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IMAGINARIES OF THE FUTURE 01: BODIES AND MEDIA

Standards of Justice for Human Being and Doing in Kim Stanley Robinson's 2312 and C. S. Friedman's *This Alien Shore*

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The creation of superior societies and communities in which bodies live better and thrive depends on richly detailed accounts of imagined societies including flexible theories of justice that can be used to evaluate them. Both Kim Stanley Robinson's 2312 (2012) and C. S. Friedman's This Alien Shore (1998) attempt to rethink what bodies can do and be, by exploring ways of living together among those with different, and differently compatible, bodies. The novels are set in future spacefaring societies away from the Earth, which nevertheless struggle with the fact of Earth's existence. Each novel describes radical cognitive and bodily change: chosen alteration in 2312 and environmental transformation in *This Alien Shore*. In each novel, the body, and what bodies can do and be, is a central issue. But how might we evaluate the societies these novels describe to gauge their contributions to articulating desires for a better way of being? In this article I employ Martha Nussbaum's 'capabilities approach' (encompassing life, bodily health, bodily integrity, senses, emotions, reason, affiliation, play, other species, control over environment) to think about justice in the articulation of evaluative standards. In so doing the analysis I develop addresses some key questions raised by these novels, including: Whose body will matter? Will there be bodily norms? How will communities confront different bodily abilities? How can we enhance our own thinking about how to live in and among bodies? How does (and should) the idea of the body politic change when our expectations about bodies changes?

'Suddenly he remembered that in the actual flesh she was a big bag of problems' (Robinson, 2012: 300)

"... the messy experience of corporeality..." (Booher, 2010: 65)

Our bodies are a problem. And yet the problem of our bodies is not the problem that we need to solve. Our experience of living in our bodies, our corporeality, is messy – painful, oozy, creaky, misunderstood, mysterious. The problem is not the 'messy experience' of being in bodies, but living together with the bodies we have. We understand what the character Warham means in Kim Stanley Robinson's novel 2312 when he calls Swan a 'big bag of problems' (Robinson, 2012: 300). It is not that Swan's body is somehow the analogous 'bag' that is the problem. It is Swan herself, 'in the flesh': her body and the person she is within that body. Swan's body is unfamiliar to the reader: she is enhanced biologically and technologically. But Swan is familiar as a person. And the challenges of collective living are also familiar. So in this imagining of future bodies how can we see ways of unpacking that challenge?

I think that the answer is justice. Justice is the key principle for the body politic – another body, a social and political entity created to facilitate our living together. Martha Nussbaum offers a body-focused theory of justice in the capabilities approach: a way of thinking about justice as asking the question 'what are we able to do or be?' This article analyses two science fiction novels, C. S. Friedman's *This Alien Shore* (1998) and Kim Stanley Robinson's *2312* (2012), in order to evaluate the standard of justice set out in Nussbaum's capabilities approach. We need body-focused theories of justice in order to think through how to live together more sustainably. Theories of justice need to work from the fact (and fragility) of the human body. Nussbaum often grounds her own work in the lived examples of women whose lives lack particular capabilities. This article uses two science fiction novels to imagine the opposite: lived examples of bodies that experience living under these capabilities. It is useful to ground theory in the practical example. But the only practical contemporary example of individuals able to do and be as Nussbaum imagines are those with multiple and overlapping privilege (social, political, economic, geographic, etc.).

However, each of these novels presents societies that seem to think about what bodies are able to do and be in ways that allow us not only to appreciate these two texts' focus on bodies, but also to understand more clearly what Nussbaum's capability approach is arguing.

Both novels imagine worlds of different and differently compatible bodies. The narratives each take place in future spacefaring societies, away from the Earth, and yet struggling with the fact of Earth. Each novel describes radical cognitive and bodily change: chosen alteration in 2312 and environmental transformation in *This Alien Shore*. Each novel includes a rich description of humans living together that can be used as an experimental space for evaluating theories of justice. In order to understand these novels' contributions to imagining alternative bodies, theories of justice are needed to better understand both how different bodies live within such speculative future societies and also how these imagined futures challenge the idea of a unitary body politic. Nussbaum's capabilities approach offers a flexible theory of justice, one that illustrates both a way of evaluating the societies that these novels present and a context in which to see a theory of justice at work. Using these two science fiction novels therefore illustrates both the need for analysis of fictional space as a method of political philosophy and as an experimental space for evaluation of, in this case, a theory of justice.

In selecting these two novels for a comparative approach, we might note that they are useful for their similarities. Both novels are love stories and mysteries, the mystery in each case involving some group with particular animus against the main character and her allies. Both novels take place primarily in space, but each concerns life on Earth. Each novel richly describes a variety of societies, some of which are surely radically better than our own world, even if raising new challenges. And, finally, with the initial focus on bodies, each novel is interested in the fact of human bodies: Robinson's 2312 is, for reasons that I will discuss later, a neat fit with Nussbaum's capabilities, whilst Friedman's novel acts as a useful companion since its focus on the body offers a productive analogy with the bodies depicted in 2312. Different bodily expression in Robinson's novel is celebrated with a kind of freewheeling exuberance, whereas in Friedman's narrative world, the main character experiences an in-depth

wrestling with the fact of her own body and mind. In this sense Warham's contention in the epigraph above about Swan being a 'big bag of problems' is perhaps a truer claim about Jamisia in Friedman's *This Alien Shore* whose own body and mind are a problem for the reader and Jamisia to interrogate.

