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ORIGINAL PAPER

It Takes Two: Ethical Dualism in the Vegetative State

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Abstract To aid neuroscientists in determining the ethical limits of their work and its applications, neuroethical problems need to be identified, catalogued, and analyzed from the standpoint of an ethical framework. Many hospitals have already established either autonomy or welfare-centered theories as their adopted ethical framework. Unfortunately, the choice of an ethical framework resists resolution: each of these two moral theories claims priority at the exclusion of the other, but for patients with neurological pathologies, concerns about the patient's welfare are treated as meaningless without consideration of the patient's expressed wishes, and vice versa. Ethicists have long fought over whether suffering or autonomy should be our primary concern, but in neuroethics a resolution of this question is essential to determine the treatment of patients in medical and legal limbo. I propose a solution to this problem in the form of ethical dualism. This is a conservative measure in that it retains both sides of the debate: both happiness and autonomy have intrinsic value. However, this move is often met with resistance because of its more complex nature—it is more difficult to make a decision when there are two parallel sets of values that must be considered than when there is just one such set. The monist theories, though, do not provide enough explanatory power: namely, I will present two recently publicized cases where it is clear that neither ethical value on its own (neither welfare nor autonomy) can fully account for how a vegetative patient should be treated. From the neuroethical cases of Terri Schiavo and Lauren Richardson, I will argue that a dualist framework is superior to its monist predecessors, and I will describe the main features of such an account.

Keywords Schiavo · Richardson · Vegetative · Laureys · Autonomy · Utilitarianism · Kantianism · Pluralism

A similar, more established quasi-pluralistic framework could be found in the medical ethics literature under Tom Beauchamp and James Childress' *Principles of Biomedical Ethics*. My paper deviates from this text in many ways, but especially in the inclusion of autonomy and happiness as part of ethical theories, rather than guiding principles.

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Presuppositions

In this paper, I will look at two cases concerning neuroscientific practice. In the next section I describe two moral frameworks that are typically used in

addressing these problems, referred to here as the autonomy and welfare-centered approaches. Importantly, my argument for dualism rests on the prior acceptance of at least one of these ethical principles. If the reader is not committed to either, I do not here have an argument against competing theories, such as virtue ethics. Nonetheless, besides being two of the most prevalent moral theories, these two approaches are individually attractive because they use universal principles to determine what sort of action a person should take, which makes them easier to implement than many competing theories. After examining these frameworks and the delineation of states of consciousness, I will apply these to the two case studies. From this, I will show that as autonomy and welfare-centered approaches address different intrinsic values, those ethical problems that involve both values, such as the neuroethical cases that I present here, require both approaches.

Two Moral Frameworks

Although for ethicists this section might appear unnecessary, I want to be as clear as possible about my assumptions concerning the two moral frameworks I am criticizing. Therefore, I will represent the two frameworks in light of three questions every moral system attempts to answer: who it is that deserves moral treatment, how we should treat those who deserve moral treatment, and how to arbitrate between people or groups that deserve moral treatment when few are able to receive it. The two moral theories that I consider offer different solutions to these three main questions. Because both approaches contain intuitive aspects, I will attempt to show the theories in their best light, so that when I show their inadequacy in later sections it will not be for want of generosity to the particular views.

A well-known consequentialist, Brad Hooker, thinks that moral theories compete in virtue of four qualities, including that good theories recommend action in line with our considered moral views and that good "moral theories should help us deal with moral questions about which we are not confident, or do not agree" ([1]). Like Hooker, I take the utility of moral theories seriously, and am largely criticizing the two approaches in this article based on their inability to help us in making a decision in the difficult case of the vegetative state. Thus, although I am not arguing against these two moral theories in general, I am arguing that they cannot help us to make decisions in some cases, whereas a dualist framework can. As neuroethics requires a framework that will help to guide us in difficult cases, I recommend the pluralist approach.

The Autonomy-Centered Approach

Who Has Moral Status?

The first approach that I want to consider is what I will call the autonomy-centered approach. An autonomy-centered moral theory will assign moral status to anyone who is a moral agent. That is, only moral agents deserve moral treatment. What makes someone or something a moral agent differs among theorists that take this approach, but all include autonomy in some form.

All understandings of moral agency cohere in that to be an agent, in general, means to be able to act. The root of the word "agent" is from the Latin word "agito," which means to put in motion or to move. Thus, an agent is one who is able to move or act, and a moral agent is one who is able to move or act morally. This is understood in terms of autonomy: a moral agent is one who has moral autonomy, or the ability to make moral decisions. Differences in the accounts come with this extension of agency to moral agency: some theorists have thought that this requires the capacity to reason, as morality is built from practical reason.[1] Others have thought that agency requires the ability to reciprocate moral action.[2] Most conspicuously, Tom Regan has argued that one need only be the subject-of-a-life to be a moral agent. That is, for Regan, one has to be an experiencing and motivated subject to be a moral agent, but does not have to have reason [5].

