A Farewell to Arms (And Legs): The Legal Treatment of Artificial Limbs

BAYARD BROWN*

Recent advancements in prosthetics have significantly improved the mobility and quality of life of prosthetics users. Now, more than ever, an artificial limb serves as a practical replacement for a missing limb. In many spheres, however, artificial limbs are treated as tools and not replacements for the missing body part. Artificial limbs raise legal issues wholly different from natural limbs, as they can be removed, searched, damaged without pain, and sold. The courts and laws of the United States have addressed these differences piecemeal, resulting in little consistency in how artificial limbs are treated. This Note provides an overview of the current fragmented and contradictory legal doctrine surrounding the treatment of artificial limbs. It argues that a prosthetic should be treated as a replacement limb rather than a tool to the greatest extent possible. Specifically, it argues that there should be a strong presumption against removal of the prosthetic, that the degree of justification needed for the search of an artificial limb should be above that of a strip search, and that for workers’ compensation claims damage to an artificial limb should qualify as an accident.

I. INTRODUCTION

Muslim cleric Abu Hamza al-Masri claims that he lost both of his hands and one of his eyes fighting against the Soviet occupation of Afghanistan, and in place of one of those hands he often

* J.D. Candidate 2014, Columbia Law School. The author would like to thank Professors Tim Wu and Elizabeth Emens for their assistance as well as the Journal staff for their efforts.
wears a hook.\textsuperscript{1} In October of 2012, Masri was extradited from Great Britain to the United States, where U.S. authorities confiscated the hook, over his lawyer’s protestations that the hook is necessary for Masri to function in a civilized manner.\textsuperscript{2} Masri’s hook was removed whenever he left his cell, a situation which his lawyer Lindsay Lewis said made it all but impossible for him to perform basic hygienic acts, such as washing himself,\textsuperscript{3} and which his attorney Jeremy Schneider suggested was preventing Masri from effectively aiding in his own defense.\textsuperscript{4}

Such removal of a natural hand or leg would clearly be an unconstitutional instance of cruel and unusual punishment,\textsuperscript{5} but as al-Masri’s case indicates, the removal of an artificial limb is not similarly prohibited. Traci Billingsley, a spokesperson for the United States Bureau of Prisons, explains that it is normal to remove the artificial limb of an inmate if it is believed that the prosthetic “could pose a danger.”\textsuperscript{6} The removal of al-Masri’s hook might frustrate his ability to perform basic tasks just as much as the removal of a person’s organic hand would, yet removal of prosthetics like al-Masri’s hook is common practice at federal prisons.\textsuperscript{7}

Artificial limbs replace parts of the human body to the greatest extent technology permits, but in many legal contexts an artificial limb is not treated as a true replacement.\textsuperscript{8} Recent progress in the technology of prosthetics makes them more capable of

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\item \textsuperscript{2} Should Abu Hamza be Allowed to Wear his Prosthetic Hook?, BBC News (Oct. 8, 2012, 7:03 AM), http://www.bbc.co.uk/news/uk-19870477.
\item \textsuperscript{4} Roth & Smith, supra note 1.
\item \textsuperscript{5} U.S. CONST. amend. VIII.
\item \textsuperscript{7} Id.
\item \textsuperscript{8} See, e.g., Fogarty v. State, 236 A.2d 247, 249 (R.I. 1967) (“Live tissue from an injured worker’s body applied by a skilled surgeon as a replacement for an injured thumb is not equitable with a prosthetic device purchased from a surgical appliance dealer. One is real; the other artificial.”).
\end{itemize}
functionally replacing a missing body part than ever before. 9 How, then, does the law deal with the idea of an arm that can be removed, searched, sold, and damaged without causing pain? 10

Current doctrine treats prosthetics inconsistently. Under disabilities law, prosthetics are seen as replacements that a disabled person has a right to have. 10 In a prison or detention facility, prosthetics are viewed as potentially dangerous tools that can be removed for the sake of security. 11 In the context of searches, an artificial limb is seen as little more than a medical boot. 12 For workers’ compensation, some jurisdictions see prosthetics as a replacement for a lost body part that is necessary in order for the user to work, while other jurisdictions see an artificial body part as little more than a tool that the worker carries. 13 In the marketplace, prosthetics are seen as a regular marketable good. 14

This Note argues that under the law prosthetics should be uniformly treated as replacements for the missing limbs as far as is physically possible. More than ever, a prosthetic can perform the functions of the missing body part, and current research in prosthetics is aimed at increasing the integration of artificial limbs with the organic body. 15 U.N. resolutions to which the United States is a party indicate that providing the prosthetics of the disabled person’s choice is a moral imperative that all signing countries are obliged to fulfill, and that the lack of an assistive device strips a disabled person of some of their fundamental rights. 16 The fact that some jurisdictions and areas of law treat a prosthetic as a replacement and others treat it as a tool has led to inconsistent and unequal treatment for prosthetics users.

11 See infra Part IV.
14 See James F. Blumstein, The Use of Financial Incentives in Medical Care: The Case of Commerce in Transplantable Organs, 3 HEALTH MATRIX 1, 28 (1993).
Treating prosthetics as replacements would allow prosthetics to be available to a prisoner if that prosthetic is the prisoner’s preferred assistive device. It would mean that the justification required to remove and search a prosthetic limb would be greater than the justification required for a strip search. Finally, it would mean that all jurisdictions would have to treat a work accident that caused damage to a prosthetic as sufficient cause for workers’ compensation. Treatment of prosthetics as replacements would lead to more equitable results and a more appropriate degree of respect for the dignity of prosthetics users.

Part II of this Note provides a brief overview of the history of prosthetic body parts, including the recent improvements in prosthetic technology and advances in prosthetic science currently being developed or researched. Part III lays out how prosthetics are treated by domestic and international disabilities law. Part IV examines how courts and the government currently treat the removal of prosthetics and prosthetic users in the context of prison. Part V analyzes how courts treat the search of prosthetic limbs. Part VI discusses the ways the law treats prosthetics when they are damaged while at work, the legality of selling a used prosthetic, and how the law would treat an attempt to repossess a prosthetic. Part VII concludes this Note by advocating for treatment of artificial limbs not as mere tools, but as replacements for missing body parts.

II. A BRIEF HISTORY OF ARTIFICIAL LIMBS

People have been replacing missing body parts with prosthetics for millennia. The oldest artificial body part found to date is an artificial toe unearthed in Egypt that is thought to date back to between 950 and 710 B.C.E. Archaelogists uncovered an artificial leg from 300 B.C.E. in Capua, Italy, and The Histories by Herodotus describes a Persian soldier who made use of an arti-

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ficial foot in 484 B.C.E.\textsuperscript{19} The problem of missing body parts and the accompanying solution of prosthetics has been around for much of recorded history. However, from the time of the artificial toe of Egypt until the modern era the technology of artificial limbs has remained relatively static.\textsuperscript{20} In the intervening years the greatest advances in artificial limb science were improvements in cosmetic appeal and durability.\textsuperscript{21} It was not until relatively recent advancements in medicine, anesthesia, surgery, and prosthetic science that artificial limbs began heading towards advancement in practical capabilities.\textsuperscript{22} In the late 1960s the possibility of an electronic prosthetic was at last in sight, but until energy could be more efficiently stored or used, an artificial limb with greater functionality was still out of reach.\textsuperscript{23}

In the 1990s, the technology of computer processing was first integrated into prosthetics.\textsuperscript{24} With prosthetic limbs now containing computing power, there finally began to be improvements in functionality for artificial limbs. The modern Ottobock C-Leg senses when a user is in danger of stumbling and the knee firms in order to help the user avoid a fall.\textsuperscript{25} The new Touch Bionics i-limb Ultra can sense muscle signals sent to it by the user and automatically make the prosthetic hand perform a variety of different actions.\textsuperscript{26} The Ossur Power Knee can learn and mimic the gait of a user so that walking is more efficient and natural-looking.\textsuperscript{27} None of this was possible as recently as thirty years ago, but now such advancements are becoming standard.