The article is divided into four sections. The first gives an overview and defense of Nussbaum's theory of justice as one appropriate for examining the question of future bodies and communities in science fiction. The next two sections look at the novels from two different perspectives: the absence of a bodily norm for humans and interpersonal discomfort around body type. Finally, the article concludes by analysing the dynamic of chance and choice: to what extent does the origin of bodily difference matter for justice?

Nussbaum's capabilities approach

Martha Nussbaum's capabilities approach emerges out of both the development economics of Amartya Sen and a critique of the social contract theory of John Rawls (see Rawls [1971] and Sen [1979]). Nussbaum's version of the capabilities approach is contrasted most particularly with Rawls' resourcist approach. Rawls' own *Theory of Justice* (1971) designates a list of 'primary social goods', which are defined as the things that need to be justly distributed within any society. This list is understood to include those things that any rational citizen would want to have in order to pursue her life plan. The original list of primary social goods consists of rights, liberties, income, wealth, powers, opportunities and the social bases of self-respect. These primary social goods are to be distributed in accordance with two principles of justice: firstly, the equal distribution of basic rights and liberties; and, secondly, the acceptance of an unequal distribution of social and economic goods so long as that unequal distribution includes fair equality of opportunity and benefits the least advantaged members of society.

The capabilities approach does not focus on how to distribute such a set of resources. Rather, it holds that the question 'What am I able to do and be?' is more central to realizing a just society than a resource-based question: 'In what way should we distribute this set of goods?' One familiar critique that capability theorists have with resource-based justice approaches is that focusing on a distribution of resources

imagines bodies that are essentially the same.¹ Citizens use goods in order to pursue their life plans, but such a theory seems ignorant of the varying needs of different bodies, some of which will require far more resources in order to pursue their life plans. Resource-based approaches use a set of resources as a standard for determining relative advantage; access to resources (who has what) will reveal gaps and areas for remediation.² But Nussbaum (and Sen) note that the ease of evaluating access to income and wealth (for example) is undermined when it is often not the resources but the *use* of resources and the potentially different bodily needs that matters most (Nussbaum, 2006; Sen, 1979).

The capabilities approach highlights areas where the *opportunity* for human functioning in the aspiration toward a life of dignity is essential. Nussbaum describes her capabilities list as 'a template for persuasion' (Nussbaum, 2017). And so the capabilities list provides abstractly both a standard for evaluating the justness of a given society or situation (as illustrated in the analysis of the novels below) and also a way into imagining human flourishing. Nussbaum's capabilities approach is then not simply a theory of justice for the here and now (and let's be clear we are far from even approaching justice under Nussbaum's theory). Rather, the capabilities provide a way into thinking about what we desire for the future. I would not go so far as to say that Nussbaum's theory is intended necessarily to be 'educating desire' a la Abensour: she is not asking people to desire differently, for example, however I do think that one can use Nussbaum to approach this educative role (see Nadir [2010]).

Instead of Rawls' two principles of distribution for the list of primary social goods, Nussbaum provides a list of ten human capabilities that set a minimum threshold for justice in any given society (each capability must be met for justice to occur). The capabilities, which are seen as entitlements, start from the idea that a human life should be one of dignity. That dignity is expressed not simply in the rights that you might possess but in the capabilities you have. 'We begin with a conception of the

¹ Nussbaum highlights the issue of human disability in her 2006 *Frontiers of Justice*, identifying disability as an 'unsolved' problem of justice (Nussbaum, 2006 [Cf. chapters 2 and 3]).

² Access to the primary goods determines the primary method for classifying the 'least advantaged'. This is the group that must be benefitted for Rawls in the second principle of justice with the unequal distribution of social and economic goods.

dignity of the human being, and of a life that is worthy of that dignity – a life that has available to it "truly human functioning" (Nussbaum, 2006: 74). This dignity is not a zero sum game. Human dignity need not be built on the denial of dignity to non-humans (as Nussbaum's argument about non-human animals in *Frontiers* illustrates). This is not the humanist dignity of Pico della Mirandola that valorizes the human over other creatures. And Nussbaum's is not a theory of justice that is built on the presumption of human rationality, for example. The language of functioning captures the being and doing that the capabilities seek to identify and then set as the minimum threshold for justice, the threshold for all bodies that a just society would be expected to meet.

The ten capabilities are: Life, Bodily Health, Bodily Integrity, Senses (Imagination and Thought), Emotions, Practical Reason, Affiliation, Play, Other Species, and Control over Environment (Political and Material). The first three concern the physical structure of the body, while the second three concern the body's desires. The next three concern the body's relation to others, and then last, control over the material and political world, focuses on what a body is able to do. The list is identified as being both changeable and flexible (now and into the future). But unlike Sen, who coined the capabilities approach but did not specify a list of capabilities, Nussbaum thinks that the specificity of a list matters for deliberating about justice, and especially for describing a society in which we might desire to live (Nussbaum, 2011: 27).

