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How do people use ‘killing’, ‘letting die’ and related bioethical concepts? Contrasting descriptive and normative hypotheses

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Abstract

Bioethicists involved in end-of-life debates routinely distinguish between ‘killing’ and ‘letting die’. Meanwhile, previous work in cognitive science has revealed that when people characterize behaviour as either actively ‘doing’ or passively ‘allowing’, they do so not purely on descriptive grounds, but also as a function of the behaviour’s perceived morality. In the present report, we extend this line of research by examining how medical students and professionals (N = 184) and laypeople (N = 122) describe physicians’ behaviour in end-of-life scenarios. We show that the distinction between ‘ending’ a patient’s life and ‘allowing’ it to end arises from morally motivated causal selection. That is, when a patient wishes to die, her illness is treated as the cause of death and the doctor is seen as merely allowing her life to end. In contrast, when a patient does not wish to die, the doctor’s behaviour is treated as the cause of death and, consequently, the doctor is described as ending the patient’s life. This effect emerged regardless of whether the doctor’s behaviour was omissive (as in withholding treatment) or commissive (as in applying a lethal injection). In other words, patient consent shapes causal selection in end-of-life situations, and in turn determines whether physicians are seen as ‘killing’ patients, or merely as ‘enabling’ their death.

KEYWORDS

action/omission distinction, end-of-life ethics, killing, letting die

1 | INTRODUCTION

At the core of medical ethics lies the norm that doctors must not kill.[1] Yet decisions resulting in patient deaths are made daily in hospitals worldwide, with more than 70% of deaths in intensive care units occurring in the wake of a medical decision.[2]

Among the most ethically controversial of these decisions are those that seem to *hasten* the death of a terminally ill patient. Are physicians in these circumstances not ‘killing’ their patients? In virtue of what specifically might these practices be construed as merely ‘allowing’ the patient to die? Of particular interest to our present study are three such end-of-life interventions: withholding life-sustaining treatment, withdrawing life-sustaining treatment, and medically assisted death procedures (such as euthanasia or assisted suicide).

Withholding life-sustaining treatment is the omission of therapy that would sustain the patient’s life (for example, not applying a vasopressor or not performing CPR), while *withdrawing* life-sustaining treatment is the decision to actively cease a life-sustaining treatment (for instance, terminal extubation). *Euthanasia* is often characterized as the administration of a lethal substance (such as the combination of a general anesthetic and a muscle relaxant) in order to bring about death.

According to a prevailing perspective in medical ethics, clinicians may be authorized—and sometimes required—to *let* a patient *die* (e.g. by withholding life-saving treatment), but they should never *kill* a patient (e.g. by administering a lethal substance). With a few

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[1] Graylin W., Kass L., Pellegrino, E., & Siegler, M. (1988). Doctors must not kill. *JAMA*, *259*(14), 2139–2140.

[2] Sprung, C. L., Cohen, S. L., Sjokvist, P., Baras, M., Bulow, H. H., Hovilehto, S., … Schobersberger, W. (2003). End-of-life practices in European intensive care units: The Ethicus Study. *JAMA*, *290*(6), 790–797.

exceptions,[3] national regulations throughout Europe and North America criminalize medically assisted death while authorizing doctors to withhold or withdraw life-sustaining treatment. Professional guidelines and ethicists commonly consider withdrawing and withholding life support as morally equivalent[4]—all other factors being equal—but this view can contrast with health professionals' perceptions, with many doctors and nurses finding it harder to stop a treatment than to refrain from starting it.[5] In Spain, where the present research was conducted, the ethics of assisted death has been subject to debate for over two decades,[6] but the procedure remains illegal. Meanwhile, it is legal and increasingly prevalent for doctors to withhold or withdraw life-saving treatment.[7]

Advocates of the status quo often appeal to the intuition that administering a lethal substance counts as 'killing'—and therefore violates the most crucial norm in medical ethics—whereas denying life-saving treatment amounts to merely 'letting die'. However, contrasting visions of the morality of end-of-life practices have coexisted in academic and public debates for decades now.[8] We hypothesize that these disagreements may be aggravated by the unexamined misunderstanding about the ordinary meaning of 'killing' and 'letting die'.

In the following subsection, we summarize prevailing bioethical perspectives on killing and letting die.[9] Some theorists understand the *killing* versus *letting die* distinction as fundamentally evaluative (i.e. conveying information about the doctor's duty); others view the distinction as solely descriptive (i.e. meant merely to distinguish commission from omission). After characterizing these competing hypotheses—the *deontic* and *commissive* hypotheses—regarding the ordinary meaning of 'killing' and 'letting die', we review folk psychological evidence on 'doing', 'allowing' and 'enabling',[10,11] which constitutes the background for our present experiment.

1.1 | The descriptive view

Critics have levied two principal charges against the killing versus letting die distinction. First, they argue that the distinction is *vague*, such that it is not always easy to establish whether a given action constitutes 'killing' or 'letting die'. Second, they maintain that it is normatively *inert*, since killing another may sometimes be morally preferable to letting them die.[12]

For instance, Franklin Miller and Robert Truog have argued that it is flawed to refer to the withdrawal of life-saving treatment as 'allowing' death.[13] From their perspective, the doctor who withdraws a ventilator, for instance, *commits* an action that terminates a patient's life, and therefore should be described as 'killing' the patient:

> *Describing withdrawing life-sustaining treatment as merely allowing patients to die a natural death from the underlying medical condition that is being treated by medical technology hides the fact that stopping these treatments causes the patient's death and thus conflicts with conventional medical ethics.*[14]

Denying this plain fact, according to them, reflects a motivated effort to reconcile the doctor's prominent causal role with the inviolable norm against killing. To avoid the recognition that certain acts of killing may be morally acceptable, theorists and laypeople alike commit a sort of *moralistic fallacy*, namely by letting 'views about the way things ought (or ought not) to be dictate judgments about how they in fact are' (pp. 20–21). According to what we will call the *commissive* hypothesis, the killing versus letting die distinction implicates a descriptive appraisal of whether the doctor committed a life-ending act (i.e. killing) or omitted a life-saving act (i.e. letting die). From this perspective, re-describing commissive interventions as mere instances of 'allowing' death simply to convey moral approval is flawed, just as it would be to label omissive interventions as 'killing' simply to signal one's moral disapproval.