The trend toward more complex and capable artificial limbs shows no sign of slowing. Dr. Todd Kuiken, Director of Amputee

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\item \textsuperscript{19} B.J. Alcock, \textit{The Development of Artificial Limbs}, 117 J. ROYAL SOC’Y ARTS 396, (May 1969).
\item \textsuperscript{20} Alan Thurston, \textit{Paré and Prosthetics: The Early History of Artificial Limbs}, ANZ J. SURGERY, Dec. 2007, at 1114–119.
\item \textsuperscript{21} \textit{History of Prostheses}, supra note 18.
\item \textsuperscript{22} Thurston, supra note 20.
\item \textsuperscript{23} Id.
\item \textsuperscript{24} \textit{The History of Prosthetics}, The UK LIMB LOSS INFORMATION CENTRE (last visited Jan. 2013). http://limblossinformationcentre.com/rehabilitation/prosthetics/prosthetics-general/the-history-of-prosthetics./
\item \textsuperscript{26} I-limb$^\text{TM}$ Ultra Features, TOUCH BIONICS, http://www.touchbionics.com/products/ active-prostheses/i-limb-ultra/features/ (last visited Jan. 2013).
\item \textsuperscript{27} The Technology of the POWER KNEE, ÖSSUR, http://www.ossur.com/?PageID=15767 (last visited Oct. 6, 2013).
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Programs at the Rehabilitation Institute of Chicago, has recently successfully transplanted a portion of his patient’s nerves so that the patient can control a prosthetic arm with the electric signals sent from the brain to those repositioned nerves, an advancement only dreamed of fifty years ago. Experts hope for even greater bionic advancements with prosthetics soon, with an even higher degree of integration between the natural body and artificial limbs. Some scientists on the cutting edge believe that they are on the brink of being able to fuse a person’s nerves with prosthetics, thus creating artificial limbs that can feel.

Despite all of these recent developments in prosthetic technology, the basic medical definition of a prosthetic is largely the same as it was before, and is commonly referenced by courts. “In Stedman’s Medical Dictionary,” a Tennessee court noted, “‘prosthesis’ is defined as ‘A fabricated substitute for a diseased or missing part of the body, as a limb, tooth, eye or heart valve,” going on to cite “Tabor’s Cyclopedic [sic] Medical Dictionary” to define a prosthesis as “1. Replacement of a missing part by an artificial substitute, such as an artificial extremity. SEE: Boston Arm. 2. An artificial organ or part. 3. Device to augment performance of a natural function such as a hearing aid.” This definition gives judges little guidance as to the question of central importance to the legal analysis: how a prosthesis should be treated compared to a natural limb.

33. Cordis Corp. v. Taylor, 762 S.W.2d 138, 139 (Tenn. 1988).
III. PROSTHETICS UNDER DISABILITY LAW

An individual who uses an artificial body part is almost certainly\textsuperscript{34} covered by the Americans with Disabilities Act of 1990 (‘ADA’), which prohibits discrimination by an employer,\textsuperscript{35} a private entity offering public accommodations and services, or any public entity against an individual because of a disability.\textsuperscript{36} This prohibition of discrimination against the disabled is enforced in the same manner as the prohibitions against discrimination based on race, religion, sex, and nationality by directly citing the codification of the Civil Rights Act of 1964.\textsuperscript{37} The enforcement process provides an opportunity for the person alleging disability discrimination to file a charge with the Equal Employment Opportunity Commission (‘EEOC’), which then determines if there is reasonable cause to believe that the charge is true.\textsuperscript{38} If the EEOC decides that there is reasonable cause to believe the allegation is true, it first attempts a correction through informal methods.\textsuperscript{39} If those methods fail then the person alleging discrimination may bring a lawsuit in federal court.\textsuperscript{40} The potential remedies of a federal discrimination lawsuit include (but are not limited to) injunctions, affirmative action, equitable relief, accrual of back pay, hiring, and reinstatement.\textsuperscript{41} The Act covers prosthetics users regardless of how well the prosthetic being used returns the functionality of the missing body part, even if a per-

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  \item If a person were to use a prosthetic to replace a body part, the lack of which did not substantially limit that person’s ability to care for him or herself, perform manual tasks, see, hear, eat, sleep, walk, stand, lift, bend, read, or work then the ADA would not define that person as disabled. 42 U.S.C. §§ 12102(1)(A), (2)(A) (2006). However, Congress intended for the statutory definition of disability to be construed in favor of broad coverage, so even an individual who wears a prosthetic toe may qualify under the right circumstances. 42 U.S.C. § 12102(4)(A). Users of prosthetic hands, feet, arms, and legs would unquestionably be covered.
  \item 42 U.S.C. § 2000e-5(b) (informal methods listed are conference, conciliation, and persuasion).
  \item 42 U.S.C. § 2000e-5(g).
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son is using one of the latest prosthetics. The ADA makes no attempt to list the substantive rights of a disabled person; instead it broadly prohibits discrimination against the disabled and sets general rules for employers, public entities, and private entities offering the public goods and services to improve accessibility for the disabled.

In contrast, United Nations (“U.N.”) General Assembly resolution 3447 and the U.N. Convention on the Rights of Persons with Disabilities, both of which the U.S. has signed, do attempt to list the substantive rights of the disabled. A few of the listed rights apply specifically to disabled persons who use prosthetics as a replacement for missing body parts: the U.N. Declaration on the Rights of Disabled Persons states that “Disabled persons are entitled to the measures designed to enable them to become as self-reliant as possible.” This statement is nebulous, but Article 20 of the U.N. Convention on the Rights of Disabled Persons is more specific:

States Parties shall take effective measures to ensure personal mobility with the greatest possible independence for persons with disabilities, including by: (a) Facilitating the personal mobility of persons with disabilities in the manner and at the time of their choice, and at affordable cost; (b) Facilitating access by persons with disabilities to quality mobility aids, devices, assistive technologies and forms of live assistance and intermediaries, including by making them available at affordable cost.

Lower body prostheses would most likely qualify as mobility facilitating devices, while upper body prosthetics are covered by the convention’s general articles obligating member states to promote the availability of assistive devices and technology generally. Disabled persons thus not only have a right to a pros-

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42. 42 U.S.C. § 12102(4)(E)(I)(D) (2006) (“The determination of whether an impairment substantially limits a major life activity shall be made without regard to the ameliorative effects of mitigating measures such as . . . use of assistive technology”).
46. Id.
thetic if it would assist them, but in the case of a person with a lower body disability, that person has the right to use a prosthetic over other mobility methods like crutches or a wheelchair.\textsuperscript{47} Denying a disabled person the use of a prosthetic and instead offering other alternatives would be a violation of one of the obligations of this convention.\textsuperscript{48}

Though these U.N. resolutions are illustrative of how the U.S. and the rest of the world think about the disabled and their prosthetics in theory, neither the Convention nor the Declaration create a binding legal obligation on the United States. The Declaration on the Rights of Disabled Persons was a declaration made by the General Assembly, and General Assembly resolutions are generally not considered binding.\textsuperscript{49} The ratification of the Convention of the Rights of Persons with Disabilities would create a legal obligation on the United States, but the U.S. has only signed the convention, not ratified it.\textsuperscript{50} The push towards ratification recently failed,\textsuperscript{51} and it is unlikely to occur in the near future. Though the analysis is not clear-cut, the Convention of the Rights of Persons with Disabilities is likely not a self-executing treaty, since it deals more in principles than it does in rules that a court could enforce.\textsuperscript{52} Without ratification a non-self-executing treaty does not create enforceable federal law in the United States, meaning that the convention has no binding legal power in the U.S.\textsuperscript{53} Still, these U.N. resolutions show that, at least in theory, the international community views prosthetics as not just tools but devices that the world has an obligation to develop, distribute, and protect in order to improve the lives of the disabled.

\textsuperscript{47} Id.

\textsuperscript{48} See Gillen v. D’Amico, 237 Fed. Appx. 173 (9th Cir. 2007).


\textsuperscript{52} Medellin v. Texas, 552 U.S. 491, 514 (2008).