Let me briefly focus on two capabilities, bodily integrity and affiliation, to give a clearer sense of what Nussbaum means. Bodily integrity as a capability goes beyond the simple recognition, by others, of one's bodily autonomy. Nussbaum defines this integrity as 'being able to move freely from place to place; to be secure against violent assault, including sexual assault and domestic violence, having opportunities for sexual satisfaction and choice in matters of reproduction' (Nussbaum, 2006: 76). Having bodily integrity is not a matter of police protection

³ Nussbaum notes that the idea of 'truly human functioning' is from Marx's *Economic and Philosophic Manuscripts*. She uses Marx for an understanding of human life in its entirety, not simply as a calculating game.

or a pot of resources one could use to build walls or train in self-defense. Having bodily integrity means security from 'violent assault'. Is Nussbaum imagining a world where humans are somehow wired not to attack others? I do not think so (although I think Nussbaum's theory is amenable to such imaginings). Instead she is asking readers to think about just societies being ones that demand such security. How such a society might go about producing such security would be up for deliberation. However, seeing bodily integrity as integral to a theory of justice, and recognizing that integrity as demanding freedom from violent assault (and recognizing that such assault might be sexual or domestic in nature) and additionally demanding free movement, means recognizing the many ways in which we do not live under such conditions of justice. And, in part we do not (I would argue) because we do not consider these to be essential for justice. In the two novels discussed here bodily integrity is a challenge: Jamisia, the main character of This Alien Shore, is being pursued by those who raised her. And yet, despite these pursuers, she is encountering worlds and communities where the protection of her body is expected. Swan, of 2312, has a more fundamental expectation that she can go where she wishes and be who she wishes without an undercurrent of fear of violent personal attack.

Affiliation is defined as 'being able to live with and toward others, to recognize and show concern for other human beings, to engage in various forms of social interaction; to be able to imagine the situation of another' (Nussbaum, 2006: 77). Affiliation captures the fact of our living together, the need to facilitate institutions that enhance our understanding of how to live together (and to facilitate institutions that themselves mark the fact of living together: decision making bodies, workplaces, neighborhoods, clubs, etc.) and an acknowledgment that just societies include recognition of our interpersonal lives. To connect affiliation to a theory of justice requires thinking through the integration of individuals into larger communities as will be seen at the end of *This Alien Shore* and in the focus on interpersonal relations of interdependence that Robinson's protagonist Swan demonstrates with Warham and other characters in *2312*. The presence of these capabilities in these novels (or in other speculative fictions) does not necessarily constitute the overt presentation of a

society that has solved some entrenched problem of human violence.⁴ Instead, these novels reveal the being and doing of characters in a way that only becomes clear to the reader in retrospect as s/he realizes what is absent: obstacles in the form of security or health, or overall flourishing. The presence of these characters' capabilities is not, therefore, necessarily obvious to readers of Friedman's and Robinson's texts.

Whether the capabilities approach is the most compelling theory of justice is clearly up for debate.⁵ Among liberal theorists of justice the primary debate is between the resource-based and capabilities-based theorists of justice and rotates around a variety of issues, interrogating the meaning and the application of the capabilities approach. In the first category are those theorists who criticize Nussbaum for claiming the capabilities as functionings when they can seem to simply be resourcebased (Nelson, 2008). Others consider both the creation of a particular list of capabilities (Claasen, 2011), or the lack of prioritization in Nussbaum's list of capabilities (Arneson, 2010), and some think the capabilities as mandating too 'thick' a perspective on justice, one that people under Rawls' 'reasonable pluralism' would not choose. This latter group leads to the second set of issues around the capabilities: whether it stands up to key issues of justice when compared to a resourcist approach. So which approach best speaks to questions of gender inequality (Robeyns, 2010)? Or which approach works best for thinking through justice for people with disabilities (Richardson, 2006; Terzi, 2010)? Finally, there is an open question about Nussbaum's contention that the capabilities approach is compatible with Rawls' political liberalism: does the capabilities approach expect too much agreement on the idea of the good (Robeyns, 2016)? This article will not enter these debates within the particular readings of the two novels by Friedman and Robinson. Instead, I want to defend the

⁴ Although it could be argued that Marge Piercy's *Woman on the Edge of Time* (1976) is one example of a novel that thinks through the idea of personal violence overtly, highlighting what has been done in Mattapoisett to avoid such violence and also to point out the punishment for those who violate these strictures more than once.

⁵ I cite a selection of people working within this larger debate on theories of justice. I am not referencing here the particular work on the capabilities and human development. For further reading specific to the debate between Rawlsian vs Nussbaumian approaches to justice (Cf. Brighouse and Robeyns, 2010; Comim and Nussbaum, 2014; Watene and Drydyk, 2016).

proposition that the focus on the body offered by the capabilities approach provides a better argument for justice in a future society of bodies that we may not find wholly familiar.

Nussbaum's theory offers a window into thinking about future human flourishing through these ten capabilities, as discussed above. Resourcist theories protect the idea that one's reasonable and rational pursuit of one's own good is one's own business. However, these approaches are not equipped to recognize that such pursuits are, in terms familiar from Ursula Le Guin's short story 'The Day Before the Revolution' (1974), often 'the business of Business' (Le Guin, 2017: 494). This is not to say that one could not find ways to monetize the capabilities. However, in doing so one would have to move beyond simply selling people the idea that a meaningful life is a life of autonomous choosing. Rather, one would have to sell people on the idea, for example, that they already have the ability to be: safe, healthy, connected to other people and to the natural world, and able to play a role in the economic and political life of the society in which they live.