In the overly simple form I have given, the first two of these requirements are too strong for a general account of moral agency. The first requires that the

[1] Immanuel Kant is the most notable: see his *Critique of Practical Reason, Groundwork of the Metaphysic of Morals*, and *The Metaphysics of Morals* [2, 3].

[2] See Bonnie Steinbock's "Speciesism and the idea of equality" [4]. Reciprocity here is not to be confused with Kant's reciprocity thesis, as demonstrated by Henry Allison in "Morality and freedom: Kant's reciprocity thesis," where the reciprocity is between the moral law and the ability to reason or act freely.

agent have a conceptual understanding of his or her actions, whereas the second requires that the agent is able to return moral action. However, for someone in a comatose state, for example, we know that the person is not currently able to reciprocate moral actions or to think rationally, but we do not know whether this is a temporary or permanent interruption of agency. Temporary stupor, as in sleep, should not exempt one from moral status. An account of moral agency should take into consideration the potential for moral agency when deciding whether someone or something should count as a moral agent. This addition is not necessary for the third strand of autonomy-centered approaches, as Regan's theory requires only that the moral agent be the type of subject who is capable of having moral motivation, but not that this motivation leads all the way to action.

The practical reason approach may need a second addition to answer the feminist critique of justice-based ethics. Justice-based ethics, in this view, includes all those theories that link moral value to conceptual principles, such as justice. The feminist critique of this type of theory is that it does not include the ethics of care, where the ethics of care can be described as linking ethical action to empathy, rather than reason.[3] Because the motivation for moral action from empathy is an alternative, rationality cannot be an exclusive requirement for moral agency. Animals and humans that are able to empathize but not reason are moral agents, in this view.[4]

Incorporating these worries, the autonomy-centered approach that I consider here requires that to be eligible for moral status one must have the potential to reciprocate moral actions, whether through reason or through empathy. Much of the weight of this requirement hangs on the use of "potential," but I will use it to mean temporal potential, where temporal limitations are not seen as disrupting agency if the agent would otherwise act morally. By using this form of the agent-centered approach, I hope to be assessing the theory at its strongest.

How Should Those with Moral Status Be Treated?

Once the requirements are put in place for moral status, the autonomy-centered theorist has to determine how those persons and things with moral status should be treated. For the two universal theories I consider in this paper, the prescription for moral action follows from the realization of an intrinsic good. The motivation behind choosing an autonomy-centered approach is the intuition[5] that part of what makes an act right or wrong is the will or motive of the actor. Thus, good will is singled out by the autonomy-centered theorist as having intrinsic value, and because the good will has intrinsic value, we should act in a way that protects, preserves, and promotes it. More specifically, we should ensure our own good will and act in a way that respects the autonomy of others, so as to avoid harming their good wills.

Respect, as it is used here, is most commonly understood through reflexivity. That is, in determining how to treat another being with moral status, one should always consider what promotes autonomy and the good will in oneself. This is not the same as equal respect, as there is some standard of what counts as good. For example, someone who treats him or herself poorly should not be understood as acting morally if they treat others equally poorly; there needs to be a minimum standard of respect for something to count as a morally praiseworthy action.

How Should We Adjudicate Moral Dilemmas?

Finally, when acting morally it is essential to protect and promote the autonomy of all the moral agents involved. In the face of an ethical dilemma, we must abstain from any action toward other moral agents that might compromise their autonomy or good will. Although we should try to prevent harm to other moral agents, we should never sacrifice one moral agent for the sake of another, because each is intrinsically valuable.

[3] This critique may be found in much older texts, such as in the writings of David Hume, using different terminology. See his *Treatise of Human Nature*.

[4] Some examples of humans that satisfy these criteria may include infants, brain-damaged adults, or severely deformed adults.

[5] "Intuition is used in many ways, so it is worth describing my own usage: "moral intuition" is considered moral judgment. That is, "intuition" is neither reflex nor unreflective judgment, but a resolution that comes out of a process of reflection.

The Welfare-Centered Approach

Who Deserves Moral Status?

The other type of theory that I consider here is what I dub the welfare-centered approach. "Welfare" is a noun that derives from the Middle-English phrasal verb "wel faren," which means "to prosper." I use the term "welfare" instead of the more usual "happiness" because it captures what I consider the key aspect of the ambiguous latter term. Unlike the autonomy-centered view, in the welfare-centered view, a person or thing has moral status if it is a moral subject.

There are different approaches to characterizing what counts as being a moral subject. In the most widespread view, the ability to feel pleasure or pain, is all that is needed to make someone worthy of moral treatment.[6] In this view, someone should be treated morally regardless of whether he or she is capable of acting morally or having moral motivations: to be worthy of moral treatment one only need be capable of experiencing welfare, which is characterized as pleasure in the absence of pain.

How Should Those with Moral Status Be Treated?

