Reply to Sulmasy/Courtois: Why it is Sometimes *Unethical to Deactivate Cardiac Implantable Electrical Devices*

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In their present piece, Daniel Sulmasy and Mariele Courtois defend Sulmasy's previous work on the killing/allowing-to-die (K/ATD) distinction in medicine, in response to my challenge. I will address their defense by considering the differing character of our claims regarding the nature of the doing/allowing distinction. I will then consider the relative merits of the competing distinctions in our respective accounts—the ongoing vs completed (O/C) and replacement vs substitutive (R/S) treatment distinctions. I will go on to consider the Sulmasy and Courtois counterexamples to the O/C treatment distinction and, finally, the implications of the Sulmasy/Courtois view for medical practice.

Is the Doing/Allowing Distinction Exclusively a Matter of Causal Relationships?

Sulmasy and Courtois suggest that I ignore Sulmasy's view of the importance of intention. This is inaccurate. My difficulty with the Sulmasy account is its implication that in evaluating physician causal relationships to patient death, description is independent of ethical evaluation. Sulmasy's account implies conceptually separate considerations of causal relations and their moral meaning. On his account, we should consider causal relations as matters of natural facts. From said facts, we may determine the proper label for causal relations as "doing" or "allowing." We may then determine the moral valence of agency properly labeled in causal terms as K or ATD from said label and other factors. Sulmasy's definitions may "combine intention and description," as he and Courtois suggest, but the two are conceptually separable in his account; in which causal relations are simply described after which intentions may relate to them.

My contention is that in actual social practices such as medicine, our construals of causal relationships as doing or allowing are not discovered by examining causal relationships. They are stipulated in medicine as in other practices by the way in which norms governing the practice bear on practice-specific facts. I suggested that consideration of the doing/allowing distinction, as drawn in fire rescue triage, bolstered my argument that the way in which lines are drawn between doing and allowing for purposes of bringing the K/ATD distinction to bear is practice-specific. Fire rescue triage is a practice somewhat different than medicine. Per my explication of Burning Building II, firemen may move a net committed to one jumper to save two, *allowing* the first jumper to die. Physicians may not remove a treatment committed to one patient to save two, without having the treatment removal described as killing. The difference follows from differences between the norms of medicine and of the fire rescue triage. A physician-patient

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relationship involves tighter bonds than a fireman-jumper relationship.

In response, Sulmasy and Courtois accuse me of first suggesting an analogy between removing a net from beneath a jumper when there were no others to be saved and the withdrawal of life sustaining treatment in a medical context; and then concluding that because such net removal would be killing, all life-sustaining treatment removal in medicine must also be killing (Sulmasy and Courtois, p. 343). This is indeed an absurd suggestion; but where they see it in what I wrote, I cannot tell. Removing the net without a good reason might indeed be killing; and, similarly, removing life-sustaining treatment in medicine without a good reason might also be killing. But there are good reasons in each practice for removing "a treatment" (a net or a ventilator) that warrant description of the removal as an allowing-to-die. My point was that the reasons differ across practices such that acts similar to treatment removals, in causal terms, might warrant differing descriptions in terms of doing or allowing across practices.

Sulmasy and Courtois resist my analogy of net removal to medical treatment removal in Burning Building II, suggesting that in fact the removal of the net is less similar to withdrawal of life-sustaining treatment than to failing to deploy such treatment. The case, in their view, is simply a case of triage analogous to similar triage in medical circumstances. This view seems implausible to me, and, it would seem, also to Sulmasy and Courtois. They agree, after all, that removal of the net "without good reason" would be "an unjustified instance of allowing-to-die" (I think most would call it killing) (Sulmasy and Courtois, p. 343). They thus appear to view the placement of the net as a commitment to the jumper, just as connecting the oxygen tank to the patient is a commitment to the patient. That the one may be permissibly removed to save two but not the other suggests that my analysis of the case is correct and theirs is faulty.

Ongoing Versus Completed or Replacement Versus Substitutive?