\textsuperscript{53} Id. at 505.
IV. CURRENT TREATMENT OF ARTIFICIAL LIMBS IN
THE CONTEXT OF ARREST AND PRISON

A most common circumstance that requires the removal of a
prosthetic limb for an extended period of time is entering a
prison. It is the official policy of the Federal Bureau of Prisons
and many state departments of correction to thoroughly inspect
the prosthetics of incoming inmates54 and prison visitors whose
prosthetics contain metal.55 Prisons remove artificial limbs that
they believe could pose a danger,56 meaning that prison officials
can decide to take away hooks and artificial limbs that those
officials determine could be used to bludgeon.57 Certainly this secu-

rity concern has merit, since as the head of the Warren, Ohio,
Orthotics & Prosthetics Rehabilitation Engineering Center John
N. Billock explains, a hook can be considered a weapon and can
be used to inflict significant harm.58

54. See, e.g., Roberts v. Rhode Island, 239 F.3d 107 (1st Cir. 2001) (describing strip
search procedures at a state prison); Hairston v. U.S. F.B.O.P., 1:12-CV-845, 2013 WL
5351049 (M.D. Pa. Sept. 23, 2013) (listing a strip search as part of prisoner intake pro-
cedure for federal prisons).
55. U.S. DEPARTMENT OF JUSTICE FEDERAL BUREAU OF PRISONS, VISITING
REGULATIONS 6 (2011). A prosthetic limb that contains metal will set off a metal detector,
so the potential visitor is brought to a restroom and the prosthetic is subject to “thorough
inspection.” Id. Surgically implanted metal is excused if the potential visitor has proper
documentation. Id. This aligns the treatment of prosthetics with that of “personal belong-
ings” and distinguishes the thorough inspection of the prosthetic from a “visual inspec-
tion”). Id.
56. Associated Press, supra note 6. Note however that some courts have held that
this removal has to be accompanied by an explanation, as removal for an extended period
of time with no explanation is a violation of the Eighth Amendment. See Parkinson v.
“It is clear that the confiscation, retention and deprivation of the petitioner’s leg served no
legitimate penological objective any more than it squares with evolving standards of de-
cency.”).
57. This policy of routine removal of prosthetics when entering prison is not uni-
formly followed by the rest of the world, as illustrated by the currently unfolding case of
South African Olympic athlete Oscar Pistorius. See Oscar Pistorius’ Blade Legs Not Con-
sidered Weapons Behind Bars, TMZ (Feb. 14, 2013, 5:00 PM), http://www.tmz.com/2013/
02/15/oscar-pistorius-legs-not-weapons/. Also known as “Blade Runner,” Pistorius uses
two carbon fiber blade legs for personal mobility and to compete as a runner. Id. After his
arrest in February, 2013, Pistorius was taken into custody, where his South African
prison declined to confiscate his prosthetics, despite their policy of confiscating any item
that could be used as a weapon such as hard plastics. Id.
58. Abu Hamza al-Masri, supra note 6 (“You could brutalize somebody with it . . .
you can put somebody’s eye out or knock out their teeth.”).
Courts typically defer to the judgment of prison officials when the matters under discussion are decisions arising out of the security concern of a prison, but this deference can be outweighed by other concerns. Removal of a prosthetic in a prison or detention situation has given rise to suits alleging violations of the Fourth, Fifth, Eighth, and Fourteenth Amendments as well as the ADA. These cases turned upon the question of how far the well-established institutional concerns of prison and detention facilities limit the rights of prosthetics users. With only a few significant exceptions, these alleged violations of constitutional rights develop when a prisoner has had a prosthetic removed, and that removal causes difficulties for the prisoner. The difficulties normally consist of the prisoner having trouble navigating his or her cell or the prison generally, which in turn prevents the prisoner from taking advantage of some of the opportunities available to prisoners who do not require the use of a prosthetic (frequently exercise and hygiene opportunities).

The case of Baribeau v. City of Minneapolis illustrates several of the common charges made by prisoners deprived of an artificial limb, and highlights some of the typical reasons why these claims fail. Plaintiff, charged with displaying simulated weapons of mass destruction after dressing as a zombie as part of an anti-consumerist action, had his prosthetic leg removed because the detention center worried that it could be used as a weapon. Plaintiff alleged that the confiscation of his prosthetic leg violated the Fourth Amendment, since the seizure of a part of his body constituted a very significant intrusion. The appellate court rejected this argument because of the heavy-duty nature of the

61. Baribeau v. City of Minneapolis, 596 F.3d 465, 472 (8th Cir. 2010); U.S. CONST. amend. IV.
62. Id.; U.S. CONST. amend. V.
64. Kwasi Sekou Muhammad, 645 F. Supp. 2d at 319; U.S. CONST. amend. XIV.
67. See, e.g., Muhammad, 645 F. Supp. 2d 299.
68. Baribeau v. City of Minneapolis, 596 F.3d 465, 471–72 (8th Cir. 2010).
69. Id.
70. Id. at 483.
prosthetic and the institutional concerns of a detention facility.\textsuperscript{71} The plaintiff also alleged that the removal of the prosthetic violated the Fifth and Fourteenth Amendment Due Process Clauses because the removal was essentially a punishment prior to a finding of guilt.\textsuperscript{72} The appellate court rejected this argument as well, since, as with plaintiff's Fourth Amendment argument, the removal of the prosthetic was done under the rationale of facility security.\textsuperscript{73} Therefore the removal was not a punishment but reasonably related to a legitimate governmental objective, a fact sufficient to defeat plaintiff's Fourteenth Amendment claim.\textsuperscript{74} Lastly, the plaintiff alleged that the confiscation of his prosthetic violated the ADA.\textsuperscript{75} The court explained that

[t]o establish a violation of Title II of the ADA, plaintiff must demonstrate: (1) that he is a qualified individual with a disability; (2) that he was excluded from participation in or denied the benefits of the jail's services, programs, or activities, or was otherwise subjected to discrimination by the jail; and (3) that such exclusion, denial of benefits, or other discrimination was by reason of his disability.\textsuperscript{76}

Because the plaintiff admitted that there was no facility or activity that he had actually wanted to access and that the removal of his prosthetic leg prevented him from enjoying, the court ruled that there was no ADA violation here.\textsuperscript{77} Actual documented loss of jail opportunities is a prerequisite for finding an ADA violation.\textsuperscript{78}

\textsuperscript{71} Id.
\textsuperscript{72} Id. at 483–84.
\textsuperscript{73} Id. at 484.
\textsuperscript{74} Id.
\textsuperscript{75} Id.
\textsuperscript{76} Id.
\textsuperscript{77} Id. at 485. The fact that the plaintiff was provided a wheelchair and an ADA-compliant cell also weighed against his claim that an ADA violation occurred. Id.
\textsuperscript{78} See, e.g., Thompson v. Davis, 295 F.3d 890, 895 (9th Cir. 2002) (holding that “[t]o state a claim of disability discrimination under Title II, the plaintiff must allege four elements: (1) the plaintiff is an individual with a disability; (2) the plaintiff is otherwise qualified to participate in or receive the benefit of some public entity's services, programs, or activities; (3) the plaintiff was either excluded from participation in or denied the benefits of the public entity's services, programs, or activities, or was otherwise discriminated against by the public entity; and (4) such exclusion, denial of benefits, or discrimination was by reason of the plaintiff's disability”).
In contrast to Baribeau, Wheeler v. Tinsman presents an example of a situation where the confiscation of a prosthetic does limit what activities and facilities a prisoner can take advantage of.\textsuperscript{79} The plaintiff had to choose between losing his prosthetic leg and staying in the prison’s general population or keeping the prosthetic but moving to a hospital cell.\textsuperscript{80} When he chose the latter option he was kept in the cell for twenty-three hours per day, a situation that limited his ability to take advantage of activities that were available to the other prisoners, like church services and the prison’s school program.\textsuperscript{81} When the prisoner decided to give up the prosthetic and reenter the prison’s general population he was forced to move about by hopping.\textsuperscript{82} The court concluded that being barred from prison activities raised the real possibility of an ADA violation and thus denied the defendant’s motion for summary judgment.\textsuperscript{83}

Precedent from the European Court of Human Rights (“ECHR”) suggests it is likely that if conditions similar to these two cases were imposed on a European prisoner, the condition would be found to violate Article 3 of the Human Rights Act.\textsuperscript{84} In Price v. United Kingdom, the ECHR ruled that stripping a disabled person of assistive technology, resulting in a situation where that person cannot take care of himself, risks developing sores, and cannot effectively perform acts of personal hygiene, constitutes degrading treatment, regardless of the intent of the officials of the detention facility.\textsuperscript{85} Admittedly this was an extreme case, as the disabled person in question was missing all four of her limbs, but it exposes the different approach the ECHR takes to analyzing cruelty claims in the prosthetic context, looking to effect on the victim rather than the intent of the perpetrator.\textsuperscript{86}