Motivating the welfare-centered view is the belief that only welfare has intrinsic value. This belief comes from the observation that all human desires can be collapsed into an underlying desire to be well or happy. Unlike the autonomy-centered view where each moral agent is one full unit of intrinsic value in virtue of his or her capacity for a good will, in the welfare-centered view the units of welfare can be transferred among individual subjects. Thus, in this view, individuals that would contribute more to the overall welfare (where overall welfare includes the total welfare of all moral subjects) can be given preferential treatment, and individuals who would otherwise take away from the overall welfare can be given sub-standard treatment. In the welfare-centered view, the focus is on the total units of pleasure and pain (the total welfare) cross moral subjects, rather than protecting each individual.

Given this motivation, when deciding how to treat moral subjects in the welfare-centered view one should simply weigh up the total pleasures and pains that will result from different actions. That is, moral subjects should be treated in such a way as to maximize the collective pleasure and minimize the collective pain, which is (it is suggested) equivalent to maximizing welfare. This approach also applies to the moral dilemmas that one might face—when confronted with a moral dilemma, one should always act in such a way as to maximize welfare.

Methodology

While both the autonomy and welfare-centered approaches have intuitive elements, the two cannot be combined in their current state, as each claims the exclusivity of one intrinsic value, welfare or autonomy. One way to solve this issue is to test each theory against particular case-studies in neuroethics. I will analyze two such cases of patients in a vegetative state: Terri Schiavo and Lauren Richardson. Unfortunately, when applied to these case studies, both autonomy and welfare-centered approaches give recommendations that run up against our moral intuitions, though this happens for different reasons in each case.

However, a general problem in testing moral theories with intuitions is that our intuitions can be more sensitive to epistemic gaps than the prescriptions of moral theories; prescriptions for moral action are bound to the present facts and all of their indeterminacy. As will become clear in later sections, to fairly test the prescriptions of moral theories, we require a testing ground where intuitions are not likely to go awry from the present facts. In Terri Schiavo's case, we have negative intuitions about the prescriptions of the happiness and autonomy-centered approaches. However, because of an epistemic gap in verifying the absence of consciousness, we don't know if these intuitions are faulting the moral theories or if we are holding onto a sliver of hope (despite the reported facts) that Terri Schiavo is conscious. Given this epistemic gap, Terri Schiavo's case would seem to be a poor test of these theories, testing them only against the presently given facts and thus suggesting merely skeptical dualism: dualism until we have a better understanding of the vegetative state. To show that the vegetative case suggests more than skeptical dualism, I present the case of Lauren Richardson.

[6] Jeremy Bentham, John Stewart Mill, and Peter Singer are all famous for holding this view. See Peter Singer's *Animal liberation: a new ethics for our treatment of animals* [6].

Lauren Richardson's case is a fairer test for our intuitions because it takes the focus off the epistemic gap by avoiding it. Due to new developments in medicine, I present Lauren Richardson as having the potential for consciousness. Because Lauren Richardson was previously conscious, there is an epistemic asymmetry between showing that she has the potential for consciousness and showing that she has no such potential that is not present in the establishment of potential consciousness in a robot, for example. In Lauren's case, the prescriptions of the two moral theories do not rely on negative medical proclamations of Lauren's status in a way that flags our moral intuitions. Even so, I will show that the autonomy and welfare-centered approaches fall short of supplying adequate justification for her treatment. Thus, even admitting an epistemic gap that could affect our judgment of the Terri Schiavo case, I contend that because of new medical findings (which will be explained in later sections) we can avoid that gap and use a more powerful test case for the welfare and autonomy-centered approaches in the case of Lauren Richardson.

Delineating States of Consciousness

As with ethicists and the previous section on moral frameworks, experts in consciousness studies will probably find this section unnecessary, but I present it so that my assumptions about states of consciousness are clear. There are three states of consciousness that are crucial to understanding the importance of these cases: vegetative, minimally-conscious, and locked-in. Many brain injuries start off in the comatose state and progress to brain death, the vegetative state, the locked-in syndrome, or into chronic coma. From the vegetative state it is possible to proceed to a minimally conscious state [8]. Two dimensions can serve to distinguish these states of consciousness with the exception of locked-in syndrome, which is an outlier[7]: the level and content of consciousness. The level of consciousness indicates how awake a patient is from deep sleep to alertness, whereas the content of consciousness marks patient awareness, from insensibility to perceptivity. A coma is at the bottom of both dimensions, as a patient in a coma is neither awake nor aware. Conscious wakefulness is at the top of both scales, as it involves both awareness and wakefulness [9].

The vegetative state is clinically characterized by wakefulness without awareness. That is, unlike in the comatose state, the vegetative patient has patterns of sleeping and waking, eye movement, facial expressions, vocalizations, and some stimulus response. However, because the vegetative state is neurologically characterized by loss of the cortices, which seem to be required for conscious experience, all of these actions are undertaken without awareness or cognition; they are reflexive actions instigated by the brain stem. The actions of someone in a vegetative state are distinguishable from those of conscious patients by their irregularity and inconsistency [13]. By definition, therefore, those in the vegetative state are unable to experience or act voluntarily [12].