In my piece, I observed that many disagree with Sulmasy's contention that life sustaining CIEDs are best seen as obstacles to a preexisting pathophysiological trajectory rather than as elements in a stable homeostasis (such that interference with them, if life sustaining, would generally be killing). I suggested that the natural facts of the matter did not seem to help in settling this disagreement. Sulmasy and Courtois now suggest that the Sulmasy K/ATD distinction can resist the criticism I leveled against it if account is taken of Sulmasy's preferred way of distinguishing treatments that can sometimes be permissibly interfered with from those for which interference is generally forbidden; the R/S distinction. Substitutive treatments may provide physiological function but do so "distinct from the organism and extrinsic to its function" (Sulmasy and Courtois, p. 342); whereas replacement therapies "participate in the organic unity of the patient as an organism" (Sulmasy and Courtois, p. 341). Substitutive therapies arrest downward pathophysiological trajectories and, are, thus, candidates for deactivation or removal in aid of allowing-to-die. Replacement therapies are elements in a stable homeostasis and are thus not candidates for such interference. Life sustaining CIEDs such as pacemakers are substitutive rather than replacement therapies. Therefore, they may sometimes be permissibly deactivated in patients near death, and such deactivation may then be allowing-to-die. Q.E.D.

The first difficulty here is with the R/S distinction itself. It is unclear that the distinction really separates treatments into intelligibly separate classes. Sulmasy and Courtois now clarify that prosthetic heart valves, vascular grafts, and orthopedic hardware fall on the replacement side of the line between the two kinds of treatments; whereas pacemakers, implantable cardioverter defrillators (ICDs), left ventricular assist devices (LVADs), ventriculo-peritoneal shunts (V-P shunts), and deep brain stimulators fall on the substitutive side. But there is no clear feature of these various treatments that will noncontroversially place them on one side or the other of a line between "part of organic unity" and "not part of organic unity."[1] Sulmasy and Courtois now contend that prosthetic heart valves are replacement treatments (that is, they participate in the patient's organic unity) on the grounds that they "do not require an external power supply, do not need frequent inspection to confirm functionality, and tend to last a long time without renewal. They require almost no physician work, maintenance, or monitoring, and they are integrated into the patient." That description fits a pacemaker shortly after its implantation when it is functioning properly and its battery stores years of life quite well—arguably as well as it fits various other man-made devices that are screwed, sewn, or glued into the body with an intention that they remain there and contribute to physiological function. Sulmasy's initial account of replacement therapies emphasized the degree to which treatments became "a part of the patient's self."[2] While that criterion works well for organ transplants, it is less useful for nonorganic objects or devices that clearly remain distinct from patients even if implanted within them. In now suggesting that the R/S treatment distinction has a gray zone boundary (Sulmasy and Courtois, p. 342) Sulmasy and Courtois can more readily include, as replacement treatments, many that doubtfully qualified as becoming part of the patient's self. But in doing so they open the replacement therapy door to treatments such as pacemakers; which they wish to keep firmly on the substitutive side of the line. As it stands, the R/S treatment distinction has an arbitrary flavor, and it is unclear that the distinction can be clearly and consistently applied by clinicians.

If there appears to be some arbitrariness in the R/S distinction, the reason for that may emerge from considering the R/S distinction's relation to the K/ATD distinction construed as a difference between introducing new pathophysiology and removing an obstacle to preexisting pathophysiology. In medicine, the connection from a death-causing act to the character of actor agency follows from, in part, the character of disease being acted upon. If a death-causing act intervenes upon homeostasis, it is killing (introducing a new pathophysiology). If it intervenes upon arrested pathophysiology by removing an obstacle to said pathophysiology, it *may* be allowing-to-die. But the R/S distinction fails in fit to the distinction between homeostasis and pathophysiology. The essential point about contributors to homeostasis is not organic unity with the organism. It is simply being part of a dynamically stable state maintained by internal regulatory processes.[3] Implanted devices or materials within the body can be just as much a part of homeostasis as body parts fully participating in organic unity. It is likely the implicit recognition of this fact that impels Sulmasy and Courtois to broaden the category of treatments that are "part of the organic unity" of the patient beyond what the category "organic unity" can readily bear.

