



## Original Articles

## The means/side-effect distinction in moral cognition: A meta-analysis

Adam Feltz<sup>a,\*</sup>, Joshua May<sup>b,1</sup><sup>a</sup> Department of Cognitive and Learning Sciences, Michigan Technological University, 1400 Townsend Dr., Houghton, MI 49931, United States<sup>b</sup> Department of Philosophy, University of Alabama at Birmingham, 900 13th Street South, Birmingham, AL 35294-1260, USA

## ARTICLE INFO

## Article history:

Received 15 August 2016

Revised 14 March 2017

Accepted 17 May 2017

Available online 7 June 2017

## Keywords:

Trolley problem  
Moral dilemmas  
Moral cognition  
Linguistic analogy  
Double effect  
Meta-analysis  
Instrumental dilemmas  
Incidental dilemmas

## ABSTRACT

Experimental research suggests that people draw a moral distinction between bad outcomes brought about as a means versus a side effect (or byproduct). Such findings have informed multiple psychological and philosophical debates about moral cognition, including its computational structure, its sensitivity to the famous Doctrine of Double Effect, its reliability, and its status as a universal and innate mental module akin to universal grammar. But some studies have failed to replicate the means/byproduct effect especially in the absence of other factors, such as personal contact. So we aimed to determine how robust the means/byproduct effect is by conducting a meta-analysis of both published and unpublished studies ( $k = 101$ ; 24,058 participants). We found that while there is an overall small difference between moral judgments of means and byproducts (*standardized mean difference* = 0.87, 95% CI 0.67–1.06; *standardized mean change* = 0.57, 95% CI 0.44–0.69; *log odds ratio* = 1.59, 95% CI 1.15–2.02), the mean effect size is primarily moderated by whether the outcome is brought about by personal contact, which typically involves the use of personal force.

© 2017 Elsevier B.V. All rights reserved.

## 1. Introduction

Many people find it morally questionable for physicians to kill their terminally ill patients as a *means* to ending suffering, even when patients competently request it. That's active euthanasia, which is illegal in many countries. Yet in the same jurisdictions it is typically legal for physicians to commence palliative care that merely has the known *side effect* of hastening a terminal patient's death. The distinction between harming as a means and harming as a byproduct can also be observed when the stakes are much lower. Some experimental studies suggest that people regard destroying one piece of property as a *means* to saving five other pieces of property as morally worse than sacrificing one as a mere side effect (or byproduct) of saving the greater goods (e.g. Millar et al., 2014). Suppose, for example, that you can save someone's five rare books by diverting some spilled bleach that's fast approaching them. It may seem morally acceptable to save these books, even if you know that as a side effect the caustic liquid will then flow toward just one rare book and destroy it. But it strikes many as less morally appropriate to save the five if doing so

involves using someone else's beloved book as a means to diverting the bleach.

The distinction fits with a venerable theory in moral philosophy that is associated with the Doctrine of Double Effect. The Doctrine is complicated and variously formulated. John Mikhail (2011: 149), for example, articulates it as follows:

[A]n otherwise prohibited action, such as battery or homicide, which has both good and bad effects may be permissible if the prohibited act itself is not directly intended, the good but not the bad effects are directly intended, the good effects outweigh the bad effects, and no morally preferable alternative is available.

A core element of any formulation of the Doctrine is something like the means/byproduct distinction, embodied in what we can dub the *Means Principle*: all else being equal, bringing about a bad outcome as a means to a noble goal is morally worse, or more difficult to justify, than bringing about the same outcome as a side effect (McIntyre, 2001; Mikhail, 2011; Wedgwood, 2011).<sup>2</sup> Some, especially those in the Catholic tradition, have used the Doctrine to reconcile the ideas that a human fetus is a person, it's always wrong to intentionally kill an innocent person, but it's sometimes permissi-

\* Corresponding author.