1.2 | The normative view

In turn, proponents of the killing versus letting die distinction have argued that these terms are not value-free descriptions of facts. Rather, they are meant to characterize the physician's conduct in light of their pre-existing duties.

In one prominent example, Gert, Culver and Clouser argued that a physician's life-ending intervention should count as 'killing' only if there was a pre-existing duty to keep that patient alive.[15] *Prima facie*, doctors have this obligation to preserve life. Failing to observe that

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[3] Exceptions to this are the Netherlands, Belgium, Luxembourg, Canada, and certain U.S. states, where both euthanasia and assisted suicide are legal, and Switzerland, where assisted suicide is legal (but euthanasia is not). See The Netherlands Criminal Code, Article 293; The United States: Oregon's Death With Dignity Act 1994, The State Of Washington's Death With Dignity Act 2008–2009, Vermont's Act Relating To Patient Choice And Control At End Of Life 2013, California's End Of Life Action Act And Other Developments 2015; Belgian Act 2002; Luxembourg Loi du 16 mars 2009 sur l'euthanasie et l'assistance au suicide; Switzerland, Swiss Criminal Code, article 114; Canada, Bill C-14: An Act to amend the Criminal Code and to make related amendments to other Acts (medical assistance in dying); United Kingdom, Suicide Act 1961.

[4] Wilkinson, D., Butcherine, E., & Savulescu, J. (2019). Withdrawal aversion and the equivalence test. *American Journal of Bioethics*, *19*(3), 21–28. https://doi.org/10.1080/15265161.2019.1574465.

[5] Sprung, C. L., Paruk, F., Kissoon, N., Hartog, C. S., Lipman, Du, J. B., ... Feldman, C. (2014). The Durban world congress ethics round table conference report: I. Differences between withholding and withdrawing life-sustaining treatments. *Journal of Critical Care*, *29*(6), 890–895. https://doi.org/10.1016/j.jcrc.2014.06.022.

[6] Guerra, M. J. (1999). Euthanasia in Spain: The public debate after Ramon Sampedro's case. *Bioethics*, *13*(5), 426–432.

[7] Simon-Lorda, P., & Barrio-Cantalejo, I. M. (2012). End-of-life healthcare decisions, ethics and law: The debate in Spain. *Eur. J. Health Law*, *19*(4), 355–365.

[8] Pew Research Center (2013). To end our days: The social, legal and political dimensions of the end-of-life debate. Retrieved from http://assets.pewresearch.org/wp-content/uploads/sites/11/2013/11/to-end-our-days.pdf.

[9] Rachels, J. (2001). Killing and letting die. In L. Becker & C. Becker (Eds.) *Encyclopedia of ethics*, (2nd ed., pp. 947–950). New York, NY: Routledge.

[10] Barry, C., Lindauer, M., & Øverland, G. (2014). Doing, allowing, and enabling harm: An empirical investigation. In T. Lombrozo, J. Knobe & S. Nichols (Eds.), *Oxford studies in experimental philosophy* (Vol. 1, pp. 62–90). Oxford, U.K.: Oxford University Press.

[11] Cushman, F., Knobe, J., & Sinnott-Armstrong, W. (2008). Moral appraisals affect doing/allowing judgments. *Cognition*, *108*(1), 281–289.

[12] Kuhse, H. (1998). Critical notice: Why killing is not always worse—and is sometimes better—than letting die. *Cambridge Quarterly of Healthcare Ethics*, *7*(4), 371–374; Rachels, op. cit.

[13] Miller, F., & Truog, R. (2011). *Death, dying, and organ transplantation: Reconstructing medical ethics at the end of life*. Oxford, U.K.: Oxford University Press.

[14] Ibid.: p. 21.

[15] Gert B., Culver C., & Clouser, K. D. (1998). An alternative to physician assisted suicide: A conceptual and moral analysis. In M. P. Batin, R. Rhodes & A. Silvers (Eds.), *Physician assisted suicide: Expanding the debate* (pp. 182–203). New York, NY: Routledge.

duty constitutes killing in normal circumstances, whether by commission (e.g. by withdrawing mechanical ventilation) or by omission (e.g. by failing to provide a vital treatment).

Yet, for Gert and colleagues, a patient's stated *preference* can alter the physician's duty: that is, doctors have an obligation to honour patients' *refusals* (i.e. not to be treated). Thus, if a particular patient refuses life-saving treatment, the physician's duty is now to honour the patient's refusal—overriding the default duty to preserve life. In these circumstances, a physician who terminated the patient's life ought to be described as *allowing* her *to die*.

However, physicians are not equally obligated to honour patients' *requests* (i.e. to be treated). If the same patient had requested a lethal injection, there would be no obligation to honour that request. The duty to preserve life would prevail; and a physician who terminated the patient's life would therefore be counted as *killing* her.

The account of Gert and colleagues illustrates what we will call the *deontic* hypothesis, namely, that the killing versus letting die distinction involves some evaluation of whether the doctor violated an ethical duty (i.e. killing) or not (i.e. letting die).