In other words, one does not get at the differences between the resourcist and the capabilities approach by simply talking about differences in individual desire. If the resource approach is insufficient it is not because some people have expensive and some have cheaper tastes (Broadway shows or movies; purchasing a Ferrari or a Chevy Malibu). Instead, a capabilities approach on what one can be and do might consider the difference in cost between the Chevy Malibu and the Chevy Malibu altered to accommodate a driver without the use of her legs. Surely this second Chevy costs more money – but is it right for a theory of justice to demand that the key issue for justice is the initial distribution of income (for example) rather than different bodily needs? The capability approach recognizes that bodily variation needs to be accommodated from the start of a theory of justice. We 'begin as needy babies, grow up slowly, and require lots of care. . . [we] may also have other needs, stemming from accidents or illnesses that put [us] in the position of asymmetrical dependency. . . if [we] live to old age, [we] typically need a great deal of care again and are likely to encounter disabilities, either physical or mental or both' (Nussbaum, 2006: 87-8). Care is often a bodily need, 10

and not one that simply disappears after infancy and early childhood. Focusing on what all bodies are 'able to do and be' means recognizing that it is the endpoint, the achievement of a capability, which matters. A Rawlsian approach, by contrast, focuses on the proper procedure, the rule by which the resource is first to be distributed.

Nussbaum recognizes that theories of justice do more than ask what is required to promote individual flourishing. She also sees that theories of justice themselves help shape how we might think about potential futures. 'A particular picture of who we are and what political society is', she writes, 'has for some time imprisoned us, preventing us from imagining other ways in which people might get together and decide to live together' (Nussbaum, 2006: 414). She is referencing here the idea of the social contract. An idea that has worked not simply to describe or even justify legitimate political arrangements but that has, instead, shaped the very way we think about such arrangements and thus our expectations in the future for altering those arrangements. And so the capabilities approach writ large, and the particular list of capabilities that she offers, can be read not simply as mapping a theory of justice, but also as a way to imagine the contours of our living together differently. Her list of capabilities is therefore 'aspirational but not utopian' (Nussbaum, 2011: 42). And she seems to imply here that to be aspirational is to focus on a realizable future, whereas to be utopian would be to imagine too far. However, this understanding of utopia as the shorthand for the 'too far', is needlessly constraining (for a theory of justice and an understanding of the utopian). The capabilities thus present a question about our future: what would it be like to be a body that was able to do and be in these many ways? As one considers the body from the perspective of dignity, one imagines being and doing in ways that are potentially utopian, radically better than our current understanding of how humans are able to do and be. Taking Nussbaum's capabilities approach alongside fictional depictions of future communities potentially reveals the utopian possibilities in the capabilities. Theories of justice 'shape our sense of what is possible' (Nussbaum, 2006: 415), and the capabilities approach as a specific theory of justice asks not just how we might live, but also who we are as beings in bodies. Furthermore, works of art facilitate our understanding of what justice looks like.

The novels I will discuss here address just these questions: they are stories of different kinds of life, with expanded ideas of how bodies can, and should, interact. These two novels by Friedman and Robinson imagine two quite different universes, but each suggests conceptions of justice that might expand our current understandings. Three particular aspects of the texts illustrate these potentially expansive conceptions of justice. First, both novels present societies that no longer have a human bodily norm. There are certainly bodily commonalities, but the idea of what it means to have a body, and the idea of what any particular body can do and be, have been expanded. Second, both novels present main characters that live in bodies that others do not entirely understand; yet the lack of understanding is not the problem we might imagine it to be. Finally, the novels both consider how much it matters for justice whether we choose our bodily distinction or are afforded it by chance. In what follows, I discuss each of these themes in turn.

Bodies without norms

Friedman's *This Alien Shore* (1998) is set in a world forever altered by space travel. Long before the birth of its main character, space travel opened a new frontier for an overcrowded and degraded Earth. But the consequences were radical genetic change for the travelers, hysteria about the possible 'taint' of such genetic damage from people left on Earth, and the consequent closing off of contact between Earth and any colonies. People on Earth developed a hatred for those 'Hausman Variants' whose DNA was forever altered by their initial trip into space. And the colonists developed a similar hatred for the people of Earth for their decision to cut off contact and thus vital supplies for the developing colonies.

The novel opens with the last-minute escape of Jamisia Capra from her corporate space station home, Shido. Shido took in Jamisia after the early and violent death of her parents in a building collapse. Jamisia eventually learns that she has been raised as a kind of experiment. Forces on Shido used her early trauma to try to fracture her mental states, in the hopes of creating an 'insane' personality to pilot space ships in the 'ainniq', the hyper-space of monsters connecting planets and space stations. Currently Guera, a planet of cognitive variants, controls who can move through space, because only certain Guerans have the 'talent' to pilot

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ships. Jamisia is clearly treated unjustly by Shido: her bodily integrity and health are violated when they refuse her mental health treatment after she is trapped in the collapsed building for weeks. Shido violates her capability of both emotion and senses by knowingly creating other personalities within Jamisia, without giving her any real knowledge or means of fruitfully connecting with those other selves. But the unjust treatment of Jamisia by Shido is not particularly contentious. Even the scientists who use her recognize that her treatment is likely wrong, but they still regard it as justified as a potential means for breaking the Gueran monopoly on space travel.