E-mail addresses: [adfeltz@mtu.edu](mailto:adfeltz@mtu.edu) (A. Feltz), [joshmay@uab.edu](mailto:joshmay@uab.edu) (J. May).URLs: <https://sites.google.com/site/ethicaldecisionslab/> (A. Feltz), <http://www.joshmay.com> (J. May).<sup>1</sup> Authorship is equal; author names are ordered alphabetically by surname.<sup>2</sup> Side effects are notoriously difficult to define, but for our purposes a *side effect* is (roughly) an effect of an individual's action that is not a goal of hers or a means to one of her goals (cf. Cushman & Mele, 2008: 179).

ble to save the life of a mother via hysterectomy even knowing that this will have the side effect of killing the fetus (Foot, 1967). Killing someone as a mere byproduct of a worthy goal may be justified, according to Double Effect, given that only the good effect of one's action is intended. Many proponents of the Doctrine, however, are secular. Indeed, something like the Means Principle is arguably presupposed in many aspects of American criminal law (Sarch, *in press*) and is codified in the American Medical Association (AMA Opinion 2.21).

Whether the Means Principle plays a role in ordinary moral thinking has implications for longstanding debates in philosophy, psychology, and public policy. First, arguments in favor of Double Effect have commonly rested on it explaining firm commonsense intuitions about cases (e.g. Foot, 1967; McIntyre, 2001; Scanlon, 2008; Wedgwood, 2011; Nelkin & Rickless 2014). Such arguments suffer if our basic mode of moral thinking is not committed to the significance of the means/byproduct distinction. Second, the Means Principle may serve to underwrite conceptions of moral cognition as involving tacit computation (Cushman et al., 2006) that is perhaps universal and innate (Hauser et al., 2007; Mikhail, 2011). Third, many who have attempted to empirically debunk deontological or non-utilitarian ways of thinking have regarded the Means Principle as a core element of the targeted approach to ethics, since it treats more than outcomes as morally significant (Greene, 2013; Sinhababu, 2013). Thus, the status of the Means Principle in ordinary moral cognition informs a wide range of debates, from empirical questions about human nature to moral questions about the plausibility of certain ethical traditions.

Participants in such debates have understandably focused attention on numerous experiments that have reported a means/byproduct effect in moral judgment. Some researchers have reported the effect among adults and often when using the famous trolley dilemmas or other similar sacrificial dilemmas involving life and death (e.g. Cushman and Young, 2011; Cushman et al., 2006; Hauser et al., 2007; Mikhail, 2002; Moore et al., 2008; Sinnott-Armstrong et al., 2008). But other studies have apparently generated the effect using non-trolley dilemmas or in other areas of moral judgment, such as situations involving bodily harm, cheating, financial loss, pollution, and property damage (e.g. DeScioli et al., 2012; Gold et al., 2013; Kelman and Kreps, 2014; May, ms-b; Millar et al., 2014; Nichols and Mallon, 2006). Moreover, some studies have found the means/byproduct effect in children (e.g. Mikhail, 2011; Pellizzoni et al., 2010) and non-Western populations (e.g. Abarbanell and Hauser, 2010; Ahlenius and Tännsjö, 2012; Hauser et al., 2007; Kawai et al. 2014; Mikhail, 2011; Moore et al., 2011a).

However, there are reasons to worry that the purported effect is not robust or perhaps even non-existent. First, some of these studies appear to have confounds, conjoining harming as a means with other factors relevant to moral cognition, including contact, commission, battery, and personal force (Greene et al., 2009; May, 2014; Mikhail, 2014). Consider, for example, what is arguably the most famous pair of cases in this literature: Switch and Footbridge. In *Switch*, the protagonist can either do nothing and let an empty runaway trolley kill five innocent people stuck on the tracks or flip a switch that will divert the trolley to a side-track with only one innocent person on it. Here, sacrificing one for the greater good involves only causing a death as a side effect of a noble goal. In *Footbridge*, the protagonist is on a bridge and can save the five only by pushing a man onto the tracks who is large enough to stop the trolley with his body. Here, the actor can promote the greater good by killing not only as a means but in a violent way that requires up-close and personal contact with the victim. And some experiments suggest an important interaction effect between harming as a means and using personal force (Greene et al., 2009).