Some of those in the vegetative state progress into the minimally conscious state, characterized by wakefulness with some awareness, but these states are very difficult to tell apart. In fact, a London hospital reported that forty-three percent of its forty patients diagnosed as being in a vegetative state were misdiagnosed and in fact conscious [11]. Sixty-five percent of the misdiagnosed were blind or severely visually impaired [11]. One reason for the misdiagnosis in the case of the blind is the requirement of visual tracking as an exhibition of awareness.[8] This is one of the easier tests to administer and is also a good way of ensuring that the patient is not in the locked-in state, as will be shown further on, but commonly misdiagnoses minimally conscious patients who are also blind [12].

The minimally conscious state exhibits inconsistent evidence of awareness because the patient is easily exhausted and comes in and out of states of awareness. Clinical criteria include the reproducible following of commands, "yes" or "no" responses, intelligible verbalizations, or repeatable voluntary behavior that is relevant to the stimuli [10]. Neuro-

[7] Locked-in syndrome is a syndrome of the expression of consciousness, not of consciousness itself, and so it cannot be distinguished from healthy patients with this scale.

[8] The majority of hospitals in the United States and Europe use the Glasgow Coma Scale to diagnose patients. This scale, set up in 1974, uses observations of the eyes, motor function, and verbal ability to categorize patient, where the proper functioning of all three of these is necessary for being classified as fully conscious [12].

logical differences with the vegetative state include a more global brain reaction to stimuli: one study showed that sound stimuli activated many areas of the brain for patients in the minimally conscious state, whereas in vegetative patients these activated only the areas needed to process sound [13]. Likewise, those in the vegetative state show only limited brain activation in response to pain, whereas minimally conscious patients have more wide-ranging activations like those of healthy patients [14].

The locked-in syndrome is a near reversal of the clinical and neurological symptoms of the minimally conscious and vegetative states: the patient is entirely consciously awake and aware, but generally unable to move or control the body with the exception of eye movements. Unlike the vegetative and minimally conscious states, the patient's brain stem and mid-brain, which serve as the gateways to bodily function, are damaged, whereas the cortices are left intact [8]. Many patients in the locked-in state communicate through blinking the eyelids, and one such patient was even able to write a book this way.[9] Thus, persistent eye-tracking is a good way of differentiating those in the locked in state. However, a more reliable assessment of consciousness that would help separate these three states would be to give patients brain scans while undergoing a mental imagery task [9]. This was undertaken by Adrian Owen et al., who purported to show that some patients diagnosed as vegetative responded when given commands to imagine playing tennis by activating their motor cortex [16]. This appears to show that the study of brain imagery can make finer distinctions than clinical diagnoses, as brain scans showed these patients to be in a minimally conscious state, despite their vegetative status.

Case One: Theresa Marie "Terri" Schiavo

The case of Terri Schiavo was so widely publicized that there are many written accounts of her predicament. However, I have found that many of these documents involve contradictions and confusions, and thus a restating of the factual knowledge (as given in the court documents) is essential to clarifying her case.

Theresa Marie Schiavo was twenty-seven years old when in 1990 her heart stopped supplying sufficient blood to her brain for about an hour, and she went unconscious. The cause of this event is undetermined, according to her autopsy report in 2005 [7]. Due to the lack of oxygen being supplied to her brain, many areas of her brain suffered damage. In fact, at the time of her autopsy, fifteen years after the injury, her brain had atrophied to half the size of a normal brain for a woman of her age, and about three-quarters the size of the brain of a woman in a similar state of consciousness for a similar amount of time [7]. The size of her brain indicates the extent of damage, which involved nearly all of the cortical areas including the visual cortex, the loss of which rendered Terri Schiavo blind. The state of her brain was consistent with her being either in a persistent vegetative state or in a minimally conscious state, and the determination between these could only be done clinically, according to the autopsy report [7]. That is, post-mortem research was not able to distinguish between these two states by examining the brain alone due to the fact that the minimally conscious state had, at the time, only recently been defined in the literature and only in terms of clinical difference, where clinical diagnoses are made with respect to the functionality of the brain rather than to its structure.

One part of the difficulty in the Terri Schiavo case was determining whether she was in a vegetative or minimally conscious state. Given the definition of these three states of consciousness, it is clear that distinguishing between the three would be difficult even for an experienced doctor. It is no surprise, then, that doctors sometimes disagree about the medical status of their patients. Terri Schiavo is one such controversial case. Able and experienced doctors claimed both that she was in a persistent vegetative state with no chance of improvement and that she was in a minimally conscious state and may benefit from new therapies [17]. As mentioned above, the neurological evidence from the autopsy does not establish Terri Schiavo's condition as either vegetative or minimally conscious. However, the autopsy does establish that the damage was in the higher cortical areas, which rules out locked-in syndrome and the possibility that Terri Schiavo was fully conscious but unable to communicate.