The R/S distinction is a conceptual misfire in that it overly restricts the set of treatments interference with which may be "introducing a new pathophysiology." The O/C distinction does not. It is ongoing physician agency that precludes an implanted treatment from being part of an internally stable dynamic state and, hence, of homeostasis. The presence or absence of homeostasis attained by an implanted treatment is what the O/C distinction picks out, which the R/S distinction does not.

A possible motivation for restriction of the category of treatments for which interference is impermissible emerges in the ways in which the R/S distinction is brought to bear. Sulmasy and Courtois criticize my view for "restricting the category of permissible ATD to deactivation of treatments that are not 'complete'" (and thus) "condemning patients to experience discomfort and suffering that could otherwise have been avoided" (Sulmasy and Courtois, p. 344). Consigning patients to suffering is, of course, regrettable. The point of the medical K/ATD distinction, however, is to tell us, independently of patient suffering, which instances thereof are candidates for licit relief through physician-caused death by allowing-to-die. If that is so, suffering cannot enter into the valid reasons for preferring one version of the K/ATD distinction over another, however much we may value relief of suffering as an outcome of bringing the distinction to bear. I suggest that the K/ATD distinction in medicine should be shaped exclusively according to whether physician agency in the outcome of patient death is active or passive—apart from how the chips fall when the distinction is brought to bear. With a distinction in place that follows from the character of physician agency as active or passive, we must then minimize suffering as best we can.

Is Interference with "Completed" Treatments Always Killing?

I now turn to what Sulmasy and Courtois deem a fatal objection to my contention that a distinction between ongoing and completed treatments may aid in drawing the medical K/ATD distinction. Sulmasy and Courtois suggest that my account of how the medical K/ATD distinction is typically drawn is rebutted by the way in which physicians view some other medically implanted objects which I did not discuss: deep brain stimulators for Parkinson's disease and ventriculoperitoneal (VP) shunts. Deep brain stimulators and VP shunts are completed treatments in my scheme. Yet physicians sometimes remove them when they are causing burdensome side effects and the patients experiencing the side effects and their physicians prefer burden relief to any life-sustaining function performed by the devices. Insofar as such removals lead to patient death, physicians regard said removals as allowing-to-die. So, not all interfering with completed treatments is killing and the ongoing vs completed treatment distinction therefore cannot serve to underwrite the K/ATD distinction in medicine.

Sulmasy and Courtois have introduced a complication to my account of the medical K/ATD distinction that also affects Sulmasy's. Both can accommodate it. I begin with my version of the distinction. It is quite true that "completed" treatments sometimes become burdensome. Implanted devices become infected and deep brain stimulators have unwanted effects. Sometimes completed treatments in the form of objects implanted into the body have to be removed. When the objects are not life sustaining, there is no difficulty. VP shunts and deep brain stimulators sustain life, if in less immediate ways than life sustaining CIEDs. How might

my account construe their removal? In each case the implanted device is conferring life sustaining benefit but also burden. The physicians and their affected patients prefer burden relief to the benefit, and proceed with device removal. On Sulmasy's account, this is unproblematic as the device is a treatment arresting a fatal trajectory such that removal, insofar as it hastens death, is an allowing-to-die. On my account, these completed treatments underpin homeostasis, so that insofar as they are life-sustaining, removal is putatively positive agency resulting in death and, hence, problematic.