1.3 | Empirical evidence

Some evidence in moral psychology has paved the way towards understanding laypeople's use of 'killing' and 'letting die'. In an influential study, Cushman and colleagues examined people's judgments about two doctors' behaviours that each resulted in the death of a homeless patient.[16] The doctors behaved in exactly the same way, except that they differed in their primary motive: half the participants read about a doctor who was motivated by concern for the patient's dignity, while the other half read about a doctor whose motivation was to save time and hospital resources.

Despite the fact that the two doctors performed otherwise identical actions, the first doctor was more likely to be perceived as allowing the patient to die and the second as ending the patient's life. Respondents were also asked about their personal attitudes towards euthanasia: those who opposed euthanasia were more inclined to describe the doctors as ending the patient's life than those who supported euthanasia.

The authors conclude that whether lay respondents describe end-of-life treatment as *doing* or as *allowing* depends on a moral appraisal of the doctor's act. Thus, preliminary evidence suggests that the folk use of 'doing and 'allowing' is at least partly deontic.

1.4 | Scope and objectives

These divergent interpretations of the doing/allowing distinction have practical implications for public and academic end-of-life debates. Stating that 'Doctor A killed patient B' ought to immediately elicit our disapproval if we understand this language to convey a deontic violation, but not necessarily if we interpret the statement as describing a mere commission. We suggest that contenders in bioethical debate have rarely made it sufficiently clear whether the terms 'killing' and 'letting die' are used descriptively or evaluatively, obscuring the deeper question of whether the nature of their disagreement is moral or perhaps terminological.

Our present work seeks to contribute to philosophical bioethics by characterizing not what different theorists mean, but how laypeople and medical personnel predominantly employ these terms.[17] Extending the methods of Cushman and colleagues' (2008) study, our experimental approach introduces a series of developments, which are summarized below.

First, in order to investigate whether folk usage of 'doing' and 'allowing' in end-of-life cases reflects a commissive or deontic interpretation, we devised an experiment with two orthogonal factors. Participants evaluated both *commissive* and *omissive* end-of-life practices, and each of these interventions either observed or disregarded the patient's preference (thus, either constituting a *deontic violation* or *not*).

Second, in addition to asking whether the doctor 'ended' or 'allowed' the patient's life to end, we also investigated whether the doctor was described as 'killing' the patient, while providing not one, but two, alternatives. Historically, moral philosophers have treated *killing* and *letting die* as comprehensive. Yet, recent research in experimental ethics has revealed that certain behaviours are best conceived as 'enabling' a harmful outcome.[18] A person enables an event (e.g. death) when the event results from an action—not an omission—but without it being the case that there is a complete causal process between the agent's action and the event: i.e. when the agent's action is necessary but not sufficient to bring about the outcome.[19]

According to this descriptive definition, WD-LST is a case of enabling death, while WH-LST and MAD are not; the former because it only involves omissions, the latter because the doctor's behaviour is sufficient for bringing about death. Third, participants were also asked whether they viewed the doctor's actions or the illness as the primary cause of death. A wealth of evidence suggests that causal selection is shaped partly by a moral appraisal of the outcome's perceived causes.[20] Thus, in line with the deontic hypothesis, we predicted that the causal salience of the illness versus the doctor could depend on whether the patient expressed consent.

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[16] Cushman et al., op. cit.

[17] Earp, B. D., Demaree-Cotton, J., Dunn, M., Dranseika, V., Everett, J. A. C., Feltz, A., … Tobia, K. (2019). Experimental philosophical bioethics. *American Journal of Bioethics Empirical Bioethics*, in press.

[18] Barry et al., op. cit.

[19] Sloman, S. A., Barbey, A. K., & Hotaling, J. (2009). A causal model of the meaning of 'cause,' 'enable,' and 'prevent.' *Cognitive Science*, *33*, 21–50.

[20] For instance, in an early experiment (Alicke, M. D. (1992). Culpable causation. *Journal of Personality and Social Psychology*, *63*(3), 368), participants read about a car accident involving a negligent drive *and* an oil spill on the road. In a phenomenon dubbed as *culpable causation*, the driver was treated as the cause of the accident if they were doing something immoral, e.g. rushing to hide a vial of cocaine. In contrast, if the driver was pursuing a morally praiseworthy end, e.g. rushing to hide an anniversary present for their parents, respondents treated the oil spill as the primary cause of the accident instead. See also Kominsky, J. F., Phillips, J., Gerstenberg, T., Lagnado, D., & Knobe, J. (2015). Causal superseding. *Cognition*, *137*, 196–209; Cushman et al. op. cit.

Fourth, we surveyed participants with and without medical training and experience, to understand whether expertise shapes the use of 'killing' and 'letting die'. If the competent use of killing and letting die language is descriptive—as claimed by Miller and Truog—and those who refer to commissive interventions as 'letting die' are trapped in a moralistic fallacy, then medical knowledge and experience might be expected to mitigate this bias.

2 | METHODS

2.1 | Participants

Between January and May 2018, we asked a total of 306 students and health professionals to take part in a short study to explore attitudes toward end-of-life debates.

Lay sample. We recruited 122 undergraduate students (74 women; M = 21.3, Q1 = 19, Q3 = 21) at the Complutense University of Madrid. Participants in our lay sample were majors in neither philosophy nor medicine.

Medical sample. We recruited 184 medical students and professionals (120 women; M = 26.7, Q1 = 21, Q3 = 26) from the University of Granada and healthcare clinics in the vicinity. A total of 52 were third-year medical students, 89 were sixth-year medical students, 11 were medical school graduates, 8 were doctors in residency, and 24 were practising professionals.