[9] Jean Dominique Bauby's *The Diving Bell and the Butterfly*, a translation from *Le scaphandre et le papillon*, was published in 1997 by Random House two years after his stroke [15].

In Terri Schiavo's case a legal dispute ensued over her status and care. On the one side, her husband, Michael Schiavo, had petitioned the court to act as a temporary guardian and decide the fate of Terri Schiavo based on the evidence it received. The court ruled that Terri Schiavo would have wished to refuse medical care in the case that she was on artificial life support without probable recovery, based on verbal evidence given by Michael Schiavo, his brother, and his sister-in-law [18]. Terri Schiavo's parents, Robert and Mary Schindler, opposed this motion and appealed to overturn it, citing evidence both that Terri Schiavo did not believe in ending life through the removal of life support and that she was, in fact, in a minimally conscious state [19]. The case of Terri Schiavo became a legal dispute over whether Terri's supposed desire to refuse treatment was trumped by her alleged emergence into a minimally conscious state. Michael Schiavo ultimately won the legal battle and Terri Schiavo passed away in March of 2005.

Terri Schiavo's case has an ethical dimension that is relevant to the cause of finding a neuroethical framework: it involves both her wishes as an autonomous agent and her status as a sentient being. Judge Greer argued that Terri Schiavo's wishes were clear—she did not want to live in the case that she would be artificially supported without the chance for recovery. Moreover, Greer argued that the medical evidence pointed to the latter condition being fulfilled, allowing for the termination of Terri Schiavo's treatment.

Terri Schiavo's and the Autonomy-Centered View

The part of this story that is relevant to the autonomy-centered theorist is the debate about what Terri Schiavo wishes. The first ruling was in favor of Michael Schiavo and against the Schindlers on the grounds that Terri Schiavo would have wished to end treatment in the given situation. Thus, it appears that autonomy, as it is legally defined, had the leading role in this trial. If one wanted to bring this first debate into an ethical setting, one might claim that the moral notion of autonomy is the most relevant to the case, and thus that an autonomy-centered framework is preferable for its analysis.

Of course, respecting moral autonomy, as defined above, does not simply mean respecting one's stated wishes, as it might in the legal setting. It does mean allowing for self-determination, so far as it lines up with rationality. The wishes should not be supported, in this system, when they involve acting in a way that harms our own autonomy (by acting akratically, or against our own best judgement) or the autonomy of others (by supporting their akratic behavior, or by failing to allow them to act in line with their best judgement). Thus, to treat Terri Schiavo appropriately in this framework is to support and not hinder her autonomy or good will while also acting according to our own autonomy or good will.

One objection to this idea is that Terri Schiavo no longer had the potential to be autonomous (even if she was minimally conscious). Because of this, she did not fit into the requirements of the autonomy-centered framework outlined above: according to the doctors assigned to her case, Terri Schiavo did not have the potential for conscious experience, and thus could not have been considered a moral agent. In this case, considerations of her autonomy should not apply.

There are a couple of unsatisfactory ways to try and solve this difficulty. One is to say that to address Terri's autonomy is to respect her past moral self or the memory of her autonomy. However, respecting the memory of someone's autonomy dilutes the mandate to respect actually autonomous beings, as respecting all past autonomies would grossly inflate our moral sphere. That is, if we had to take into account the wills of every past being in the same way that we take into account currently autonomous beings, we would run into a cobweb of moral dilemmas that run counter to the spirit of the autonomy approach.

A second approach is to redefine respect for Terri Schiavo's autonomy as respect for the autonomy of those who surround and love her. In the legal setting, this approach would not have helped to decide her fate as the wishes of those who loved her ran contrary. In the moral setting, this sort of debate could presumably be solved because autonomy is defined with respect to a universal standard, rather than mere whims and wishes. Even in the moral setting, though, it would be difficult to establish just what sort of treatment would best respect the autonomies of those surrounding Terri Schiavo, as the controversies surrounding the interpretation of Kant's view on animals and children attest. Furthermore, this approach is unsatisfactory for the same reason that the

treatment of animals in Kantian theory is unsatisfactory: it seems that Terri Schiavo deserves direct, rather than indirect, moral status because the latter is circumstantial. The intuition that Terri deserves moral treatment is not simply reducible to a psychological predisposition or failure of rationality as it is, perhaps, with intuitions about the dead having moral status: the intuition in Terri's case is that there is a moral level between autonomous agent and rock that is not represented in autonomy-centered theories.

Neither of these solutions fulfils the criteria of helping us to make moral decisions in difficult cases: one option leads us to inflating our moral sphere beyond what we can warrant, and the other leads to a moral impasse where we cannot decide which treatment of Terri Schiavo would best respect those surrounding her. In other words, even if there were a clear way of respecting the autonomy of those who love her, it is counterintuitive to respect Terri Schiavo simply by respecting those who love her; it seems that Terri herself deserves moral treatment, even when in the vegetative state. Either way, the autonomy-centered theorist has not given us a satisfactory way of dealing with patients like Terri Schiavo.

