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Case study: Ethical and Legal Issues in Human Machine Mergers (Or the Cyborgs Cometh)

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Although I consider myself to be a bioethicist, healthcare ethics educator, counselor at law and consultant, prior to returning to an academic setting, I practiced as a trial attorney with an emphasis in patient advocacy, bioethical, and biotechnology issues. I currently hold a faculty appointment at the Alden March Bioethics Institute, Albany Medical Center; I am also a Fellow at the Institute for Emerging Technologies and a Fellow of the American Bar Foundation. My other honors include an appointment as a Senior Fellow at the American Medical Association's Institute for Ethics, and being named a Women's Bioethics Scholar. My research encompasses the legal, ethical, and social impact of emerging healthcare technologies, and evolving notions of legal personhood.

I would like to thank my co-counsel, Mark Senter of Dallas, Texas for his amazing lawyering skills, negotiation tactics and confidence; and I would like thank our client, Mr. Collins, who so graciously agreed to be the subject of discussion in this article.

I. INTRODUCTION

In this article, I give a real-life case study (in which I was an attorney of record) where human machine mergers bring up several legal and ethical issues, including disability rights. I review some of the literature on this and discuss different practical ways practicing attorneys may approach the issues. The names have been changed to protect the privacy of the parties.

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II. MR. COLLINS

A. *Background*

Mr. Collins is a 6 foot, 6 inch, 63-year-old disabled Vietnam veteran; he is an incomplete quadriplegic and classified as 100% disabled. He has had several laminectomies and spinal fusions from C-2 to C-6. In other words, he has no functional use of either of his legs and his left arm, and very limited use of his right arm. He requires assistance to perform bathing and lower body dressing functions, for bowel and bladder care, and for transfers. He cannot use a manual wheelchair for any significant length of time, because his condition is such that if he should slip in his chair, he could fall into a position where he would be unable to breath. He is dependent upon a fully functional powered mobility assistance device (“MAD”), which can recline and protect him against hypotensive episodes and protect his legs from dragging along the ground. Because Mr. Collins acquired this injury in service to his country, the Department of Veterans Affairs (“VA”) has provided him with a MAD specifically designed for him.

In October 2009, Mr. Collins was a passenger on a Allways Airlines flight from Miami to San Juan, Puerto Rico. His MAD, which weighs approximately 450 pounds, was damaged in transit. When Mr. Collins was given his chair, it was no longer functional. The personnel from Allways Airlines were very apologetic and explained that the chair must have been dropped accidentally; they reassured Mr. Collins that his “wheelchair” would be fixed promptly. It wasn’t until December 2010 that an engineer hired by Allways Airlines examined the MAD and condemned it. Mr. Collins did not receive his replacement MAD until October 1, 2010, eleven months later. He is confined to his home and essentially bedridden for eleven months.

B. *Seeking Compensation for Damages*

When Mr. Collins files a claim with Allways Airlines, he requests compensation for out-of-pocket costs during his eleven-month confinement. The adjuster for Allways Airlines, at first, denies the claim, stating that this was a baggage claim incident and that Mr. Collins was not entitled to any compensatory damages. The adjuster offers a free round trip ticket from Puerto Rico to anywhere in the continental United States. Mr. Collins declines to accept this offer.

In a letter to the adjuster, Mr. Collins’ counsel explains that Collins had been living a fairly independent life until this incident. He was able to transport himself and run daily errands such trips to the pharmacy, supermarket, post office, and banking, and counsel attaches a photograph of Collins running errands, traveling on a local roadway prior to October 2009.

The letter goes on to explain that because of his lack of mobility, Mr. Collins had to hire local people to run his errands for him. Counsel provided breakdown of the costs that were incurred due to his lack of access to his fully functional MAD, including trips to the supermarket, pharmacy, post office, and bank. Mr. Collins' expenses increased between three hundred and four hundred dollars per week, an amount that was untenable considering his fixed income of veterans' disability.

In addition to the out of pocket costs, Mr. Collins suffered decubitus ulcers because of being bedridden for eleven months, and sought compensation for pain and suffering.

C. Legal and Ethical Arguments

Allways Airlines did not challenge liability; they accepted that there was negligent handling of Mr. Collins equipment. What Allways did challenge were the damages and the foreseeability of damages. They likened the circumstances to an automobile accident where the owner was not in the vehicle; they argued that they did not harm Mr. Collins, they only damaged his device. And since the device was replaced by the VA (albeit eleven months later), Mr. Collins' damages were minimal. Allways offered fifteen hundred dollars in compensation.

Educating the adjuster proved to be a challenge; she was not aware of the difference between a wheelchair and MAD. She kept asking why Mr. Collins could not use a manual wheelchair. Finally, after a video demonstration of the extensive differences, the adjuster began to realize the sizeable difference and impact. The video demonstration also helped to explain that the MAD was a prosthetic and operated as an extension of Mr. Collins' body, functioning as his lower limbs and lower torso muscles. We explained that modern day prosthetics no longer consists of inanimate separate objects; that interactive prosthetics are the new normal: implants, transplants, embedded devices (e.g. pacemakers), nanotechnology, neural prosthetics, wearables, and bioengineering. And the interactive prosthetics are changing who we are, physically – who would Stephen Hawking be without his assistive devices? The MAD was an extension of Mr. Collins; by harming his MAD, the harm extended to Mr. Collins.