2.2 | Procedure

After providing informed consent, participants were randomly assigned to one of two conditions in a 2 between- (Consent: Present versus Absent) × 3 within- (Intervention: WH, WD, MAD) subjects design. In each condition, participants viewed a battery of three hypothetical vignettes describing end-of-life interventions: (WH) withholding life-sustaining treatment, i.e. the doctor decides against engaging a ventilator; (WD) withdrawing life-sustaining treatment, i.e. the doctor decides to disengage a ventilator; and (MAD) medically assisted death, i.e. the doctor decides to sedate the patient and administer a lethal dose of muscle relaxant. The between-subjects manipulation involved whether patients were described as requesting (*Consent*) or opposing (*No Consent*) the life-ending intervention (see Appendix).

After each intervention, participants viewed three sets of statements about the physician's behaviour, as follows.

Doing/allowing judgments. Participants were asked to endorse either the statement that the doctor (1) 'ended the patient's life' or (0) 'allowed the patient's life to end'.

Causal selection. Participants were asked to identify the cause of the patient's death: i.e. whether (1) the doctor or (0) the patient's illness caused the patient's death.

Killing/enabling/letting-die. Participants were asked to select one of three descriptions of the physician's behaviour: 'The doctor *killed* the patient', 'The doctor *let* the patient *die*', or 'The doctor *enabled* the patient's *death*' (emphases added).

Our primary prediction concerns the effect of consent on behaviour description and causal selection: we expect doctors to be described using passive language (e.g. as 'allowing the patient's life to end') and as causally irrelevant (e.g. 'the patient's illness caused the patient's death') when consent is present. In contrast, when consent is absent, we expect doctors to be described using active language (e.g. as 'killing the patient') and as causally salient (e.g. 'the doctor caused the patient's death').

At the end of the survey, participants were asked general questions about their beliefs and attitudes regarding euthanasia, and also provided demographic information, including their age and gender. Additionally, participants in the medical sample were classified based on their level of experience in the medical sector (3rd-year student; 6th-year student; graduate; in residence; practising doctor).

2.3 | Power analysis

We estimated a medium to large effect of our between-subjects manipulation of moral valence (r = .40). We conducted an *a priori* power analysis for a χ^2 test of independence, with error rates set to .05 (type I) and .20 (type II), revealing a required sample size of 81 participants.

Below we report the results of mixed-effects logistic and multinomial regression analyses with random intercepts by participant (except where noted). All analyses were run in *R* 3.6.0, using the *lme4*[21] and *emmeans*[22] packages.

3 | RESULTS

3.1 | Effects of patient consent

We first consider whether the evidence provides support for the deontic hypothesis that behaviour description and causal selection reflect an evaluation, i.e. concerning the doctor's respect for the patient's preferences.

3.1.1 | Doing/allowing judgments

Both samples revealed the predicted effect of patient consent on doing/allowing judgments (*ps* < .001; see Figure 1 and Supplementary Table 1). Lay respondents, medical students and professionals tended to judge that the doctor ended the patient's life in the absence of

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[21] Bates, D., Maechler, M., Bolker, B., & Walker, S. (2015). Fitting linear mixed-effects models using lme4. *Journal of Statistical Software*, *67*(1), 1–48.

[22] Lenth, R., Singmann, H., Love, J., Buerkner, P., & Herve, M. (2019). Package "emmeans": Estimated marginal means, aka least-squares means. *Comprehensive R Archive Network (CRAN)*, 1–67. Retrieved from https://cran.r-project.org/

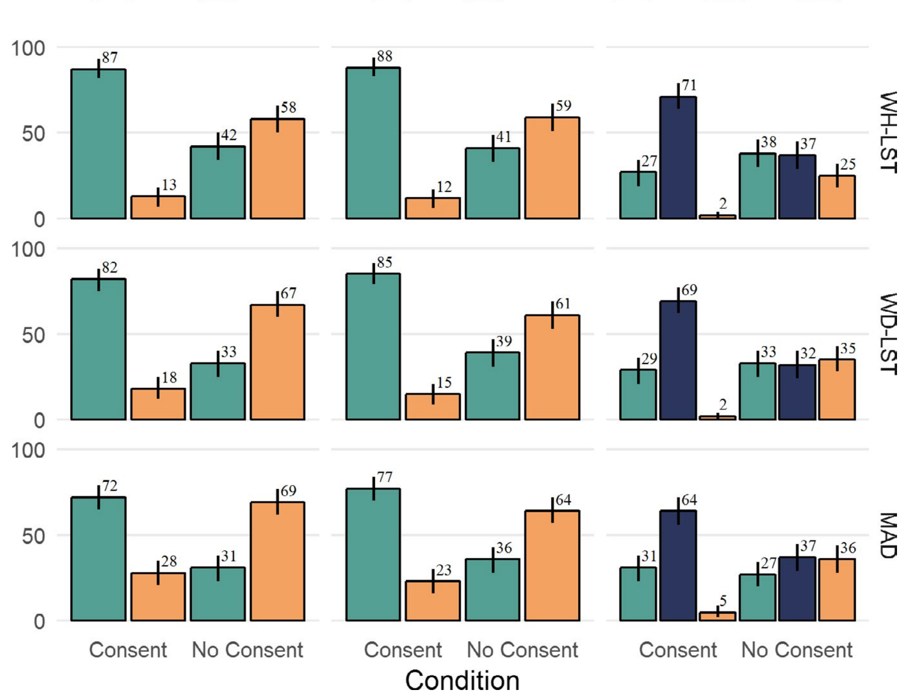

FIGURE 1 Percentages of each response option for the Consent and No Consent conditions, by dependent measure (columns) and intervention (rows) [Colour figure can be viewed at wileyonlinelibrary.com]

consent (*Lay*: 73%, 95% CI [63%, 81%], *Medical*: 66%, 95% CI [58%, 74%]), but that he/she allowed the patient's life to end when consent was provided (*Lay*: 12%, 95% CI [7%, 20%], *Medical*: 16%, 95% CI [11%, 23%]), $z = 11.8$, $p < .001$. We observed no effect of medical knowledge and experience on doing/allowing judgments for either unconsented ($z = -1.04$, $p = .30$) or consented ($z = 1.12$, $p = .26$) behaviours.