But the novel's treatment of Jamisia is focused less on pointing out the obvious injustice of her treatment than on introducing Jamisia (and the reader) to a world of diverse bodies and minds in space. In this world of radically different kinds of bodies and minds Jamisia discovers both who she is and how she can live with herself and others, as the body and mind she has been created to be. Jamisia describes the various bodies she first encounters after going into 'the up and out': an arachnid style human, a scaled human and an 'Iothan, whose facial features looked as if they had been randomly scrambled on a large, misshapen skull' (Friedman, 1998: 61). But she is more shocked by 'the Guerans – most terrifying of all! - whose mental instabilities mimicked all of Earth's ancient madnesses, who had no more in common with each other than she had with these Variants. Those were true Aliens in every sense of the word, and if they looked like real Terrans, that was only an accident of biology' (Friedman, 1998: 62). The Gueran variation is invisible (cognitive) and signaled to outsiders (although primarily only understood by fellow Guerans) by the habit of face painting to indicate their place in power hierarchies and their interactive comfort levels. This very multitude of bodies belies the possibility of a bodily norm. And while some people from Earth insist on seeing themselves as 'true humans', Jamisia has been raised to find humanity in a variety of iterations.

The universe of Robinson's 2312 (2012) is as just diverse in terms of the bodies it offers, but in 2312 bodily variations are almost all chosen by the novel's

characters. 'Spacers' are recognizable, to one another and to those who live on Earth, by the bodily variations that they adopt as well as their less comfortable relationship with Earth's gravity. Spacers might be 'talls' (over three meters) or 'smalls' (under one meter). Spacers are freer in their gender expression, including bodily changes; 'prenatally selected bisexuality has the strongest correlation with longevity' (Robinson, 2012: 229, extract 7). They seem more likely to acquire personal Als and spacers also live longer (particularly the smalls). The variations of size, sex, gender, length of life and enhancement matter in their particulars to those who have them, but the variations are so extensive that no one version of a human body stands in as the bodily standard within the novel. As in *This Alien Shore*, the diversity of bodies means that there is no bodily norm against which people are forever being measured and judged.

From the perspective of justice for future bodies we could consider ways of ensuring that the distribution of resources is not limited only to certain kinds of bodies. It might, however, be better to ensure certain beings and doings. Bodies might come in a variety of sizes and include different kinds of facial features, but what those bodies are able to do might matter for the worlds in which those bodies live. In *This Alien Shore* we see characters unable to move on their own and requiring carapace-like exo-bodies whose movement they direct, or networks of sensors that provide for the intake of external information. So, on the one hand, a just world is one that recognizes the humanity of varieties of bodies and, on the other hand, a just world is also one that ensures that despite bodily variation the doing and being – moving freely from place to place, affiliating with others, thinking, planning, playing – that all of these are available to people.

One consequence of living without bodily norms is that caring for others seems to be both more typical and less fraught. When Nussbaum emphasizes the need for a theory of justice that recognizes that we are interdependent, she means that we require care and the interventions of others not only in infancy and old age, but also potentially at various points throughout our lives. In both *This Alien Shore* and 2312 caring for others temporarily unable to care for themselves is presented as

something fairly ordinary. As clarified in the next section, caring for others is not a signal that one has failed to live up to the bodily norm. Instead, caring for others is simply a part of recognizing that what one's own body does may not be mirrored in the doing of other bodies. I use two quick examples here to illustrate why it matters to have no bodily norm in these novels.

In *This Alien Shore* when the head Guildmistress prepares for a meeting with the heads of the other space station guilds she prepares a room that will accommodate all:⁶

The chamber she had chosen was sleek and Spartan, as were most meeting spaces in the Guildhall. It wasn't so much an aesthetic choice as one born of necessity; so many of her people had visual handicaps or other sensory distortions that it was wise to keep the surroundings simple, efficient and uncluttered. . . The chairs were perfectly spaced, of course, and the monitors all adjusted to the same, precisely chosen angle. Any other arrangement would have resulted in a waste of time and energy for one of her most valued officers. (Friedman, 1998: 87–8)

Note the care taken here to set up a meeting room that accommodates the needs of all bodies, as opposed to using a meeting space to highlight the body of the Guild-mistress as the norm and thus to note the ways in which other bodies, whether visually disabled or obsessive compulsive, were failed or second class bodies. She wants to get the space right precisely because she lives in a world where bodily difference is not the means by which hierarchy is established (she does plan to wield the power of her office, but she wields that power in other ways, not through her body's different abilities).⁷

⁶ Arndt and Van Beuren also cite this scene in *This Alien Shore* to illustrate a similar point that Friedman's novel describes a community that accepts and recognizes all kinds of difference (Arndt and Van Beuren, 2013: 98).