A second worry is that the differences in people's judgments are rather small when we focus on vignettes that don't involve confounds such as personal contact. Consider, for example, one pair of trolley cases that remove the contact confound. In *Loop*, the side track circles back around and the trolley will return toward the five if it continues around the loop, but there is one innocent man stuck on the looping track who is large enough to stop the trolley from continuing on to kill the five. Like Footbridge, killing the man on the loop track is likely to be represented as harming as a means, but it doesn't involve up-close and personal contact. Now contrast *Loop* with *Man-in-Front*, in which the only change is that behind the one man on the loop track is a large boulder sufficient on its own to stop the trolley. Killing the one now looks to be a mere side effect of smashing the empty trolley into the boulder. Some early studies report that moral judgments diverge about this minimal pair of cases: more people regard *Man-in-Front* as morally permissible than *Loop* (Hauser et al., 2007; Mikhail, 2011).

Such studies may provide hope that the Means Principle does guide ordinary moral cognition when problematic confounds are removed. However, some have noted (e.g. Enoch, 2013: 10) that, while the differences in permissibility judgments between the classic Switch/Footbridge pair are consistently quite large (e.g. 85% and 12%), the differences in the *Man-in-Front/Loop* pair are much smaller (e.g. 72% and 56% in Hauser et al., 2007) suggesting that personal contact moderates the effect. Similarly, studies using continuous measures of moral judgments often find exceedingly small differences on a fine-grained scale (see e.g. Cushman and Young, 2011; Cushman et al., 2006). So, even if the differences in intuitions are statistically significant, it's unclear whether the Means Principle has a powerful impact on moral cognition (cf. Cushman, 2016; May, 2014).

A final worry about the means/byproduct effect involves replication. At least for vignettes that don't appear to involve confounds, there have been some failures to replicate the means/byproduct effect (e.g. Greene et al., 2009; May ms-a; Waldmann and Dieterich, 2007; Zimmerman, 2013). For example, while the proportion of permissibility judgments tends to go down when death is brought about as a means (*Loop*) rather than a mere side-effect (*Man-in-Front*), two subsequent studies using this same categorical measure have found that participants are inclined to think it's permissible to sacrifice the one for the greater good in both cases (see Table 1).

One might try to explain the small effect size or the inconsistent data by pointing to another body of research on the *side-effect effect*. Participants are consistently more inclined to say that an individual brought about a side effect intentionally if the side effect is bad as opposed to good (Knobe, 2010). When researchers try to study the means/byproduct effect, they generate cases in which the protagonist is generating bad outcomes, such as the death of an innocent person. But, given such negative consequences of the well-intentioned action, it might be difficult for people to see such outcomes as being mere side effects (as in *Switch*). So such "side effects" might be represented as more intentional, perhaps even intended, much like cases in which the protagonist is supposed to have generated an outcome as a means (as in *Footbridge*). Perhaps for some participants the side-effect effect masks the difference between generating a bad outcome as a means versus a byproduct, which leads to similar moral judgments about the relevant pairs of cases.

There are at least two reasons to doubt that this masking account explains the different results across studies. First, if people treat the bad side effects as more like harming as a means, then permissibility judgments should be *equally low* in both cases, not *equally high*. Second, some studies indicate that, for whatever reason, the side-effect effect doesn't play a role in the trolley-type cases, since people do treat harming as a byproduct as less

Download English Version:

<https://daneshyari.com/en/article/5041560>

Download Persian Version:

<https://daneshyari.com/article/5041560>

[Daneshyari.com](https://daneshyari.com)