\textsuperscript{80} Id.
\textsuperscript{81} Id. at *2. The prison claimed that it did not have a wheelchair and that crutches posed the same danger as did a prosthetic leg. Id.
\textsuperscript{82} Id. at 3.
\textsuperscript{83} Id. at §30. This disability was the result of the effects of phocomelia due to Thalidomide. Id.
\textsuperscript{84} Human Rights Act, 1998, 42, Sch. 1, Pt. I (Eng.) (banning torture as well as inhuman or degrading treatment).
The fact that the prosthetics users in this situation are prisoners shifts the constitutional analysis, since the law recognizes certain fundamental limitations on rights in the prison context.\textsuperscript{87} The case of \textit{Whirl v. Kern} differs from the previous examples because the plaintiff was suing for wrongful imprisonment, negating the institutional concerns normally at play in a prison.\textsuperscript{88} Since the prosthetic was removed while the user was wrongfully imprisoned, the court held that the user could recover damages for both the physical injury caused by the prolonged deprivation of the prosthetic leg\textsuperscript{89} as well as for the deprivation itself.\textsuperscript{90} The court noted, though, that if the prosthetic of a legally incarcerated user\textsuperscript{91} is removed pursuant to the requirements of a reasonable rule, then plaintiff cannot recover for that period.\textsuperscript{92} Thus, while a person is legally imprisoned his or her prosthetic can typically be removed in the name of security as a matter of course, but if the removal occurs during a case of wrongful imprisonment, deprivation of a prosthetic can result in recovery for pain and suffering.

Another odd but telling case is \textit{In re Roark}, a state appellate court decision finding that procedures for searching a prisoner’s attorney’s prosthetic leg imposed an indirect burden on that prisoner’s right to counsel.\textsuperscript{93} The attorney was not allowed a contact visit\textsuperscript{94} with his client unless he was willing to allow the prison to disassemble his $21,000 prosthetic leg.\textsuperscript{95} The prison claimed that imposing this condition was necessary because of the risk that a

\textsuperscript{87} See \textit{Bell v. Wolfish}, 441 U.S. 520, 545 (1979) (laying out the relevant legal standard).

\textsuperscript{88} 407 F.2d 781 (5th Cir. 1968). The court explained that it does not have to factor in the reasonable discretion of the jailers in this suit to recover damages for pain and suffering because lawful imprisonment is a necessary condition for the jailer having that discretion. \textit{Id}. When the imprisonment is not lawful the jailer receives no policy deference from the court. \textit{Id}.

\textsuperscript{89} \textit{Id}. at 796 (deprivation of the prosthetic caused his leg tendons to contract and his stump tissues to swell).

\textsuperscript{90} \textit{Id}. at 797.

\textsuperscript{91} \textit{Id}. In this case the plaintiff was legally incarcerated until certain indictments against him were dropped. After they were dropped he was not released, thus his suit for wrongful imprisonment. \textit{Id}.

\textsuperscript{92} \textit{Id}. at 797–98.


\textsuperscript{94} A “contact visit” is a visit where both the client and counsel can talk directly, as opposed to a non-contact visit which, in this case, entailed talking via telephone while separated by thick glass. \textit{Id} at 1950.

\textsuperscript{95} \textit{Id}. at 1948.
prosthetic could be used to smuggle in contraband, but the court held that the disassembly of the prosthetic was not reasonably necessary for the security interest of the prison, since the artificial limb had already undergone thorough visual inspection. The court recognized that “the process of removing the leg and replacing it away from home is cumbersome, taking up to a half hour, and heightens the risk of pain, chafing, lacerations and infection. And, [plaintiff’s attorney] expressed concern about untrained prison staff damaging his $21,000 precision instrument if it were disassembled,” concluding that the level of intrusion in this case, though difficult to determine because of the rarity of prosthetics search cases, is at least as high as for a strip search. This case now primarily serves only as persuasive authority, since the test it uses in determining the permissibility of prison deprivations is no longer used in federal courts or California.

The removal of a prosthetic in prison has the potential to severely limit what prison activities and facilities an inmate can access. Removal also has the potential to constitute cruel and unusual punishment if the deprivation resulting from the removal is severe enough. The security concerns of a prison or detention center mean that, for the most part, prosthetics are seen primarily as a weapon and not as an assistive medical device. Courts do, however, recognize the suffering that the lack of a prosthesis can cause, especially if other methods of mobility are unavailable, and the case of In re Roark illustrates a court understanding what removal of a prosthetic actually entails, and hints at a recognition of prosthetics as not just tools, but something more.

96. Id. at 1951.
97. Id. at 1956–57.
98. Id. at 1955.
99. Id.
100. Id. at 1952 n.10.
101. See Thompson v. Department of Corrections, 105 Cal. Rptr. 2d 46 (Cal. 2001).
102. Cummings v. Roberts, 628 F.2d 1065, 1068 (8th Cir. 1980) (finding that confiscation of a wheelchair that forced an inmate to crawl on the ground for mobility violates the Eight Amendment).
V. CURRENT TREATMENT OF ARTIFICIAL LIMBS IN THE CONTEXT OF BORDER SEARCHES

Is searching an artificial leg more analogous to searching a boot, or to searching a body cavity? This question is of key importance when analyzing the search of an artificial limb, since it determines the severity of intrusion in a case where a prosthetic limb has been searched. Under the Supreme Court’s Fourth Amendment jurisprudence, that level of intrusion must be balanced against the need to search in order to determine whether such a search is permissible.\textsuperscript{103}

A search without consent is permissible only with a warrant, except for certain specific classes of cases where a warrantless search can be conducted.\textsuperscript{104} In general, when these warrantless searches occur, they must be reasonable in order to be permissible.\textsuperscript{105} There is no clear test for calculating the reasonableness of the search, but instead the “need for a particular search must be balanced against the resulting invasion of personal rights.”\textsuperscript{106} A typical search entails less of an invasion of personal rights than a strip search, which in turn entails less of an invasion of personal rights than a cavity search.\textsuperscript{107} Because different types of searches entail different levels of invasion of personal rights, deciding which type of search is most analogous to the search of an artificial limb will determine the level of suspicion needed to initiate the search of an artificial limb. A search conducted without the requisite level of suspicion is unconstitutional.\textsuperscript{108}

Outside of the context of a prison search, most cases that deal with the search of an artificial limb occur when the subject of the search is returning to the United States from abroad on an inter-

\begin{footnotesize}
\textsuperscript{103} Terry v. Ohio, 392 U.S. 1, 21 (1968).
\textsuperscript{104} Camara v. Municipal Court of San Francisco, 387 U.S. 523 (1967) (exceptions include but are not limited to: emergencies (Id.); searches incident to valid arrests (Jones v. United States, 357 U.S. 483 (1958)); searches conducted after receiving authorized permission (Stoner v. California, 376 U.S. 483 (1964)); and a search conducted when “imminent destruction, removal, or concealment” of evidence is reasonably feared (United States v. Jeffers, 342 U.S. 48, (1951)).
\textsuperscript{107} United States v. Aman, 624 F.2d 911, 912 (9th Cir. 1980).
\textsuperscript{108} U.S. CONST. amend. IV.
\end{footnotesize}
national flight. Just as corrections officers are given wide latitude in determining what search measures are necessary for security, the customs officials in a border search situation are given more leeway under the Fourth Amendment than a normal search outside of the border context would receive. Nevertheless, how courts treat searches of artificial limbs in the border search context provides insight as to how the courts views prosthetics and their integration with the body, as well as how the search of a prosthetic can best be conducted to withstand scrutiny in a court of law.

Three leading federal appellate cases draw the contours of the current law around prosthetic searches at the national border. In United States v. Carter, the subject of the search had just arrived on an international flight from Hong Kong and appeared nervous to the customs inspector. Upon performing a pat-down search of the subject, customs officials found a vial and “coke spoon” taped to the exterior of an artificial leg. Customs officials demanded that the subject remove the artificial leg for a more thorough examination, at which time the subject refused, claiming that a physician and special lubricant were needed to properly remove the artificial leg. The customs officers contacted a physician familiar with the subject and his artificial limb, and that physician informed them that the subject did not need a special lubricant or a physician present for the artificial leg to be removed. Subject removed his artificial leg, inside of which customs agents found sixty-three packets of heroin and proceeded to arrest the subject. The subject argued that the search of his

109. Prosthetic body parts, usually connected by straps or socket, typically do not provide a place for something to be hidden on the spur of the moment. Thus the searches of prosthetic limbs that resulted in a finding of drugs (and subsequently case law) occurred after international flights, a situation where the prosthetic user knew that he would be attempting to hide goods from detection. Any searches of prosthetics in other contexts have not resulted in case law.