⁷ In this the Guild of *This Alien Shore* has a somewhat opaque political structure and the power the Guild wields in terms of both the distribution of the power to run various space habitats and to control the resources available to the humans of those habitats reveals a larger political structure that might be hard to square with the capabilities approach.

Likewise, in a scene at the end of 2312 when a spaceship has to be quickly evacuated, readers are similarly introduced to the lack of a bodily norm and thus the lack of a hierarchy based on such a norm. As it quickly changes course, the spaceship's gravity increases radically just prior to the evacuation, becoming difficult for the people on board who are unaccustomed or not well-suited to a higher gravitational force. Many talls, for example, are unable to walk or even crawl with the sudden change in gravity. Working together, the smalls and other characters whose bodies adjust more easily to the higher gravitational force transport the talls and other affected people to the airlocks and help them into spacesuits, which will facilitate movement once secured. As Robinson makes clear, the bodies of the smalls are better suited to the higher gravitational force, which 'left them at weights that human muscles had evolved to handle' (Robinson, 2012: 549). But despite an explicit instance where one body is radically advantaged over another, there is a sense of working together in an emergency to ensure that everyone evacuates safely. There is no norm here, as is indicated by the fact that the spaceship is constructed in such a way that spacesuits fit all bodies and are available in lockers accessible from the floor (for someone crawling or rolling to access them). Furthermore, there is no norm in terms of the judgment of those whose bodies are not suited to the higher gravity. Swan notes at one point that 'some of these people might be complacent spacers and out of shape, and might have brought this on themselves' (Robinson, 2012: 551), but this judgment does not mean that Swan or other characters will work any less hard to help. Indeed, Robinson emphasizes how the smalls are pleased with their heroic moment, describing their 'faces suffused with a mad joy' (Robinson, 2012: 552) as they work together. But this is not an established hierarchy. It is a momentary emergency that highlights that no one body is seen as the norm in the world of the text.

These two examples highlight not only the absence of a norm, but also the presence of a capabilities approach to justice. While perhaps one could consider the second example (the evacuation scene at the end of Robinson's *2312*) through a resource-based focus, where access to spacesuits and egress from a ship in an emergency were perceived as rights and so to be distributed equally, it makes more sense to interpret the fact of equal resources here through the capabilities approach. People are

being made able to do and be, people are being granted bodily integrity, life, affiliation. The first example (the Guildmistress' preparation of the meeting room in *This Alien Shore*) highlights affiliation, a respect toward the differences people have in a situation of working together and then, importantly, control over one's political environment. As office holders, or Guildmasters, they are guaranteed the ability to 'participate effectively' when the physical space in which they meet is constructed so as to neither advantage nor disadvantage anyone.

The accommodations in *This Alien Shore* become clear to us initially through the injustice done to Jamisia as a child. By contrast, Swan in *2312* is relatively privileged, and justice can be harder to see given this privilege. Swan is not a child (even though she is sometimes childish). She is a spacer, from Mercury, whose life has advantages that people on Earth do not have. She is the granddaughter of the 'Lion of Mercury', and so has the advantage of proximity to people with power. She is an artist and designer who has the advantages of fame, talent and confidence in the work she performs. From the perspective of Swan's position, her world would seem to be quite just; she seems able to do and be what she chooses. But is this justice simply the benefit of her the privilege, or is it embedded in the principles of the world in which she lives? I would argue that one approach to identifying the justice of Swan's world is to reflect upon the way in which a wide variety of bodies are accepted in the narrative universe of *This Alien Shore*.

While humans on Earth in Friedman's text often refer to themselves as 'true humans' (Friedman, 1998: 126), a characterization disdained by all outworlders and some Earthians, the universe in which Jamisia lives is one with no real bodily norm. The different Hausman Variants have produced a wide array of bodies in which humans, recognized as humans, live. One's body can, as it does in 2312, however, signal one's allegiance: either to space and new opportunities, or to Earth and its isolationism and apathy. The body politics of both the up and out of *This Alien Shore* and the alliances among various planets and asteroids in 2312 are similarly diffused – made up of nodes, webs, lines of connection, and shifting allegiances. Absent bodily norms, and relations between and among the varieties of human bodies in this novel, are not based on hierarchies of standardization. This is not

to say that there are no hierarchies, nor to say that the hierarchies that do exist are necessarily just. But those hierarchies are built on systems other than bodily appearance or ability.

Does the lack of a bodily norm signal that these novels are presenting posthuman bodies? I argue no. First of all, these characters are presented as thoroughly human – as mattering as humans and recognizable as humans in bodies recognizably mortal, fragile and human. While Swan is enhanced, her enhancements have not changed her human nature (although other characters challenge this; see below). Second, the theory of justice I am applying to these novels is a theory of justice thoroughly informed by the idea of dignity that is amenable to the non-human animal, but not amenable (or at least not within this article) to the disembodied posthuman.⁸

How others perceive us

The issue that matters for justice is the *attitude* towards bodily variation. Jamisia has been taught to see all of these Variants as human. And as she wonders at the great variety of human life she also interacts with the niceties of cultural exchange which she has been taught. Gueran life is Other in a way that challenges her understanding. This is confirmed when the Gueran Masada, who is hired for his coding and decoding expertise, notes the fear that others, particularly earth humans, have for his kind:

