

The Equivalence thesis: why timers do not successfully resuscitate the acts/omissions and withdrawal/withholding debate.

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In mid-February 1400, King Richard II is said to have died of starvation in a castle in Northern England. He had been deposed, but the people of England were reluctant to execute the king. Instead of taking action to end his life, they merely omitted to feed him.

The commentators to our target article (Wilkinson et al. 2019) raise a number of interesting practical and ethical objections to the Equivalence Thesis and to our suggestion that the observed distinction between withdrawing and withholding treatment may be a form of cognitive bias (Withdrawal Aversion).

The discontinuity argument

One issue raised by the commentators is whether there is a difference between withdrawal of continuous and discontinuous therapies. McGee and Truog argue that withdrawal of a periodic life-sustaining therapy (LST) (eg dialysis or artificial nutrition) is an *omission*. “[W]hen doctors agree... to discontinue these forms of LST, they are refraining from providing the LST the next time it is due” (McGee and Truog 2019). In contrast, withdrawal of a continuous LST, like mechanical ventilation, is an *action*.¹ Call this the *Discontinuity Argument*.

We share McGee and Truog's view that withdrawal of continuous treatment is unambiguously an action. But if that is the case, does it make an ethical difference? Two commentaries point to the Israeli Dying Patient Law (2005). (Glick and Jotkowitz 2019, Ravitsky and Steinberg 2019) This law distinguishes between continuous and discontinuous treatments; withdrawing discontinuous treatment is permissible because it is regarded as a form of withholding.² Furthermore, the law specifically notes that continuous treatments can be made discontinuous through the use of timers that must be periodically reset. It has been argued that timers on ventilators would be compatible with Halachic approaches to end of life decisions and allow withdrawal of mechanical ventilation. (Ravitsky and Steinberg 2019)

But is this justified?

If withdrawal of discontinuous treatments *is* equivalent to withholding treatment, then timers appear to offer a dramatic solution to the whole issue of withdrawing and withholding. With appropriate safeguards, ventilators, but also ventricular assist devices (Char and Hollander 2019), pacemakers, and implantable defibrillators should have built in

¹ McGee and Truog note that cases of withdrawal of continuous treatment, although actions, are instances of letting die, rather than instances of killing. They would presumably regard the starvation of Richard II as the latter rather than the former (even if it were classified as an omission).

² While the Israeli law holds that it is *permissible* to withhold (withdraw) discontinuous therapies, it does not explicitly state that all instances of withholding are equivalent. For example, someone might believe that there is a difference between deciding not to continue a periodic treatment and deciding not to start a periodic treatment. (It goes without saying, that we reject such a view).

timing devices. There need be no more debate about withdrawing and withholding, since any continuous treatment can be converted to a discontinuous one and hence withheld.³ However, in our mind, there is no intrinsic ethical difference between stopping a continuous or discontinuous treatment. Why do we take this view?

Imagine two patients who are attached to ventilators

Mr C is a ventilator dependent patient whose ventilator operates continuously in normal circumstances. Dr A arrives on Monday morning and disconnects the ventilator. Mr C dies.

Mr D is a ventilator dependent patient whose ventilator requires periodic resetting or it will switch off. Dr B arrives on Monday morning and does not reset the ventilator. Mr D dies.

Two ventilators

The difference between these two cases is that Dr A acts, while Dr B simply omits to act. However, it seems simply a mistake to distinguish between Dr A and B for this reason.

Imagine, for example that in Two Ventilators the doctors are motivated by racism, while the patients have a desire to continue to live. In that case, both doctors should be prosecuted. It is hard to see any plausible reason to judge Dr B less harshly for having failed to reset the ventilator, than Dr A for disconnecting the ventilator.⁴

Importantly, while Dr B omits to act on Monday morning, there is a prior action. Imagine that Mr D had been previously on a continuous ventilator, but over the weekend Dr B, had switched him over to the timed device. If it would be unethical to withdraw continuous ventilation from Mr D, it should be unethical to switch him to a timed ventilator and then omit to restart it (and vice versa).

If all patients in an intensive care unit were switched to a timed ventilator – that should also be ethically unacceptable to those who oppose withdrawal of continuous therapies. Consider the following thought experiment.

Dr X markets a device, the Cardiac-Exit Device (CED), to patients who have been diagnosed with a grievous and irremediable medical condition but are not imminently dying. The CED would be inserted like a regular pacemaker, though would be combined with AV node ablation. The device would replace the normal cardiac pacemaker. It would have no net physiological effect, however, the Cardiac-

³ Paradoxically, the discontinuity argument is self-defeating. The argument is based on the assumption that there is an ethical difference between withdrawing a continuous treatment and withholding a discontinuous treatment. However, since virtually any continuous treatment can be converted to a discontinuous one, in practice, there is no real distinction. That may be that there is no point to converting treatments to discontinuous. (Perhaps it is this that has contributed to the apparent lack of uptake of timing devices on ventilators in Israel since they were first proposed in the 1970s (Barilan 2015)).