3.1.2 | Causal selection

We also found the predicted effect of patient consent on causal attributions in both samples, *ps* < .001 (see Figure 1). Specifically, the doctor was treated as the cause of the patient's death when interventions were unconsented (*Lay*: 70%, 95% CI [60%, 79%], *Medical*: 61%, 95% CI [52%, 69%]), while the illness was seen as the cause when consent was given (*Lay*: 10%, 95% CI [5%, 16%], *Medical*: 12%, 95% CI [8%, 18%]), $z = 11.7$, $p < .001$.[23] Once again, medical knowledge and experience did not influence causal selection for either unconsented ($z = -1.46$, $p = .15$) or consented ($z = 0.74$, $p = .46$) interventions.

3.1.3 | Killing, enabling death and letting die

In both samples, consent influenced whether participants described the physician as killing the patient ($F = 50.4$, $p < .001$) or as enabling their death ($F = 85.2$, $p < .001$), but had no effect on reports that the doctor let the patient die ($F = 1.66$, $p = .20$)—as displayed in Figure 1.

Contrary to the conventional view, participants were equally likely to describe the doctor as letting the patient die with (24%, 95% CI [20%, 29%]) and without (29%, 95% CI [24%, 34%]) her consent, $z = 1.29$, $p = .20$. Rather, participants were much more likely to describe the doctor as *enabling* the patient's death with her consent (74%, 95% CI [68%, 79%] versus without: 32%, 95% CI [26%, 38%]), $z = 9.23$, $p < .001$. Conversely, participants were more likely to describe the doctor as killing the patient without (26%, 95% CI [19%, 34%]) versus with her consent (1%, 95% CI [0%, 2%]), $z = 7.10$, $p < .001$. Thus, end-of-life ethics appear to largely reflect a division between 'killing' and 'enabling death',[24] rather than 'letting die'—a point we return to in the Discussion.[25]

3.2 | Effects of intervention type

Next, we evaluate the commissive hypothesis that judgments reflect a descriptive appraisal, i.e. whether the doctor's behaviour was an action or an omission. To assess this, we examined whether intervention types were characterized differently, partialling out the effect of consent.

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[23] If we exclude the least experienced subjects (i.e., 3rd-year medical students), we are left with 132 medical students and professionals with no fewer than six years of education in medicine. In this subsample, the effects of consent remain highly significant (*ps* < .001), and the differences between interventions remain non-significant (*ps* > .15).

[24] Barry et al., op. cit.

[25] The preference for 'enabling' was greater among lay participants (83%, 95% CI [75%, 88%]) than among medical-sector participants (62%, 95% CI [55%, 70%]), $z = 3.70$, $p < .001$. Still, in both samples the tendency to prefer 'enabling' descriptions was very strong.

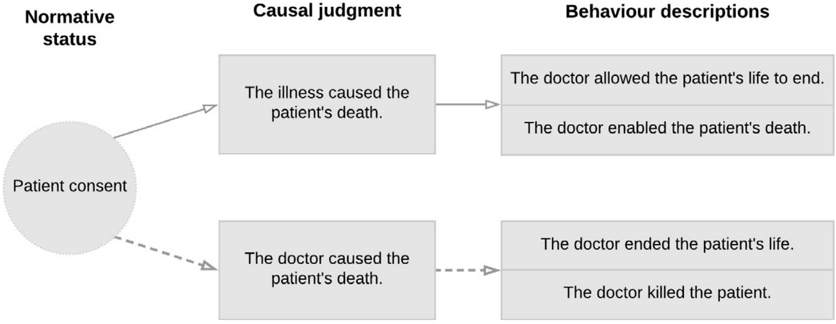

FIGURE 2 Diagram of the mediation model representing the sequence of inferences in the presence (solid line) versus absence (dashed line) of patient consent

3.2.1 | Doing/allowing judgments

An effect of intervention type on doing/allowing judgments emerged among lay respondents (*F* = 9.67, *p* < .001), but not among medical students and professionals (*F* = 1.60, *p* = .20). Lay respondents tended to judge that the doctor allowed the patient's life to end when withholding treatment (20%, 95% CI [11%, 32%]), but not when withdrawing life-sustaining treatment (43%, 95% CI [31%, 57%], *z* = 2.72, *p* = .018) or practising medically assisted death (53%, 95% CI [42%, 64%], *z* = 3.96, *p* < .001). No corresponding differences between interventions emerged among medical-sector respondents, *ps* > .10.

3.2.2 | Causal selection

Similarly, an effect of intervention type on causal selection emerged among lay respondents (*F* = 6.34, *p* = .002), but not among medical students and professionals (*F* = 0.73, *p* = .48). Specifically, lay respondents treated the illness as the cause of the patient's death when the doctor either withdrew (25%, 95% CI [16%, 38%], *z* = 2.85, *p* = .012) or withheld (29%, 95% CI [18%, 42%], *z* = 2.33, *p* = .052; at the marginally significant level) life-sustaining treatment, but were divided in cases of medically assisted death (48%, 95% CI [36%, 60%]). Meanwhile, medical students and professionals treated the illness as the cause equally across types of intervention, *ps* > .40.