110. See Florence, 132 S. Ct. at 1517.

111. Alexander v. United States, 362 F.2d 379 (9th Cir. 1966) (this less strict Fourth Amendment standard for border searches has been justified by the distinction between a normal search, that is usually performed for the purpose of apprehending persons, and a search by a customs official, that is usually performed to seize contraband property).

112. 563 F.2d 1360, 1361 (9th Cir. 1977).

113. Id.

114. Id.

115. Id.

116. Id.
artificial leg was functionally the same as a cavity search, an argument which the court rejected, but the court declined to decide whether the search of the artificial limb was equivalent to a strip search. Doing so could have established a legal standard for the level of intrusiveness in artificial limb searches, but instead this case set no clear level of intrusiveness for searches of this type. The court held that the discovery of the vial and spoon on the exterior of the artificial limb was sufficient for customs officers to have a real suspicion that there was contraband within the artificial limb, and thus the requirements for a border search were met.

In United States v. Sanders, the subject had just arrived by plane from Venezuela and did not have a regular passport. A pat-down in an examination room confirmed that the subject had an artificial leg, and questions directed at the subject related to his passport and ticket resulted in suspicious answers. When the subject was asked to remove his artificial leg he refused until he was brought to a hospital, where he was advised that the leg would be removed by force if he continued not to comply. A doctor was present for the removal. When the leg was searched approximately a pound of cocaine was discovered. Like the court in Carter, the Sanders court rejected the argument that the search of a prosthetic limb was equivalent to a cavity search, instead concluding that under the facts presented it was no more intrusive than a strip search, and therefore not subject to the heightened scrutiny that accompanies a cavity search.

Finally, in United States v. McMurray, the subject was flying into the United States from Colombia. The customs official questioning him noted suspicious travel patterns and other apparent inconsistencies with the subject’s story. Upon moving to

117. Id.
118. Id.
119. Id.
120. 663 F.2d 1, 1–2 (2d Cir. 1981) (the subject had a “Z” passport, which is a type of passport issued to Americans abroad who do not have their regular passport).
121. Id. at 2.
122. Id.
123. Id.
124. Id.
125. Id. at 3.
126. 747 F.2d 1417, 1419 (11th Cir. 1984).
127. Id.
a secondary search room, customs officials discovered that the subject had an artificial leg. The officials then requested to search the prosthesis.128 After initially refusing, allegedly out of fear that forcible removal would damage the artificial limb, the subject removed his prosthesis himself after declining medical assistance.129 The subject was arrested after the search revealed a quantity of cocaine.130 Once it had been brought to a detention facility the prosthesis was subjected to a more thorough search and an additional quantity of cocaine was found inside.131 The McMurray court also declined to decide where the search of an artificial limb falls on the spectrum of intrusiveness, holding only that this search of a prosthetic “was at least no more intrusive than an unforced body-cavity search which involves physical contact and exposure of intimate body parts.”132

From the circumstances of these three border search cases some general conclusions can be drawn about how courts view the nature of artificial limbs. First, the courts in these cases make a point of noting in the discussion of the facts that the subject of the search was offered some form of medical supervision when removal of the prosthetic was requested.133 Even where the offer is declined courts seem to appreciate the offer itself as showing that the customs inspectors are treating the search of a prosthetic limb with an appropriate level of seriousness, and are considering the health and well-being of the subject.134

Second, these cases also demonstrate (to varying degrees) that courts acknowledge that the removal of the artificial limb, and exposure of the stump the removal entails, is a potentially embarrassing act for the subject.135 In Sanders, the court explicitly recognizes that “the exposure of the stump to which the prosthetic device is attached, accompanied by a temporary lack of

128. Id.
129. Id.
130. Id.
131. Id.
132. Id. at 1421.
133. See United States v. Carter, 563 F.2d 1360, 1361 (9th Cir. 1977); United States v. Sanders, 663 F.2d 1, 3 (9th Cir. 1981); McMurray, 747 F.2d at 1419.
134. See Carter, 563 F.2d at 1361; Sanders, 663 F.2d at 3.
135. See Carter, 563 F.2d at 1361 (noting that the embarrassment caused by the removal of a prosthetic is not the same embarrassment as what a body cavity search entails); Sanders, 663 F.2d at 3 (explicitly acknowledging that exposure of the stump is an embarrassment).
mobility, constitutes an embarrassment,"136 but in both Sanders and McMurray the court indicates that exposure of the stump does not constitute exposure of an intimate body part.137 While some scholars and amputees would disagree with the court’s characterization of an amputee’s stump as a non-intimate body part,138 it appears clear that courts acknowledge removal of the prosthetic device as at least an embarrassment, but as a lesser one than the exposure of naturally occurring intimate body parts and therefore requiring less justification.139 Nevertheless, the prudent official tasked with searching an artificial limb should be advised to conduct the removal of the prosthetic in a private place so as to best mitigate the embarrassment that such a removal entails, since the offensiveness of the intrusion is a factor weighed in determining the reasonableness of a search.140

Finally, the border search cases indicate that courts tend to be more comfortable with the subject of the search removing the artificial limb himself, and suggest that the removal of the artificial limb by force would be treated similarly to a forcible search of a person’s natural body.141 In Sanders and McMurray, the subject of the search claimed that the customs officials threatened to remove the prosthetic by force if the subject did not remove the prosthetic himself, but in neither case did the courts find evidence of physical coercion on the part of the officials.142 In Sanders, the court stated that “the fact that it was ultimately Sanders, not the customs officers, who removed the leg, albeit upon demand, lessens the degree of the intrusion”143 and in McMurray the search is repeatedly described as unforced.144 If, as in these

136. Sanders, 663 F.2d at 3.
137. See id. at 3; McMurray, 747 F.2d at 1420.
139. See Carter, 563 F.2d at 1361; Sanders, 663 F.2d at 3.
140. United States v. Asbury, 586 F.2d 973, 976 (2d Cir. 1978).
141. See supra notes 112–132 and accompanying text.
142. See Sanders, 663 F.2d at 3; McMurray, 747 F.2d at 1421.
143. Sanders, 663 F.2d at 3 n.3.
144. McMurray, 747 F.2d 1420–21 (“Instead, we hold only that the unforced search of McMurray’s prosthesis under the circumstances of this case was at least no more intrusive
cases, the subject continued to refuse to remove the prosthetic, and the customs officials had to resort to the forcible removal of the prosthetic, it seems likely that courts would view the degree of the intrusion of the search as being greater, but it is unclear whether this would have had a substantive effect on the outcome of the case.\textsuperscript{145} When conducting a search of a person with a prosthetic, these cases indicate that the best option for a customs official is for the subject to remove the prosthetic himself.\textsuperscript{146}

Unfortunately, none of these three cases indicate the type of prosthetic used, or even the general complexity of the prosthetic, so it is difficult to analyze how these factors might affect the judgment of the court. Whether the prosthetic was designed to compensate for an amputation above, at, or below the knee could have a significant impact on the complexity and monetary value of the device.\textsuperscript{147} Further, the cases of prosthetics being searched discussed in this section occurred in the 1970s and 1980s, at a time before the microprocessor-controlled knee was commercially available.\textsuperscript{148} Today, microprocessor-controlled knees are not only available, but in fact are the industry standard.\textsuperscript{149} This transition to computer-controlled prosthetics means that not only are modern prosthetics far more technologically complex than they were at the time Carter, Sanders, and McMurray were decided, but that the prosthetics commonly used today in the United States are far more expensive.\textsuperscript{150} In the last decade alone the average above-knee prosthetic has gone from costing between $10,000 and $15,000 to costing approximately $50,000 on average.\textsuperscript{151} This is without taking into account high-end prosthetic legs, which can cost up to $120,000.\textsuperscript{152}