⁴ As a parallel, it is hard to see any ethical difference between an execution that killed King Richard II, and an omission to feed him leading to death by starvation. (If it led to greater psychological suffering, death by starvation might be worse than a quicker execution).

Exit Device would need to be reset once a week to continue to be effective. If, at any point in the future, the patient no longer wished to live, they could elect not to reset their Cardiac Exit Device, (and refuse resuscitation) with the effect that they would suffer an asystolic arrest.

Those who support the discontinuity thesis would presumably regard the sale and implantation of the Cardiac Exit Device as impermissible. They would regard it as an act performed with the intent of hastening or facilitating a patient's death. But, if that is the case, surely, they should regard the deployment of timers on ventilators in just the same way?

Whether an artificially administered therapy is regarded as continuous or discontinuous is simply a matter of perspective and scale. Artificial nutrition looks at first glance to be obviously a continuous therapy, but it requires external input to supply the feed, with bags changed at regular intervals. Artificial ventilation looks like a continuous therapy, but requires circuit changes, ventilator servicing, and plugging in of the ventilator to a new power source when the patient is moved.⁵ An implantable defibrillator requires 3-6 monthly servicing and checks and changing of batteries every few years. Any continuous therapy is, at some point, discontinuous, given the need for external input.

Finally, whether a therapy is continuous or discontinuous is a contingent and morally irrelevant feature. Consider the case of life-saving antibiotics. These could be given either as intermittent doses or a continuous infusion. If the doctor decides to give a continuous infusion, then the decision to stop is a withdrawal and an act. If the doctor decides to give an intermittent dosing schedule, the very same decision to stop would be a withholding. But it is the decision to start or stop antibiotics that matters, not the timing of administration or mode of delivery.

Psychological difference

However, even though the discontinuity argument manifestly fails, there is unquestionably a psychological difference between withdrawing and withholding LST. Withdrawal (perhaps especially of continuous treatments) is experienced as emotionally more difficult than withholding. From a practical point of view, there is a need to address this phenomenon. As a number of commentators point out, there is a lack of empirical evidence on how best to do this. As noted by Turpin et al (Turpin et al. 2019), literature on the related sunk-cost bias indicates that some of the distancing strategies we proposed to address withdrawal aversion may be unsuccessful.

One important distinction is between Withdrawal Aversion as experienced by health professionals and Withdrawal Aversion experienced by patients/parents/family members. We need to address these in different ways. Consider another end of life issue in intensive care. Some health care professionals and some family members experience difficulty accepting organ Donation after Cardiac Death (DCD) (Bastami et al. 2013), even in situations where the decision to withdraw treatment is accepted and the patient would have wished to be an organ donor. Health professional reluctance to facilitate donation in such

⁵ Imagine that Dr A, instead of stopping the ventilator, decided not to reconnect Mr C's ventilator to a power source when he was moved between areas of the intensive care unit. Would that be regarded as withholding of a discontinuous therapy?

circumstances should be addressed by education. Professionals should be taught about the ethics of organ donation and should receive training around DCD. Specialist professionals with relevant expertise (for example specialist nurses or doctors in organ donation) should be involved in discussions with families. However, those strategies are not the right ones for addressing family member concerns about DCD. There is a need for trusted health professionals to sensitively explore with family members their concerns, fears and feelings. It may be possible to help family members to accept the decision, despite their reluctance, or it may be that some form of compromise is necessary.⁶ In some circumstances, given the extent of family distress, it may be the wisest course not to proceed with organ donation, even if strictly speaking it would be ethical to do so (Shaw et al. 2017).

Likewise, when it comes to withdrawal aversion, there is a need to pursue different strategies. That should include education of health professionals (as well as the development of those with specialist expertise in end of life decision-making). However, it should also potentially include some of the strategies suggested by commentators to help address withdrawal aversion in families. It is often helpful to seek middle ground, for example No-Escalation of Treatment orders (Batten et al. 2019) (Paris et al. 2017), or reducing the psychological burden on family members by shifting the perceived burden of decisions to professionals (Lantos 2018, Kon and Dudzinski 2019).⁷ Finally, as helpfully highlighted by Rhodes, (Rhodes 2019) taking decisions out of the hands of both bedside staff and families may sometimes circumvent the problem. The development of formal policies and procedures for withdrawal of LST that are “justified, documented, published, [and] transparent”, may help both health professionals and family members to accept the difficult decisions that are inevitable in intensive care.

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⁶ For example, donation of only certain organs, or only tissue donation.

⁷ Indeed, one of us has often used such approaches for families struggling to accept withdrawal of treatment.

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