Must I remind you how the Terrans feel about my kaja? The very cognitive style which makes me so valuable on Guera is considered "abnormal" among those people. They did everything they could to eradicate from their gene pool, and if by some luck chance it surfaces now despite those efforts, they

I am compelled, in part, by Michael Sandel's (2009) contention that our technological advancements are moving much faster than our ethical deliberation over the advantages and disadvantages, the social desirability, of biotechnology. Nussbaum's theory of justice, which is grounded on a claim about human dignity, and these two novels, whose characters are fully and messily embodied, are, in a large sense, all humanist texts. One way to think about that ethical deliberation is, again, to use novels. Cory Doctorow's *Walkaway* (2017) offers an excellent window into a conversation over the ethical considerations of going bodiless, of uploading ourselves. And I would argue that the novel enters this debate over the human and the posthuman with a rich appreciation for the doings and beings of bodies themselves (and a deep curiosity about the posthuman simulation). Even here the justice-based questions that emerge are largely questions for the embodied.

use drugs or DNA therapies to "correct" it. Even if the price of that correction is the crippling of a mind, the death of a unique human soul. (Friedman, 1998: 42)

Masada is giving another example of injustice here. If the first violation of bodily integrity and health is Shido's refusal to treat Jamisia's trauma, surely another form is found in the degrading of certain cognitive 'types'. Masada would be identified as having autism and a distinct ability to see patterns in code. Masada is not simply decrying the potential eradication of cognitive difference; he is also noting that the 'cures' for such difference will destroy the very person they are supposed to fix. Jamisia acknowledges her fear of Guerans, but she also knows (and thus the reader is encouraged to see) that the Gueran variations are not to be dismissed.

Other Guerans in the novel also address the 'cure' issue, some noting that they happily accepted a modification that would allow them to, for example, move freely in their bodies (correcting for genetic paralysis). Others echo Masada in their disdain for the harm such cures can do:

She could have had her brain repaired long ago so that her body moved of its own accord, but there was risk in that; the same techniques which would reroute the neural pathways in search of a more efficient cellular combinations might also do damage to the delicate system she relied on for thought. A woman from some other planet might have risked that, preferring to sacrifice a few fleeting thoughts rather than spend her life encased in this mechanized carapace, but no Gueran ever would. The legacy of Guera was in the minds and souls of her people, and like all her people, [she] revered the human brain in its natural form. (Friedman, 1998: 123)

This woman is not arguing that no one should seek to alter the way in which they were born. She is rejecting it for herself in particular, and then making a cultural claim about Gueran attitudes toward cure. But any monolithic interpretation of Gueran culture is challenged by other Guerans who have chosen such repairs. All of this shows that the distinction between Earth and Gueran treatment of cognitive

variation is less about the idea of the 'cure' and more about who chooses it and what it is supposed to accomplish. This is clarified by Hsing, who chose a body that would move: '. . . his own Variation had been corrected long ago. Some people made that choice. In his case it had been pretty simple, really, a choice between having a body that would reply to his commands and one that wouldn't. He'd had the procedure done as soon as he was old enough to make his wishes known, and had never regretted it since' (Friedman, 1998: 148). Hsing was able to make his choice after having spent some number of his early years (until he was old enough to make his wishes known) with the paralytic Variation. So it is clear that Guera does accept alteration when an individual chooses it.

Jamisia's own body suggests another way of thinking through Nussbaum's capabilities approach and future bodies in this novel. This is a future world where mental illness or intellectual disability, as we currently understand them, are solvable – through either fetal genetic diagnosis or mental health treatment. Earth has a method for eradicating these mental variations. Guera has a method for accommodating people with mental variations into the community. When Jamisia's own 'madness' is activated (in order to pilot the ship through the ainniq, because sabotage killed the Gueran pilot) she is taken in by Guera. 'Her nature is Gueran. She belongs among us. Maybe not by birth, but after what Shido did to her, she has no place among Terrans. Guera will accept her for what she is. . . . She'll have time to come to terms with what she's become. And in time she'll realize that on Guera she has no need to hide her nature' (Friedman, 1998: 564).

Guera is not simply a welcoming space. It is a community built around accommodating cognitive difference. Guera will give Jamisia the tools 'to come to terms with what she's become' (Friedman, 1998: 564). This is a version of bodily integrity that sees a 'nature' or a 'soul' based on the identity that Jamisia has been forced into (unjustly) by Shido. No matter how she came to be who she is, she now has a nature that needs both acceptance and tools. Guera offers a kind of just community for future bodies, bodies that we cannot simply describe as being cured. Guera has worked out a system of accommodation via implants, social customs and principles of interaction. These systems of accommodation recognize the capabilities. The system

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of face painting, for example, accommodates a variety of cognitive differences to the capability of both emotion and affiliation. By setting a system of human interaction visible in the lines painted on your face, Guera provides a system where people are able to connect to others on terms that are knowable and comfortable. It is a system that allows all of the various peoples of Guera to 'do and be' in ways that work for them. This kind of accommodation is open to a range of theories about identity. On the one hand, the woman in the passage above is making a claim that each Gueran has an essential nature in the givenness of their body and mind at birth. On the other hand, others challenge this perception of identity as given and instead claim that Guerans can alter their bodies and minds to better reflect their own wishes. Jamisia herself notes this tension in the opening chapters of the novel when she realizes that since she is no longer on Shido the restriction on adult bodily alteration no longer limits her. However, she also notes that Shido's celebration of such alterations is the celebration of a marketplace of alterations available for purchase and for status (Friedman, 1998: 59).