\footnotesize
\textsuperscript{145} See Sanders, 663 F.2d at 3; McMurray, 747 F.2d at 1420–21.
\textsuperscript{146} See Sanders, 663 F.2d at 3; McMurray, 747 F.2d at 1420–21.
\textsuperscript{147} Comal Doyle, Glimpsing the Future for an Amputee: Amputees Struggle Daily to Live Normal Lives, and They Face Ever-Growing Medical Costs, Give Jurors A Complete Picture of an Amputee’s Future to Ensure That They Award Full and Fair Costs, TRAIL, May 1, 2008, at 54–57.
\textsuperscript{148} The History of Prosthetics, supra note 24.
\textsuperscript{149} Doyle, supra note 147, at 54.
\textsuperscript{150} Id. at 54.
\textsuperscript{151} Id. at 54.
\textsuperscript{152} Id. at 54.
A prudent customs official should make allowances for the changes between the prosthetics of the 1970s and the microprocessor prosthetics of today when searching a prosthetic limb by consulting the specific manufacturer of the prosthetic before removal is attempted, and by handling any internal search of a microprocessor prosthetic with the utmost care. If the new technology of synching nerves with prosthetics\textsuperscript{153} becomes widely used, searching a prosthetic could potentially become an activity that would have to be conducted by an expert in the field, and if the technology of fusing nerves with prosthetics is realized\textsuperscript{154} then searching a prosthetic might risk causing the user physical pain or be entirely impossible without resulting in permanent damage.\textsuperscript{155}

VI. TREATMENT OF PROSTHETIC DEVICES IN OTHER CONTEXTS

A. PROSTHETICS IN THE CONTEXT OF WORKERS’ COMPENSATION

Employees of the federal government are covered by 5 U.S.C. § 8103, which requires that in the event of a work-related accident the employee receive the appliances and supplies recommended by a qualified physician.\textsuperscript{156} Though the statute does not mention prosthetics explicitly, an opinion by Attorney General John G. Sargent clarified the statute with the following statement:

\textsuperscript{153} Jabr, \textit{supra} note 30.
\textsuperscript{154} Drummond, \textit{supra} note 32.
\textsuperscript{155} Luckily for customs officials, it is unlikely that advanced prosthetic technology will become standard in the developing world very soon, meaning that the problem of searching a high-tech artificial limb from a drug-source country will likely remain a relatively rare occurrence for customs officials for the foreseeable future. Basic prosthetics are already prohibitively expensive for much of the developing world, and even those with the necessary resources find prosthetics in short supply. Erin Strait, American Acad. of Orthotists & Prosthetists, Prosthetics in Developing Countries, 4 (2006), available at http://www.oandp.org/publications/resident/pdf/DevelopingCountries.pdf. Since the cutting-edge prosthetics currently being developed are orders of magnitude more complex and expensive than the ones used now, the problems of cost and availability seem unlikely to be solved soon in the developing world. \textit{Id.}
\textsuperscript{156} 5 U.S.C. § 8103(a) (2012).
I have the honor to advise you, therefore, that section 9 of the Federal Employees’ Compensation Act contemplates the furnishing to injured and disabled employees, at the expense of the United States, artificial limbs, artificial eyes, and other prosthetic appliances, deemed reasonable and necessary for the treatment and rehabilitation of such employees by the United States Compensation Commission.\textsuperscript{157}

Most states’ workers’ compensation statutes likewise cover the cost of replacing the lost limb with a prosthesis, and many mention prosthetic replacement explicitly.\textsuperscript{158} These statutes make it clear that a prosthetic replacement for a limb lost in the service of employment is seen by most states and the federal government as not a luxury, but in the same category as medical treatment of the injury itself.\textsuperscript{159} This view is reinforced by the fact that artificial limbs are not just provided to injured employees\textsuperscript{160} and others who have performed service for the country,\textsuperscript{161} but also to the needy through social services.\textsuperscript{162}

In most jurisdictions, however, the availability of prosthetics cannot be used to mitigate the amount of compensation that an injured worker is due, regardless of how effectively the prosthetic makes up for the injured or missing body part.\textsuperscript{163} This is due to the way that loss of use is calculated under most workers’ compensation schemes: most courts that have faced the question have concluded that loss of use should be calculated based on the abil-

\textsuperscript{157} Furnishing Artificial Limbs & Other Prosthetic Appliances to Disabled Fed. Employees, 35 OP. ATT’Y GEN. 36, 41–42 (1926).

\textsuperscript{158} See, e.g., CAL. LAB. CODE § 4600 (West 2011); N.Y. WORKERS’ COMP. LAW § 13 (McKinney 2005); 42 PA. CONS. STAT. ANN. § 8553 (West 2007); TEX. LAB. CODE ANN. § 401.011 (West 2006).

\textsuperscript{159} See, e.g., CAL. LAB. CODE § 4600; N.Y. WORKERS’ COMP. LAW § 13; TEX. LAB. CODE ANN. § 401.011.

\textsuperscript{160} See, e.g., CAL. LAB. CODE § 4600; N.Y. WORKERS’ COMP. LAW § 13; TEX. LAB. CODE ANN. § 401.011.


\textsuperscript{162} See, e.g., N.Y. SOC. SERV. LAW § 365-a (McKinney 2010).

ity of the injured party unaided by a corrective device.\textsuperscript{164} Though a prosthetic can improve the ability of a person and allow them to return to work sooner than otherwise would have been possible, most courts do not see prosthetics as mitigating an accident that damaged a person’s ability to use his or her body.\textsuperscript{165} Employers have argued against this policy,\textsuperscript{166} especially when the prosthetic essentially allows the worker who suffered the injury to return to work relatively quickly but still claim compensation for a significant loss of use. This argument has largely been successful only in cases where the worker is seeking compensation for a total and permanent loss,\textsuperscript{167} as otherwise the prosthetic is not factored in.\textsuperscript{168}

Courts have generally interpreted state workers’ compensation law as giving an injured worker the right to compensation for damage to the organic body, regardless of the utility of any prosthetic available to that individual. Even “if there were a total and complete severance of the hands, but the stumps were fitted with artificial hands which, through the miracle of modern technology, would restore the ability of claimant to function as well as before the amputation, there would be no question that there would be a compensable severance under the law.”\textsuperscript{169} Regardless of their level of technological sophistication, prosthetics are still viewed by the courts as inferior constructs, infinitely less desirable than flesh and blood regardless of how similar they are in capability: “One is real; the other artificial.”\textsuperscript{170}

This distinction in the sphere of workers’ compensation is only partially preserved when addressing a prosthetic damaged in a work-related incident. Jurisdictions differ as to whether damage to a prosthetic in the workplace can count as an accident on its own and result in compensation, or whether an accident is some-


\textsuperscript{165} See Temporary Labor Source v. E.H., 765 So. 2d 757, 760 (Fla. Dist. Ct. App. 2000) (court held that a prosthetic leg will not “change the fact that claimant suffered a catastrophic injury” to his organic leg).


\textsuperscript{167} See Mo. ANN. STAT. § 287.200 (West 2005); Cain v. Waste Mgmt., Inc., 638 N.W.2d 98, 99–100 (Mich. 2002) (total and permanent loss is tested with the use of a corrective device like a prosthetic).

\textsuperscript{168} See Tew, 369 N.W.2d at 255–56.


thing that can only happen to the organic body.\textsuperscript{171} For federal
government employees, damage to prosthetics and artificial limbs
are treated as injuries, the same as if a natural body part were
harmed.\textsuperscript{172} In certain states the same holds true, with damage to
a prosthetic sustained during a work-related activity being
enough for compensation.\textsuperscript{173} In other states, however, the relevant
statutes and case law explicitly reject damage to a prosthetic
from constituting a compensable accident.\textsuperscript{174} These jurisdictions
typically include exceptions for instances where an injury to the
organic body also results in damage to a prosthetic,\textsuperscript{175} but relevant
case law in those jurisdictions makes clear that “damage to
the prosthetic device cannot, itself, serve as the basis for establishing an accident or ‘injury.’ Rather, there must be an otherwise compensable accident, and the breakage must occur in conjunction with, and as the result of, the accident.”\textsuperscript{176}

The unequal treatment this type of jurisdiction enables is
clear: suppose two workers are involved in two separate work-
related incidents in one of these jurisdictions, with the first
worker having his natural arm injured and the second having his
prosthetic arm damaged. Suppose the incidents are otherwise
identical in every way. Depending on the injury to the natural
arm and the damage sustained by the prosthetic, these incidents
could also result in the same loss of physical ability in both of the
workers. Nevertheless, while the worker with the injured nat-
ural arm would receive full workers’ compensation, the worker
with the damaged prosthetic could receive nothing, despite the
fact that it can cost as much as $30,000 to replace a prosthetic
arm.\textsuperscript{177} This difference in treatment is especially problematic be-
cause damage to a prosthetic can result in injury to the user of