Terri Schiavo and the Welfare-Centered View

After Terri Schiavo's wishes were established by the courts, the debate over her treatment turned to her ability to experience pleasure and pain. The Schindlers countered the ruling to remove Terri Schiavo's feeding tube with purported evidence of Terri Schiavo's sentience on film. The Schindlers were claiming that Terri Schiavo had the capacity to experience life, which would trump the court ruling because Terri's purported wishes only covered the non-sentient condition. Despite these claims by the Schindlers, the doctors working with Terri Schiavo argued that because of the extent of damage to her brain, Terri Schiavo was unable to have conscious experience.

If the welfare-centered theorist wanted to establish the priority of their view in the Terri Schiavo case, they would have the same problem of establishing that Terri Schiavo has sentience, at least in latent form. While this is still in dispute among cognitive theorists, the prevailing view at the time was that Terri Schiavo did not have the capacity for sentience. This does not exclude the welfare theorist, though, because moral calculations include the welfare of all sentient beings, and as Terri Schiavo's treatment may have an affect on the welfare of others, it should be considered. The welfare-centered theorist weighs the many pleasures and pains potentially caused by the different options to determine which action would bring about the most welfare—in this case, the elongation or termination of Terri Schiavo's treatment.

Unlike the autonomy-based theorist, the welfare account has a straightforward way of determining the relevant affect of Terri Schiavo's treatment on others. Like the autonomy-centered theorist, though, the welfare-centered theorist faces the obstacle of moral intuition: an objection to this approach is that it gives no limitations on how to treat Terri Schiavo if she cannot experience pleasure or pain. Just as in the autonomy-centered case, there is a lingering intuition that there is a moral difference between a nonsentient but living human and a rock. There seems to be some remaining value or dignity to Terri Schiavo, even if forever non-conscious, that distinguishes her from an already dead one. Of course, it is difficult to tell if this intuition has any justification. One can, of course, imagine a fictional scenario where a group of people develop an unhealthy obsession for Terri Schiavo's case and, convinced that she is conscious, insist on dressing her up and wheeling her around to various formal dinners, tea parties, talks, etc. to make her case. One might object to such activity being sanctioned by the welfare-centered theorist (in the case that there is an at least mild benefit to total welfare), but this is just to object to the central idea that the welfare-centered theorist holds: only welfare, not autonomy, (expressed here as a preformed request to refuse treatment) has intrinsic value. Thus, if one takes issue with the vegetative case, it is because of distrust in the claim of exclusive intrinsic value.

A Summary of the Two Approaches

Neither the autonomy nor welfare-centered theorist gives us a satisfying account of how to treat patients who do not have the capacity for consciousness. Both accounts collapse into different forms of benefiting the collective. These solutions arise from Terri Schiavo's particular status as being in a persistent vegetative state, which means that she has no capacity for consciousness, and thus for neither autonomy nor sentience. In conclusion, Terri Schiavo would not have been given moral treatment in either of the moral frameworks that I have surveyed.

Perhaps one thing pushing our moral intuitions against these moral frameworks in Terri Schiavo's case is the question of whether she is really in a persistent vegetative state. Despite the doctors' assurances to the contrary, we may retain doubts as to Terri Schiavo's status because of the gross epistemological limitations in determining her state. This doubt would be warranted as many diagnoses of persistent vegetative state have been incorrect, especially in the case of blind patients, such as Terri Schiavo. Furthermore, because the minimally conscious state is still in its beginning stages of clinical diagnosis, we cannot be sure that the analysis of a few doctors is correct, especially when their findings are disputed. Thus, one source of our moral repugnance may be our fear that Terri Schiavo was, or had the potential to be, a conscious being who deserved our moral respect. It may be because we are not sure about Terri's status, given the epistemological gap, that we are unsatisfied with the suggestions for her care supplied by the autonomy and welfare-centered moral frameworks. If this doubt hinders our ability to fairly judge these moral frameworks, then we need a case where the patient has the potential for consciousness to determine their plausibility. Lauren Richardson is such a case.

Case Two: Lauren Marie Richardson

The case of Lauren Marie Richardson is much like that of Terri Schiavo: about a year after Terri Schiavo's death, Lauren overdosed on heroin at the age of twenty-one while pregnant, and emerged from her coma into a vegetative state. The mother and guardian of Lauren Richardson, Edith Towers, claims that Lauren had stated her wish to end treatment if she had no chance of recovery. Lauren's father, Randy Richardson, is using the full force of the epistemological gap together with new medical evidence to show that Lauren Richardson has a chance at recovery.

Some of the evidence presented by Randy Richardson was not available at the time of Terri Schiavo's ruling. Most powerful is the reversal of the persistent vegetative state for Amy Pickard, a South African woman who also overdosed on heroin while pregnant, by giving Amy a sleeping pill, Zolpidem. Amy Pickard is now able to stand and breathe on her own, and appears to be conscious of her surroundings [20]. Thus, a similar treatment for Lauren Richardson could result in her safe removal from artificial life support, negating the application of her stated wishes.