My account would address this difficulty by appealing to the doctrine of double effect (DDE), according to which acts resulting in both positive and negative outcomes may sometimes be permissible if their negative effects are merely foreseen rather than intended. In the cases at issue, the act, interference with a completed treatment conferring burden judged to exceed benefit, is (generally) licit in medicine; the bad outcome of death is not intended as means or end; and the outcome of death is tolerable given the alternatives. Yet what might be called the principle of permissible interference with burdensome but life-sustaining treatments applies to replacement treatments, in Sulmasy's terminology, no less than it does to completed treatments in mine. Transplant teams have intentionally interfered with organ transplants by withdrawing the immunosuppression sustaining them in some cases of graft-induced burden in the form of graft vs host disease (GVHD), even when it is anticipated that immunosuppression withdrawal might precipitate loss of the graft.[4] Sometimes there is a plan to replace a graft rejected in that circumstance but sometimes retransplantation is not possible. The valid generalization would appear to be that treatments of any sort that confer burden disproportionate to benefit may be permissibly interfered with if the intent is burden relief (and if the interference need not be construed as "just" killing the patient; see below). And that in the case of death resulting from such interference, said death may be construed as a side effect of the intended burden relief.

Sulmasy's account stands less in the way of interference with treatments, than mine does, by grouping many implanted treatments with substitution (arrested pathophysiology) rather than with replacement (homeostatic equilibrium). My account, classing some implanted treatments as establishing equilibrium rather than as arresting pathophysiology, must appeal to the DDE for a rationalization of interference with them whereas Sulmasy need not, until interference is contemplated with his more limited category of replacement treatments. I suspect the difference between us lies in where the lines are drawn between competing rationalizations for interference rather than in differing decisions to interfere.[5]

The Implications of Sulmasy's Account of the Medical K/ATD Distinction for Medical Practice

Sulmasy's R/S distinction, when combined to the K/ATD distinction, enlarges the set of patients for whom treatment removal or deactivation may be viewed as possibly permissible allowing-to-die when compared with my O/C distinction. Sulmasy and Courtois approvingly quote the work of clinicians at the Mayo clinic who cite cases of patients receiving LVADs that successfully sustain life and then undergo medical catastrophe unrelated to the function of the LVAD.[6] My analysis, they suggest, might not countenance the deactivation of LVADs in such situations, in contrast to theirs.

On my analysis, to the extent that the LVAD is independent of physician agency and not itself causing a burden, interference with it is active rather than passive physician agency and, hence, killing. The additional suffering implied by my view, in contrast to Sulmasy's view, is unlikely to be substantial. LVAD power supplies need to be renewed frequently and failing to do so (withdrawing physician agency at that point) will effectively achieve the end of relieving suffering in such cases. Of course, most bioethicists would view the possibility of a meaningful moral distinction between disconnecting an LVAD from its power supply and failing to renew that supply when exhausted as a kind of ingenious but ultimately futile casuistry. Those of us wishing to maintain a viable K/ATD distinction in medical practice must, I think, face the fact that such distinctions may be morally important.

Notes

1. Some have suggested that by Sulmasy's criteria, some CIEDs fit the replacement treatment category better than a heart transplant might, given the superior immunological compatibility of CIEDs with the patients into whom they have been implanted. See Rady ML and Verheijde JL Ethical challenges with deactivation of durable mechanical circulatory support at the end of life: Left ventricular assist devices and total artificial hearts. *Journal of Intensive Care Medicine* 2014;29(1):6.
2. Sulmasy DP. Within you/without you: Biotechnology, ontology and ethics. *Journal of General Internal Medicine* 2008;23(Suppl 1):72.
3. *Oxford English Dictionary* "homeostasis."
4. Dunn SP, Krueger LJ, Butani L and Punnett H. Late onset of severe graft-versus-host disease in a pediatric liver transplant recipient. *Transplantation* 2001;71:1483–5.
5. A knottier problem might be treatment interference with which seems to demand construal as killing rather than allowing-to-die, such as a hypothetical total artificial heart (TAH) independent of external power requirements or physician adjustment. Sulmasy might consider such a TAH to be a replacement treatment analogous to an organ transplant. How would he regard explantation of such a TAH if it became irrevocably infected in the absence of a plan for replacement?
6. Mueller PS, Swetz KM, Freeman MR et al. Ethical analysis of withdrawing ventricular assist device support. *Mayo Clinic Proceedings* 2010;85(9):791–97.