D. Legal Precedent and Literature

These interactive prosthetics, along with other emerging technologies, are blurring our bodily boundaries. Distinctions between “natural” and “artificial”, between “alive” and “not alive” or “animate” and “inanimate” are ones that are becoming increasingly difficult to determine.¹ Similarly,

1. Linda MacDonald Glenn, *Biotechnology at the Margins of Personhood: An Evolving*

the stark dichotomy between “property” and “person” is changing.² The notion of what a “person” is has changed and shifted under the law. Legal (or juridical) “persons” also include ships and corporations, and the law is currently evolving to recognize that the dichotomy does not always work, that there may be a need to create a continuum rather than a dichotomy.³

As these boundaries are challenged through technological developments, the case at hand brought to mind the philosophical thought experiment that has been termed the “Ship of Theseus.” A classic philosophical puzzle about identity, ancient historian Plutarch recounts the story of the famous ship of Theseus, which was displayed in Athens for many centuries. Plutarch asked, over time as the ship’s planks wore down and were gradually replaced, whether the ship became a new ship by replacing all its wooden parts or did it remain the same ship?

In the current case study, Mr. Collins’ MAD replaced many of his bodily parts. And while today, the MAD and Mr. Collins could be distinguished or separated for short periods of time, with advancing technology, one could easily envision replacement parts that are not easily distinguishable or separable. In terms of individuals with disabilities, the miniaturization and ease of wear and use of these technologies would present a boom, and a chance to end discrimination against those with disabilities. The rapid adaptation and accelerating use of these technologies could lead us to a variation of the “Ship of Theseus” puzzle: How many parts of Mr. Collins could be replaced until he was no longer legally Mr. Collins? Or could that point never be reached?

Oddly enough, the United States Supreme Court may have given one possible answer to the paradoxical question; the historical case involves replacement of the parts of a “person” and whether or not the replacements ended up creating a new identity. The juridical “person” was a shipping vessel. In the 1922 case *New Bedford Dry Dock Company v. Purdy, Claimant of the Steamer “Jack-O-Lantern”*, the question before the Court was, “[i]n rebuilding operations the test is whether the *identity* of the vessel has continued, or has been extinguished.”⁴ The appellee argued that because substantial portions of the vessel had been replaced and because the ship was now being used for amusement rather than as an auto ferry the previous identity had been extinguished and a new identity formed. But the court stated in its opinion that “[t]his court has not undertaken and will not

Legal Paradigm, J. EVOLUTION & TECHNOLOGY, Oct. 2003, at 35–37.

2. *Id.*

3. Linda MacDonald Glenn & Jeanann S. Boyce, *Nanotechnology: Considering the Complex Ethical, Legal, and Societal Issues with the Parameters of Human Performance*, NANOETHICS, Oct. 2008, at 272.

4. *New Bedford Dry Dock Co. v. Purdy, Claimant of the Steamer “Jack-O-Lantern,”* 258 U.S. 96, 99 (1922) (emphasis added).

now essay to announce rigid definitions of repairs and new construction; but we do not accept the suggestion that the two things can be accurately differentiated by consideration of the ultimate use to which the vessel is to be devoted” and held that as long as the hull and skeleton of the original vessel remained intact, the original identity was retained.⁵

Conceivably, one could make a similar argument when it comes to replacement parts for “natural” persons, extrapolating the case law that has already created precedent for “juridical” persons. If one were to argue by analogy, you could replace almost everything, so long as a skeleton and shell was left.

E. *The Resolution*

After detailing this extensive argument and thought process to the adjuster, we also communicated how excited we were to have a one of the first potential “test” cases in this area and they were looking forward to trying out this new theoretical approach to human-machine mergers. The adjuster, apparently thinking that we were perhaps just insane enough to go forward with this case to a jury, finally made an offer of twenty thousand dollars, which the client, Mr. Collins, could live with, happily. Because of Mr. Collins’ life’s circumstances, my co-counsel and I took a reduced fee and were satisfied with the outcome.

III. CONCLUSION

There were several important lessons learned in the negotiation and settlement of this case that are worthy of taking note:

We will continually incorporate more and more computer technology into our lives, and ourselves, until we become one with it.⁶ Our lawmakers and policy makers need to consider the impact of personhood – property boundaries changing.

That these emerging technologies presents a unique challenge for the legal profession to help shape policy, since the technology is cutting-edge and statutes, case law, and law journals are usually written *after* the fact.

Finally, as human machine mergers continue, ethical, legal, and social issues will continue to emerge, posing challenges for practicing ethicists and lawyers.

5. *Id.* at 100. See also Glenn & Boyce; *supra* note 3, at 272.

6. It’s already happening! How many of us carry our iPhones or smartphones or small wireless computer to our meetings [and everywhere else]. When someone has a question no one can answer, in just a few seconds, we conjure up the answer with Google.