3.2.3 | Killing, enabling death and letting die

Intervention type exerted an effect on 'killing' (*F* = 4.55, *p* = .011) and 'letting die' (*F* = 3.00, *p* = .050) choices, but not on 'enabling' (*F* = 0.27, *p* = .76) choices. Specifically, withholding treatment (*let die*: 32%, 95% CI [26%, 37%]; *kill*: 3%, 95% CI [2%, 6%]) was more likely to be described as 'letting die' than was medically assisted death (*let die*: 21%, 95% CI [16%, 28%]; *kill*: 7%, 95% CI [4%, 12%]), *z* = 2.44, *p* = .039, and less likely to be described as 'killing', *z* = -2.91, *p* = .010. Additionally, withholding life-sustaining treatment was marginally less likely to be seen as 'killing' than was withdrawing life-sustaining treatment (*let die*: 27%, 95% CI [22%, 33%]; *kill*: 6%, 95% CI [4%, 11%]), *z* = -2.27, *p* = .060.

Thus, respondents did somewhat distinguish commission (i.e. WD and MAD) from omission (i.e. WH), although these effects were weaker and more inconsistent than the effects of patient consent.

3.3 | Mediation model

Finally, causal selection was strongly linked to participants' behaviour descriptions: when participants viewed the doctor (versus the illness) as the cause, they tended also to describe the doctor as ending the patient's life (versus allowing the patient's life to end), *z* = 14.6, *p* < .001. Furthermore, causal selection also predicted whether the doctor was described as letting the patient die (*z* = -4.56), enabling their death (*z* = -4.82), or killing them (*z* = 7.28), *ps* < .001.

This opens up the possibility that the impact of patient consent on behaviour description is explained by differences in the doctor's perceived causal role.[26] To investigate whether consent influenced behaviour descriptions by mitigating the doctor's perceived causal involvement, we conducted a series of mediation analyses with 5000 quasi-Bayesian simulations.

Indeed, as shown in Figure 2, causal selection mediated the effect of patient consent on 'doing/allowing' (ACME = -0.25, prop. mediated = .56), 'enabling death' (ACME = -0.08, prop. mediated = .24), and 'killing' (ACME = -0.14, prop. mediated = .47), but not on 'letting die' (*p* = .27). Causal selection also mediated some effects of commission—although these indirect effects were systematically weaker, and in fact absent among medical students and professionals.[27]

4 | DISCUSSION

Across three cases of end-of-life intervention, we find convergent evidence that moral appraisals shape behaviour description[28] and causal selection.[29] Consistent with the deontic

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[26] See also Kominsky et al., op. cit.

[27] The indirect effects of commission via causal selection were significant for doing/allowing (ACME = 0.05, *p* = .020) and 'killing' (ACME = 0.03, *p* = .023), but not for 'enabling death' (*p* = .27) or 'letting die' (*p* = .33)—although only in the lay sample.

[28] Cushman et al., op. cit.

[29] Alicke, op. cit.; Kominsky et al., op. cit.

hypothesis, physicians who behaved according to the patient's wishes were described as allowing the patient's life to end. In contrast, physicians who disregarded the patient's wishes were described as ending the patient's life. Additionally, patient consent appeared to inform causal selection: the doctor was seen as the cause of death when disregarding the patient's will; but the illness was seen as the cause of death when the doctor had honoured the patient's will.

Whether the physician's behaviour was omissive or commissive did not play a comparable role in behaviour description or causal selection. First, these effects were weaker than those of patient consent. Second, while the effects of consent generalized to medical students and professionals, the effects of commission arose only among lay respondents. In other words, medical students and professionals treated patient consent as the sole basis for the doing/allowing distinction.

Taken together, these results confirm that doing and allowing serve a fundamentally evaluative purpose (in line with the deontic hypothesis and Cushman et al., 2008), and only secondarily serve a descriptive purpose, if at all.

The minimal differentiation between omissive (i.e. WH) and commissive (i.e. MAD) interventions is particularly striking given the importance of this distinction for much existing legislation. Regulation in many countries distinguishes sharply between withdrawing life-saving treatment and euthanasia by appealing to differences in their descriptive characteristics. Yet, participants—especially in our medical sample—treated these interventions indistinguishably, suggesting a potential disconnect between the legal status of end-of-life interventions and prevailing moral attitudes towards them.

At a broad level, respect for the patient's preferences largely determined whether the doctor was viewed as killing the patient. Contrary to Gert and colleagues' (1998) hypothesis, however, this was true regardless of the *form* of the patient's preferences: that is, a patient's desire to end their life determined descriptions of the doctor's behaviour, whether expressed through request or refusal.

4.1 | Limitations

Before turning to our final remarks, we should note some of the limitations of our study. First, the evidence we gathered can help bioethicists understand how as a matter of fact terms like 'killing' and 'letting die' are generally employed. To that end, we have uncovered clear evidence that laypeople's, medical students' and professionals' use of phrases such as 'ending a life' or 'allowing a life to end', 'killing' or 'enabling another's death' primarily reflects a deontic appraisal of the physician's conduct. This, we hope, is a valuable insight into the factors shaping bioethical judgment. However, on its own, this insight cannot guide medical ethicists in determining what we *should* mean by 'killing' versus 'letting die': i.e. namely whether they refer to an action that is immoral versus morally acceptable, commissive versus omissive, or something else entirely.

