin, 2015; Mele, 2009; Nahmias, 2005). In the second survey, we address laypeople’s beliefs concerning deliberation, choice, and consequences (e.g. Batthyany, 2009; Bayne, 2011; O’Connor, 2009; Roskies, 2011; Schlosser, 2012b, 2014, 2015). Finally, in a third survey we ask how important proximal and distal intentions are for judging an action as free (Nahmias, 2005; Pacherie & Haggard, 2010; Roskies, 2011; Schlosser, 2014; Sinnott-Armstrong, 2011).

2. Survey 1

2.1. *Consciousness and intention*

In the first study we assessed whether laypeople believe a person’s conscious thoughts and/or their intentions to be relevant for their actions to be free. What laypeople believe about the relation of consciousness, intention, and free action has rarely been empirically studied before. We formulated a set of potential lay beliefs based on the previous literature.

2.1.1. *Consciousness*

The first potential factor is whether people consider an action to be free if it is preceded by a conscious action-related thought (Matsushashi & Hallett, 2008; Shepherd, 2012). This thought must not necessarily be an intention. This view receives support by recent research on folk beliefs. For example, Shepherd (2012) found that laypeople judge actions as free if they are caused by conscious mental states (irrespective of whether or not these are intentions). This was not the case if an action was caused by an unconscious mental state.

2.1.2. *Intention*

Some philosophers have suggested that the concept of free action depends on the presence or absence of an intention, independent of whether it is conscious or not. This idea aims to account for routinized behavior that has no related conscious intention, but which still might be considered free (Breitmeyer, 1985; Marcel, 2003; Mele, 2009; Pockett, 2007; Schlosser, 2012a). Here we do not claim that unconscious intentions exist, but instead we want to probe what laypeople would think if they were to exist. An example of an unconscious intention might be thoughtless automatic behavior. Sometimes one carries out highly routinized actions without consciously intending to do so, e.g. when unlocking a door, making coffee in the morning etc. (Levin, 2015; Mele, 2009; Nahmias, 2005). Even though such actions are often carried out automatically without conscious intention, they are nonetheless goal-directed and thus might be considered to be guided by unconscious intentions (Breitmeyer, 1985; Marcel, 2003; Mele, 2009; Pockett, 2007; Schlosser, 2012a). Such routinized actions might also occur as a subpart of a more global, consciously initiated action plan. For example, driving home after work might require a conscious intention, whereas the action to stop at a red light might not. Some philosophers consider those automatic actions as free (Levin, 2015; Marcel, 2003; Mele, 2009). Having an intention prior to action no matter whether or not the intention is conscious is thus the second potential criterion we investigate.

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