The autonomy-centered theory, at least the way that I have characterized it, would be able to include Lauren Richardson as someone who deserves moral status because she has potential moral agency. Thus, according to this theory, we should always act in a way that respects Lauren's autonomy. However, the autonomy-centered theorist is faced with a new layer of epistemic difficulty: not whether the patient is conscious or not, but the content of the patient's consciousness. This is the difficulty of figuring out what Lauren's autonomous wishes are (or should be) in the current case. One apparent option would be to respect Lauren's past stated wishes, which, according to her mother, were to be taken off of any form of life support. If these wishes apply to Lauren's case, this could be enough reason to grant Lauren Richardson a reprieve from medical care. However, first, when Lauren made this decision she was probably unaware that she could be in a condition of requiring life support as a temporary measure and, second, even if Lauren had given an applicable directive respecting Lauren's autonomy seems like it would be better carried out by waiting until she is able to express her autonomy. We would certainly wait if someone were asleep or was temporarily paralyzed, which are morally similar cases in this framework. Thus, the autonomy-centered theorist is either stuck making an uncertain decision or in a moral standstill until patients like Lauren "wake up".

The welfare-centered theorist would decide how to treat Lauren with the same procedure used in Terri's case: solely on the basis of how much pain or pleasure would result from each treatment. The welfare-centered theorist is not concerned with Lauren Richardson's stated wishes but with maximizing welfare, which may or may not require respecting Lauren's wishes. In other words, if Lauren were a practicing Catholic, like the family of Karen Quinlan who found even life-saving technology repugnant in certain cases, her wishes to be removed from medical care could be ignored by the welfare-centered theorist. For the same reasons given above, although the welfare-centered theorist has a more straightforward method for solving ethical cases, it is one that runs contrary to our actual moral views: that how we

live our lives should be, at least in some cases, up to us.

The case of Lauren Richardson shows the tension between the autonomy and happiness-centered theorists in a crisper light: the autonomy-centered theorist is sometimes left without a moral judgment in cases where one seems necessary, either because the subject is left out of the moral equation or the equation is just too difficult to determine; whereas the welfare-centered theorist always has a moral judgment but welfare's reach extends beyond the scope that we would grant it. That is, the autonomy-centered theory does not say enough, whereas the welfare-centered theory says too much. These problems with the individual theories have been brought up long before this paper, notably in the issue of animal rights, but I find that the vegetative state provides a case that more lucidly exposes the insufficiency in the monist accounts. However, when considered together in a dualist framework, I will argue, the deficiencies of these theories balance out.

Ethical Dualism

Ethical dualism asserts that there is more than one type of intrinsic value, and that these intrinsic values should be implemented depending on the context of the moral decision. Importantly, these intrinsic values are irreducible to each other because they are on parallel scales of measurement, much like the purported dualism of mental and physical properties, and thus they cannot be directly compared. If there were a mother-of-all-values that encompassed both autonomy and welfare, then the two could be compared on that scale, but I suggest the implementation of dualism until such a value is discovered. Thus, the dualist's greatest problem is to explain how irreducible intrinsic values can be used together in an ethical theory, particularly when they appear to give different suggestions for the same moral situations.

Using this approach of ethical dualism, a new neuroethical framework could include both autonomy and welfare-centered views. Enticing about the autonomy-centered view is the respect for others as autonomous agents, rather than as vessels for our own interests. Enticing about the welfare-centered view is the focus on what seems to be the most basic value for humans: welfare. A dualist framework recognizes the value of including both while allowing each their own domain: the autonomy-centered view would apply to all of those creatures with both autonomy (or potential autonomy) and sentience (or potential sentience), and the welfare-centered view would apply to all of those creatures with sentience alone. Those creatures, if any, who have autonomy without sentience are not included in my view. This may seem contradictory as it indicates (accurately) that in my view, autonomy without the potential for experiencing welfare is not valuable, giving priority to welfare. However, I hold only that the ability to experience welfare is a precondition for the value of autonomy, and not the basis of its value in a way that would make autonomy reducible to welfare.

Who Has Moral Status?

When considering whether someone has moral status in ethical dualism, one should use the weaker of the two requirements: the subject must be sentient, or able to experience pain and pleasure. If the dualist includes all those with sentience, they can be sure that both classes covered by the dualist framework have full representation.

How Should Those with Moral Status Be Treated?

When deciding how to treat a being with moral status, it is important to first take into account the relevant sphere: if the creature is able to have pleasure and pain but is not autonomous, its autonomy need not be taken into account, and all decisions can be made with respect to welfare. If the creature is autonomous, then both its welfare (as part of the total welfare) and its autonomy (as one of many with autonomy) should be considered, depending on the relevance to the case at hand.