\textsuperscript{172} 5 U.S.C. § 8101 (2012) (an exception is made for eyeglasses and hearing aids,
which can only result in compensation or replacement if they are damaged in an incident
where the user sustained an injury that required medical services).
\textsuperscript{173} See, e.g., Mont. Code Ann., § 39-71-119; N.Y. Workers’ Comp. Law § 13 (McKin-
ney 2005).
\textsuperscript{175} Id.
\textsuperscript{176} Mullins v. 7-Eleven, Inc., 5 So. 3d 35, 37 n.2 (Fla. Dist. Ct. App. 2009).
\textsuperscript{177} Rhonda Turner, Prosthetics Costs, DISABLED WORLD (May 30, 2009),
the prosthesis either over time\textsuperscript{178} or immediately.\textsuperscript{179} If the damage affects how well the device fits the user, it could contribute to skin irritation, sores, and infection.\textsuperscript{180} It can also cause pain and make the prosthetic less capable of compensating for the lost limb.\textsuperscript{181}

Alternatively, \textit{Hodge v. Village of Southampton} illustrates how damage to the prosthetic can directly injure the user, even in a case where only the prosthetic was struck.\textsuperscript{182} The plaintiff alleged that the defendant slammed a car door on the plaintiff's prosthetic leg.\textsuperscript{183} When the plaintiff arrived at a hospital emergency room approximately three hours later, records indicate that he was suffering from pain and swelling in his joint and extremity, as well as bruising.\textsuperscript{184} Even where no direct injury to the body occurs, “[a] prosthesis does not merely replace an otherwise missing or impaired body part. A prosthesis can also enable other body parts to function as they had before the loss or impairment,”\textsuperscript{185} meaning that damage to the prosthesis can inhibit a person's ability to function. Prostheses are by their nature as integrated as possible with the user's body, raising the possibility that not allowing damage to an artificial limb to qualify as an accident will lead to unpredictable results in cases where the damage to the artificial limb afterwards causes harm to the user's body.

B. REUSE OR RESALE OF A PROSTHETIC

Another difference between natural limbs and artificial limbs is that if the user of an artificial limb so desired, that limb could be sold or given away. While the sale of human organs and body parts is illegal,\textsuperscript{186} there is currently no ban on buying or selling

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182. & \textit{Hodge}, 838 F. Supp. 2d at 72. \\
183. & \textit{Id.} \\
184. & \textit{Id.} at 73. \\
\end{tabular}
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most artificial body parts, including artificial organs. Some commentators are critical of the fact that selling natural organic material has been criminalized while artificial replacements can still be bought and sold freely, but in practice this freedom is used relatively rarely with regard to prosthetics. The reuse of internal prosthetics such as pacemakers is currently not practiced due to the risk of infection. External prosthetics, on the other hand, are designed specifically for their intended user, making the prospect of efficient reuse a difficult one. The process for designing an external prosthetic takes into account the level at which the limb is missing, the physical fitness of the intended user, and the user’s professional and private environment. Finalizing the design of an artificial limb requires multiple fittings, an analysis of the socket where the prosthetic is to connect, and takes into account the alignment of the prosthetic with the rest of the body. With the device being so customized and personalized, the user of a second-hand prosthetic would likely miss out on much of the functionality and comfort enjoyed by the person for whom the prosthetic was originally designed. Additionally, the fear of liability for the resale of custom prosthetics may discourage the practice.

Despite these technical problems, reuse and resale of a prosthetic is legal, and there are a number of charities focused on providing prosthetics in both the United States and the develop-

189. Ann McIntosh, Regulating the “Gift of Life” — The 1987 Uniform Anatomical Gift Act, 65 WASH. L. REV. 171, 180 n.84 (1990). The fact that pacemakers are not reused is also due to the fact that to date, no pacemaker has received the necessary FDA approval for reuse. Andrew M. Seaman, Used Pacemakers Might be Able to be Reused; Could Have Second Life in Developing World, THE HUFFINGTON POST, (Sept. 13, 2012, 4:41 PM), http://www.huffingtonpost.com/2012/09/14/used-pacemakers-battery-life-heart-developing-_n_1882125.html.
191. Id.
192. Id.
ing world. Those charities accept donations of used artificial limbs both for direct redistribution and also for using component parts of donated limbs. Prosthetics have also been reused in other creative ways, such as a recent exhibition of used prosthetics as works of art. It is difficult to know what to make of prosthetics being legally salable while many organic components are not, because of the fact that the main motivation for criminalizing the sale of organs and other natural body parts is not entirely clear. Class consciousness, economic analysis, spirituality, and gut feelings of unease have all been pointed to as factors motivating the criminalization of the sale of organic material, so it is hard to tell which spheres consider prosthetics distinct from organic material and in what way.

C. REPOSSESSION OF A PROSTHETIC

With the price of prosthetic limbs increasing dramatically, to the point where the price of an industry standard above-knee artificial leg is significantly more than the average price for a new car, one question that might bear consideration is the legality of repossessing a prosthetic. A piece of property can be repossessed by a secured party without judicial process so long as the repossession proceeds without any breach of the peace.

194. National Limb Loss Information Center Staff, Prosthetic Limb Donations, Amputee Coalition (Jul. 23, 2011), http://www.amputee-coalition.org/fact_sheets/pros_limb_donations.html (listing some of the organizations that are willing to accept prosthetic limbs and how they are used by those organizations).
195. Id.
198. Doyle, supra note 147.
200. Meaning a party with a security interest (created where “(a) the collateral is in the possession of the secured party pursuant to agreement, the collateral is investment property and the secured party has control pursuant to agreement, or the debtor has signed a security agreement which contains a description of the collateral and in addition, when the security interest covers crops growing or to be grown or timber to be cut, a description of the land concerned; (b) value has been given; and (c) the debtor has rights in the collateral.” U.C.C. § 9-203 (2012).
Since the statute does not provide a definition for what constitutes a breach of the peace, courts have been left to construct their own definitions, with many concluding that "the term 'breach of the peace' connotes conduct that incites or is likely to incite immediate public turbulence, or that leads to or is likely to lead to an immediate loss of public order and tranquility."\textsuperscript{202}

Some courts hold that an oral protest is enough to force a would-be repossession to desist,\textsuperscript{203} while other courts hold that mere protest is not enough to constitute a breach of the peace.\textsuperscript{204} It is long established, however, that any use of force or violence, or any situation that is likely to incite violence, does constitute a breach of the peace.\textsuperscript{205}

It seems exceedingly unlikely that repossession of a prosthetic would ever be a legally viable option. Any removal of a prosthetic without the consent of the amputee wearing the prosthetic would seem to inevitably require force, making it a breach of the peace and a violation of U.C.C. section 9-609.\textsuperscript{206} Furthermore, repossession a prosthetic while it is being used and without the user's consent is legally impermissible, a fact made clear by the long-established holding that it is legally impermissible for a would-be repossession to remove a piece of clothing, jewelry, or a watch that another person is currently wearing.\textsuperscript{207} Such a removal is impermissible even if a writ of replevin has been issued to the would-be repossession for the item in question.\textsuperscript{208} If, alternatively, the prosthetic was not being used at the time, it would still be impermissible for someone to repossess it, so long as it was kept within a fenced-in or otherwise enclosed space, as acquiring the prosthetic under those circumstances would constitute criminal trespass.\textsuperscript{209} In all likelihood, an attempt to repossess an artificial limb without the consent of its user would at best be ineffectual, and at worst would leave the party attempting repossession vul-

\textsuperscript{203} See also Chapa v. Traciers & Assocs, 267 S.W.3d 386, 395 (Tex. App. 2008).
\textsuperscript{204} Census Federal Credit Union v. Wann, 403 N.E.2d 348, 351–52 (Ind. Ct. App. 1980).
\textsuperscript{206} Crews & Green v. Parker, 68 So. 287, 288 (Ala. 1916).
\textsuperscript{207} U.C.C. § 9-609.
\textsuperscript{208} Id.
\textsuperscript{209} N.Y. PENAL Law § 140.10 (McKinney 2010).
nerable to civil and criminal charges (unless the prosthetic user for some reason has a penchant for leaving his expensive artificial limb out in an unfenced yard unattended). Thus, in the realm of repossession, a prosthetic not currently being used is treated as any other material good, while a prosthetic being used is treated as being inside of a sphere of personal protection that warrants no breach — though this sphere of protection treats prosthetics the same as it does shoes, wristwatches, and earrings.