Second, both lay and medical samples expressed overwhelmingly favourable views about euthanasia (see Supplementary Table A2), which may somewhat limit the generalizability of our findings. As revealed by Cushman and colleagues' (2008) work, opponents of euthanasia likely view doctors as *killing* patients (rather than as *letting* them *die*) even in the presence of explicit consent—which might be expected to weaken the effects of patient consent observed in our study.

Third, although both theory[30] and evidence[31] show that consent is a powerful determinant of the moral status of dyadic acts, in our study we did not explicitly probe participants' moral judgments in each condition, relying instead on consent as a proxy of moral valence.

Fourth, we focused on how participants spontaneously employ terms such as 'killing', 'enabling' or 'letting die'—absent any theoretical definition. As a result, we do not know how participants understood each term in any great detail. Our evidence, however, suffices to affirm that the bipartite distinction pitting 'killing' against 'letting die' appears misguided or, at the very least, incomplete. Echoing previous studies' results on the doing/allowing distinction,[32] participants often prefer to describe life-ending interventions as '*enabling* the patient's death', when afforded this third option. Further research on 'enabling' in end-of-life contexts may bring welcomed nuance to ongoing debates about the distinction between WH-LST and WD-LST.[33,34]

Fifth, our medical sample was not constituted specifically by professionals who have provided end-of-life care. Plausibly, first-hand experience with critical care shapes bioethical judgments in ways that neither the study of medicine, nor medical experience in general could—a hypothesis that we hope to pursue in future studies.

4.2 | Conclusion

When a patient dies at the hands of their physician, determining whether they were killed or allowed to die is of utmost importance. Distinguishing 'killing' from 'letting die' is the cornerstone for an essential *legal* delimitation, specifically, of those medical interventions that should be subject to criminal prosecution. In this paper, our goal was to develop an understanding of the considerations that carve this bioethical distinction in the minds of both the general public and medical personnel.

Some scholars in medical ethics have aspired to define 'killing' and 'letting die' on the basis of constitutive, descriptive properties, namely to distinguish omissive (*letting die*) from commissive (*killing*) life-ending interventions. Our results revealed that this approach is importantly at odds with the ordinary usage of these bioethical

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[30] Hurd, H. M. (1996). The moral magic of consent. *Legal Theory*, *2*(2), 121–146.

[31] Sommers, R. (2019). Commonsense consent. *Yale Law Journal*, forthcoming.

[32] Barry et al., op. cit.

[33] Wilkinson et al., op. cit.

[34] McGee, A., & Truog, R. D. (2019). Withholding and withdrawing life-sustaining treatment and the relevance of the killing versus letting die distinction. *American Journal of Bioethics*, *19*(3), 34–6.

concepts. The descriptive features of a physician's behaviour only weakly determine causal selection and behaviour description. It is its normative (or deontic) features that determine, first, whether the physician is perceived as *causing* the patient's death, and in turn whether they are described as ending the patient's life or merely allowing it to end.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section.

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APPENDIX: STUDY MATERIALS

WITHHOLD (WH)

Doctor 1 is a physician in an intensive care unit. An elderly patient, Patient A, is under Doctor 1's care, suffering a terminal illness. Doctors believe Patient A will die within 6 months. Patient A is able to speak and make decisions, but it is increasingly difficult for Patient A to breathe properly. Patient A needs an automatic respirator (a machine that pumps air into his lungs and helps him breathe) to stay alive. There is the possibility of connecting Patient A to an automatic respirator.

Consent:

Patient A decides that he does not want any of the measures proposed to him and that he prefers to die. He communicates his decision to Doctor 1 repeatedly. Doctor 1 follows the patient's will and does not engage the automatic respirator. The patient dies after about 30 minutes.

No Consent:

Patient A decides that he wants all the measures that are proposed to him and that he prefers to live. However, Doctor 1 believes that these decisions should not be made by patients, so Doctor 1 does not inform Patient A about the different options. Doctor 1 decides on his own not to engage the automatic respirator. The patient dies after about 30 minutes.

El doctor 1 es médico en una unidad de cuidados intensivos. El paciente A, de avanzada edad, se encuentra ingresado en su servicio, con una enfermedad en fase terminal. Los médicos consideran que morirá en menos de 6 meses. El paciente A es capaz de hablar y tomar sus propias decisiones, pero cada vez le cuesta más respirar por sí *mismo. El paciente A necesita un respirador automático (una máquina que bombea aire hasta los pulmones y le ayuda a respirar) para continuar viviendo. Existe la posibilidad de conectarlo a un respirador automático.*

Consent:

El paciente A decide que no quiere ninguna de las medidas que se le proponen y que prefiere morir. Le comunica al médico 1 su decisión en repetidas ocasiones. El médico 1 sigue la voluntad del paciente y no aplica el respirador automático. El paciente muere al cabo de unos 30 minutos.

No Consent:

El paciente A decide que quiere todas las medidas que se le propongan y que prefiere vivir. El médico 1 cree que estas decisiones no deben tomarlas los paciente, de modo que no consulta con el paciente A ni le informa de las distintas opciones. Decide por su cuenta no aplicar el respirador automático. El paciente muere al cabo de unos 30 minutos.

WITHDRAW (WD)

Doctor 2 is a physician in an intensive care unit. An elderly patient, Patient B, is under Doctor 2's care, suffering a terminal illness. Doctors believe he will die within 6 months. Patient B is able to make his own decisions, but he has lost the ability to breathe autonomously. Therefore, it was necessary to hook Patient B up to an automatic respirator (a machine that pumps air to the lungs and helps him breathe). Patient B needs the automatic respirator to stay alive. It is possible to keep the patient connected to the respirator.