In Lauren's case, she has moral status because she has some potential for consciousness, and thus both autonomy and sentience. Although Lauren Richardson cannot express her autonomy, she is not in moral limbo because her status as a potentially sentient being is still intact. That is, we know that Lauren is both potentially sentient and potentially autonomous, but although sentience can be respected in a general way, respect for autonomy requires particular directives; because we do not have an applicable mandate for Lauren about refusing care, and we have no way

of knowing when we will receive new information from Lauren about her own wishes, we must minimally treat her as a being with sentience until we have some indication of her particular autonomous wishes. Importantly different from the welfare-centered view, this view covers the case in which Lauren Richardson is able to express her views (or in which her past expressed views apply). Thus, the problems with Lauren being outside of the directives of moral law (from the autonomy-centered theory) and with her wishes being cast aside (by the welfare-centered theory) are both answered by an approach that takes into consideration both her autonomy and the general good.

How Should We Adjudicate Moral Dilemmas?

One problem with this approach is determining which of the two values, autonomy or welfare, will win out when the two are in conflict. As stated above, the two intrinsic values are irreducible, which means that they cannot be compared on the same scale of measurement. However, they can be assessed as more or less pragmatic for the case at hand. In many cases, when the patient is able to express his or her own autonomy it should trump assessments of welfare: while respecting autonomy can add to an individual's welfare, the opposite is less likely to be true (taking away autonomy is more often contrary to the welfare of the individual). So long as there is a margin of error in assessing anyone's welfare, it makes pragmatic sense to side with his or her autonomous wishes.

Against dualism, there are clear cases where both autonomy and welfare can be sacrificed for the sake of the other. For example, autonomy can be at least partially sacrificed for general welfare when it is destructive either of itself or of the autonomy of others (such as for sex offenders or heavy drug users); welfare can be at least partially sacrificed for autonomy if the payoff to welfare is small and the demands on autonomy are large (such as for scapegoats). Thus, the "kinks" of moral dualism have yet to be fully worked out, but I contend that its ability to supply us with moral directives, at least in the vegetative state, is superior to that of the monist approach.

I view dualism as a necessary compromise between two views that do not properly capture our ethical interests: both autonomy and welfare-centered views fall short when we look at fringe cases, such as those found in consciousness studies. Thus, some compromise is required, and dualism seems to me to be the best option.

In Sum

The cases of Terri Schiavo and Lauren Richardson force us to review our acceptance of exclusivity when applied to either autonomy or welfare; our moral intuitions in both cases balk at the advice of these theories. However, Terri Schiavo's case is a lesson in the fair use of moral intuition as a testing ground for moral frameworks: this case demonstrates the need for epistemological certainty with regard to ascribing the persistent vegetative state, rather than the minimally conscious state, to injured patients. This need comes about because our role as arbiter of the patient's particular will relies on the patient having no potential for recovery from the vegetative state. In this case, our moral intuition may simply be resisting the medical advice that Terri Schiavo has no hope for recovery. In the Lauren Richardson case, we are free to forget these worries as we assume that Lauren Richardson has the chance for recovery, and is thus is a positive test case for the autonomy and welfare-centered theories. In the Lauren Richardson case, however, we find the same problems arising: autonomy-based theories do not cover enough moral ground, and welfare-based theories allow too much.

To solve these problems, one need only take on the suggestion of ethical dualism: dualism combines these theories by taking on both intrinsic values. By using both intrinsic values, the faults of each theory are checked by the other. Autonomy-based theories are no longer forced to choose one of two extremes (moral status as all or nothing) because a human or animal can have one of two levels of moral status, sentience or autonomy. Similarly, welfare-based theories are no longer bound to the limitless control of welfare: the importance of autonomy keeps in check our ability to use individuals relentlessly. Thus, autonomy and welfare, when used in a dualist approach, serve to balance each other in a way that pushes the concerns raised by the vegetative state back onto reasonable moral ground.

In conclusion, I propose an adoption of this dualist framework into neuroethics to facilitate the identifi-

cation and solution of problems in this field. Although I have only shown that this framework seems to eliminate the problems raised by autonomy and welfare-based theories for the vegetative state, and not that it either solves all such ethical problems nor that it supersedes all other ethical theories, I find it to be the most practical and plausible ethical account to date, and the framework that is already in de facto use by many bioethicists.[10]

[10] After this paper was written, the State of Delaware's 144th General Assembly resolved "that it is against the public policy of this State and this State's interest in life, health and safety, for hydration and nutrition that is not harming a patient to be involuntarily removed from a non-terminal, apparently brain-incapacitated patient if doing so will cause the individual's death. Furthermore, such withholding of hydration and nutrition without: 1) clear written direction from a legally competent patient or, 2) a valid written advance health-care directive that was previously executed by a patient who is now incapacitated and that either allows such withholding under such circumstances or grants an agent authority to make that decision by an incapacitated patient is also against the public policy of the State of Delaware," officially protecting Lauren Richardson's life, at least for now.

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