D. A PROSTHETIC IN THE CONTEXT OF AN ASSAULT

Two Arizona cases show that the legal treatment of a prosthetic limb in the assault context is determined by whether the prosthetic user is the assailant or the assailed. In State v. Schaffer, when a security officer at the Arizona State Hospital approached a prosthetic user, that user “raised his prosthetic arm and swung it at the officer. The prosthesis hit the officer on the head and gave him an abrasion.” Because the prosthetic was used to strike the blow there was a “dangerous instrument” enhancement to the charge of aggravated assault. The user argued that the prosthetic is his arm, and that it had remained attached to him throughout the incident as it was designed to, and that therefore the prosthetic was a body part and did not qualify as a dangerous instrument. The state argued that because it was non-organic, the prosthetic qualified as a dangerous instrument under the Arizona Criminal Code. Despite the court having previously held that fists could not qualify as a dangerous instrument, the court in Schaffer held that a ‘prosthesis is not a ‘body part,’ but is a device designed to be used as a substitute for a missing body part. The characteristics of the device itself, coupled with the manner in which it is actually used, are

210. See Botsford, 141 U.S. at 251–52.
211. This topic has very little case law, with Arizona coincidentally providing both of the key cases for this section.
213. “A Dangerous instrument’ means anything that under the circumstances in which it is used, attempted to be used or threatened to be used is readily capable of causing death or serious physical injury.” ARIZ. REV. STAT. ANN. § 13-105(11) (West 2010).
215. Id. at 1205.
216. Id. at 1204.
sufficient to allow the jury to determine whether it qualifies as a ‘dangerous instrument,’ regardless of the severity of the resulting injury.218 Despite recognizing that a prosthetic is designed as a replacement for a body part, the court suggests that to avoid a “dangerous instrument” enhancement in an assault the prosthetic user should simply use “his [natural] arm instead.”

While an assailant using a prosthetic can be subject to harsher charges than someone with organic limbs in the state of Arizona, a prosthetic user who gets assailed in that state is treated with greater equivalence to a person with organic limbs. In State v. Martinez, the defendant “punched Victim so hard that her permanent dental bridge dislodged, and the artificial tooth attached to the bridge broke off.”220 Because of the damage to her prosthetic, victim was unable to eat without pain, and the defendant was charged with aggravated assault.221 To sustain an aggravated assault charge the prosecution must show that the assault caused “temporary but substantial loss or impairment of any body organ or part,”222 and the defendant in this case argued that the breaking of the prosthetic did not qualify as a loss or impairment of a body part.223 The court agreed that the prosthetic was not a body part, but held that impairment of a prosthetic can in turn result in impairment of a body part (like in this case, where impairment of a dental prosthetic also impaired the victim’s ability to use her mouth) and that this indirect impairment satisfies the statutory requirement for aggravated assault.224 Thus, while reaffirming the distinction between organic and prosthetic parts, in practice the court held that defendants should be punished the same for assaulting a prosthetic user as they would be for assaulting someone with a fully organic body.

218. Schaffer, 48 P.3d at 1206.
219. Id.
221. Id.
223. Martinez, 203 P.3d at 521.
224. Id. at 523.
VII. TOWARD A UNIFIED TREATMENT OF PROSTHETICS AS REPLACEMENTS

Prosthetic limbs raise legal problems in many distinct areas. This Note has focused on the unique questions raised in the context of prisons, searches, workers’ compensation, and repossessions. As these areas indicate, there is little unity in how statutes and the courts treat prosthetics: in a situation where a person has been detained or imprisoned prosthetics are viewed by most courts as first and foremost a security concern.\(^{225}\) In a search situation a prosthesis is treated similarly to a complex medical boot: courts recognize that it is slightly embarrassing for the user to remove, but courts commonly decline to find that the invasiveness is any greater than having a person remove his or her clothes.\(^{226}\) In the context of workers’ compensation most jurisdictions recognize that a prosthesis is not just a helpful tool but a necessary device, which, if damaged, could prevent a person from working just as much as an injury to a person’s organic body could.\(^{227}\) Other jurisdictions, in contrast, see prosthetics as tools that do not merit compensation when damaged in a work-related incident. In the realm of salability, prosthetics are treated as perfectly normal goods (with the exception of internal prosthetics in some circumstances), but the fact that prosthetics are often uniquely designed for a specific person means that in practice used prosthetics are rarely sold.\(^{228}\) In a hypothetical repossession situation, a prosthesis being used cannot be taken unwillingly, as it has the same protection as any other thing worn on a person’s body.\(^{229}\) In the assault context a prosthesis is considered a dangerous instrument when used by an assailant, and a natural body part by proxy when the prosthetic user is the victim.\(^{230}\)

As these varied legal treatments indicate, the law in the United States currently has no unified vision of how to treat prosthetics. Some of the treatments recognize the role a prosthesis plays in the life of a person; others do not. All of them should.

\(^{225}\) See supra Part IV.
\(^{226}\) See id.
\(^{227}\) See supra Part VI.A.
\(^{228}\) See supra Part VI.B.
\(^{229}\) See supra Part VI.C.
\(^{230}\) See supra Part VI.D.
Treating a prosthetic as primarily a security concern in a prison situation ignores the international obligations of the United States, and more importantly ignores the fact that prosthetics are often essential in performing the tasks we commonly recognize as essential to basic human dignity: cleaning oneself, keeping in shape, and being able to move under one's own power. Recognizing that prosthetics are limb replacements and not just tools in the prison setting fulfills the international obligations of the United States, and also avoids a plethora of legal issues stemming from the Fourth, Fifth, Sixth, Eighth, and Fourteenth Amendments as well as the ADA. It also would realign the balance between security in prisons and the rights of disabled prisoners to help prevent future prisoners from having to go unwashed, kept confined to a cell for twenty-three hours per day despite having broken no rule, or having to hop or crawl to move about.

Treating prosthetics as replacements and not tools would also make sense in the context of a search, where removal of a prosthetic, exposing what some would consider an intimate part of the body, deprives the disabled person of a physical ability for the duration of the search. The degree of intrusiveness is thus clearly higher than that of taking off a shoe or shirt, and treating prosthetics as replacements would recognize this intrusiveness. A replacement perspective of prosthetics would also better prepare customs officials for the new level of technological complexity and expense involved in prosthetics. The more caution and deference to medical and technical experts that customs officials show when searching prosthetics, the lower the chances that damage will occur to what are now intricately crafted devices more expensive than the average car.

The adoption of the replacement view of prosthetics furthermore would do away with unequal treatment for the disabled in the realm of workers' compensation. As already discussed, jurisdictions that do not allow workers' compensation claims where only a prosthetic is damaged treat people who use prosthetics vastly differently. A person with a prosthetic limb and a person with a natural limb could be made equally unable to work by a work-related accident, but the person with the natural limb would receive compensation allowing them to get back to work, while the person using a prosthetic would be left to deal with the
damage without the aid of workers' compensation, despite the fact that a replacement prosthetic might be prohibitively expensive. The approach advanced in this Note would get that worker back to work, and would also acknowledge the modern reality that high-end prosthetics can return a much larger degree of functionality to a person than could the prosthetics of even twenty years ago. Furthermore, a replacement view would do away with unequal treatment in the context of an assault, where a prosthetic limb wielded in the same manner as a natural limb can lead to enhanced charges.

VIII. CONCLUSION

Artificial limbs are different from natural ones, but they are becoming more functionally equivalent. Soon the line between artificial and organic body parts might be blurred by advancements in how prosthetics are bonded to the human body. Even if this does not happen, we no longer inhabit a world where a prosthetic is just a carven piece of wood worn for aesthetic effect. The modern prosthetic is more than just a medical boot or glove, or a tool temporarily strapped to a person's body. Today taking a person's prosthetic hand, foot, arm, or leg can enfeeble him or her almost as much as taking a natural hand, foot, arm, or leg would. No one would seriously suggest that our natural limbs are no more than tools; the same truth should be acknowledged about prosthetic limbs, through the adoption of a replacement view of prosthetics. When a limb is severed, the rights attached to those limbs are also severed. When, to the best of our ability, that limb is restored, should not those rights be restored as well?