Consent:

Patient B decides that he does not want any of the measures that are proposed to him and that he prefers to die. He communicates his decision to Doctor 2 repeatedly. Doctor 2 follows the patient's will, disconnects the respirator, and removes the breathing tube. The patient dies after about 30 minutes.

No Consent:

Patient B decides that he wants to apply all possible measures and that he prefers to live. Doctor 2 believes that these decisions should not be made by patients, so Doctor 2 does not inform Patient B of the different options. Without the patient's input, Doctor 2 decides to disconnect the respirator and remove the breathing tube. The patient dies after about 30 minutes.

El doctor 2 es médico en una unidad de cuidados intensivos. El paciente B, de avanzada edad, se encuentra ingresado en su servicio, con una enfermedad en fase terminal. Los médicos consideran que morirá en menos de 6 meses. El paciente B es capaz de tomar sus propias decisiones, pero ha perdido la capacidad de respirar por sí mismo, por lo que ha sido necesario conectarle a un respirador automático (una máquina que bombea aire hasta los pulmones y le ayuda a respirar). El paciente B necesita el respirador automático para continuar viviendo. Existe la posibilidad de mantener al paciente conectado al respirador.

Consent:

El paciente B decide que no quiere ninguna de las medidas que se le proponen y que prefiere morir. Le comunica al médico su decisión en repetidas ocasiones. El médico sigue la voluntad del paciente, y desconecta el respirador, retirando a continuación el tubo que le daba aire. El paciente muere al cabo de unos 30 minutos.

No Consent:

El paciente B decide que quiere que se le apliquen todas las medidas posibles y que prefiere vivir. El médico 2 cree que estas decisiones no deben tomarlas los pacientes, de modo que no consulta con el paciente B ni le informa de las distintas opciones. Decide por su cuenta desconectar el respirador, retirando a continuación el tubo que le daba aire. El paciente muere al cabo de unos 30 minutos.

MEDICALLY ASSISTED DEATH (MAD)

Doctor 3 is a physician in an intensive care unit. An elderly patient, Patient C, is under Doctor 3's care, suffering a terminal illness. Doctors believe he will die within 6 months. Patient C is able to speak for himself and make his own decisions. Patient C's health is deteriorating progressively, but his physical pain is suppressed through the administration of morphine. It is possible to administer a muscle relaxant and a deep sedation to the patient so that Patient C dies.

Consent:

Patient C states that he finds his situation degrading and prefers to die as soon as possible. So, Patient C asks the doctor: 'Please, administer a substance that brings about my death as soon as possible' and reiterates this request numerous times. A week later, Doctor 3 follows the patient's will, and applies a muscle relaxant and deep sedation. The patient dies after about 30 minutes.

No Consent:

Patient C decides that he wishes to apply all the therapeutic measures that are proposed to him and that he prefers to live. Doctor 3 believes that these decisions should not be taken by patients, so Doctor 3 does not inform Patient C of the different options. A week later, without discussing with the patient, Doctor 3 decides to administer a muscle relaxant and deep sedation to the patient. The patient dies after about 30 minutes.

El doctor 3 es médico en una unidad de cuidados intensivos. El paciente C, de avanzada edad, se encuentra ingresado/a en su servicio, con una enfermedad en fase terminal. Los médicos consideran que morirá en menos de 6 meses. El paciente C es capaz de hablar por sí mismo y tomar sus propias decisiones. Su salud se deteriora progresivamente, pero sus dolores físicos están siendo controlados eficazmente gracias a la administración de morfina. Existe la posibilidad de administrar al paciente un relajante muscular y una sedación profunda para que muera.

Consent:

El paciente afirma que esa situación le resulta degradante y que prefiere morir lo antes posible. Por eso pide a su médico: "Por favor, doctor, inyécteme una sustancia que me provoque la muerte cuanto antes" y repite esta petición en numerosas ocasiones. Al cabo de una semana, el médico sigue la voluntad del paciente, y le administra un relajante muscular y una sedación profunda. El paciente muere al cabo de unos 30 minutos.

No Consent:

El paciente C decide que quiere todas las medidas que se le propongan y que prefiere vivir. El médico 3 cree que estas decisiones no *deben tomarlas los paciente, de modo que no consulta con el paciente A ni le informa de las distintas opciones. Al cabo de una semana, el médico decide por su cuenta administrar al paciente un relajante muscular y una sedación profunda. El paciente muere al cabo de unos 30 minutos.*

Below, you will see two pairs of statements about the situation you just read. Please indicate which one you find most appropriate in each case.

Doctor [#] ended patient [letter]'s life.
Doctor [#] allowed patient [letter]'s life to end.

Doctor [#] caused patient [letter]'s death, not his illness.
Illness, not Doctor [#], caused patient [letter]'s death.

A continuación presentamos dos pares de afirmaciones acerca de la situación que acabas de leer. Por favor, indica cuál te parece más adecuada en cada caso.

El doctor [nº] terminó con la vida del paciente [letra].
El doctor [nº] dejó que la vida del paciente [letra] terminara.

El doctor [nº] causó la muerte del paciente [letra], no su enfermedad.

La enfermedad causó la muerte del paciente [letra], no el doctor [nº].

Indicate which of the following three statements seems most appropriate to describe the situation.

Doctor [#] killed patient [letter].
Doctor [#] allowed patient [letter] to die.
Doctor [#] enabled patient [letter]'s death.

Indica cuál de las tres frases siguientes te parece más adecuada para describir la situación.

El doctor [nº] mató al paciente [letra].
El doctor [nº] dejó morir al paciente [letra].
El doctor [nº] facilitó la muerte al paciente [letra].