The Gueran system of signaling clearly to others whom one thinks of oneself as being, inside and out, is one way of approaching justice in emotion and affiliation; another way of approaching this justice is found in how we care for others, how we think of others as needy, and what it means to meet those needs. This caring is not simply a matter of charity. Caring for others as an expectation of a just society is built into Nussbaum's theory of capabilities: both in the expectations for bodily health and integrity (which will inevitably require care) and in the capabilities of affiliation, emotion and control over the environment. To take these capabilities seriously is to think about the giving and receiving of care seriously. This kind of care is illustrated in 2312 with Warham and Swan's early hike through the tunnels of Mercury after the destruction of Mercury's living space, the planet-circumnavigating city, Terminator. Swan has received a fairly high dose of radiation from the rising sun (they are walking in the tunnels to get to the dark side of the planet), and as they have been walking her body has been weakening. One day she falls further behind Warham and he goes back, finding her collapsed in the tunnel as a result of radiation poisoning. 'Like anyone he had done his share of diaper changes, on both babies and elders, and knew the drill. . . He finished cleaning her up, trying to be meticulous but fast, and then he pulled her arms over his shoulders and lifted her' (Robinson, 2012: 184). Warham cleans Swan's diarrhea quickly, efficiently and without much thought. It is something he has done before and, importantly, it is not something he associates merely with infancy. He worries about Swan, worries about what it would mean to be walking through the tunnels with her dead body, but he cares for her body's weakness with equanimity.

While cleaning her up he notes 'a small penis and testicles, about where her clitoris might have been. . . A gynandromorph; it did not surprise him' (Robinson, 2012: 184). When she awakens she is initially worried about his having to clean her up – but not because she worries *either* about his seeing her body or about his cleaning her waste. Rather she notes that she has ingested an alien life form that lives in her digestive tract, saying that some people are averse to her bodily fluids. Warham seems somewhat taken aback, but does not complain. After their conversation about the alien bugs he notes:

"You've done some strange things to yourself."

She made a face and looked away. "Moral condemnation of other people is always rather rude, don't you think?"

"Yes, I do, of course, but I was speaking of strangeness only. No condemnation implied."

"Oh, sure. Strangeness is so good."

"Well, isn't it? We're all strange"

"You saw another way I suppose." Glancing at her lap.

"Yes," Warham said. "Although that's not what makes you strange."

She laughed weakly.

"You've fathered children?" he asked.

"Yes, I suppose you think that's strange too."

"Yes," he said seriously. "Though I am an androgyn, myself, and once gave birth to a child. So, you know it strikes me as a very strange experience, no matter which way it happens." (Robinson, 2012: 186)

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'Strange' is being used here as a particular kind of descriptor. Swan has done unknown things to her body; that is strange. Childbirth and pregnancy – surely also strange! But Warham is not shocked at what Swan has done. He does not recoil in disgust; he does not expect Swan to react with shame. Swan experiments with her body – it is part of her art – and her tolerance for alteration is higher than Warham's. But Warham does not use Swan's 'strangeness' against her. Nor is he attracted to her through that strangeness; he does not fetishize her. Instead her changes are simply fodder for conversation. Warham is not surprised by the fact of Swan's bodily differences: he is simply interested (and this may be the initial interest of their love relationship).

Others are not quite so sanguine about Swan's bodily changes. But even in those cases the reaction is anger or exasperation, rather than disgust. Zasha, a former partner of Swan's, says to her: 'You are not the same person you used to be, you have to admit. You've stuffed your brain with augmentations - Now you've got that animal stuff in there, you've got Pauline in there, recording everything you see - it is not insignificant. It can do damage. You end up being some kind of post-human thing. Or at least a different person' (Robinson, 2012: 109). But Swan takes issue with these descriptions of herself as posthuman and of her actions as reckless and wrong. 'Oh come on, Z. I'm the same as I always was. And everything you do can damage you! You can't let that stop you. Every thing I've done to myself I consider part of being a human being. I mean who wouldn't do it if they could? I would be ashamed not to! It isn't being post human, it is being fully human. It would be stupid not to do the good things when you can, it would be anti human' (Robinson, 2012: 109; emphasis in the original). This exchange captures three important ideas. First, there is Swan's willingness to change her body: by adding an internally connected AI (Pauline), by ingesting tiny alien life to live within her digestive system, to alter her brain with added bird polyps. Swan embraces these changes; she chooses them and she is pleased (for the most part) with her choices and willing to live with their consequences. She claims that she would experience shame if she did not change her body. Second, Zasha's response is also typical. Swan is doing too much, and what she is doing is changing Swan in disturbing ways. Not only is Swan a different person; for Zasha, Swan is becoming something not quite human. Third, the novel does not give us an easy answer to this impasse. Has Swan changed her body too much? What is too much? What should the limits of such alterations be? Swan thinks of the changes as good ones; she notes that it would be 'stupid' to fail to do such 'good' things. On the other hand, she rarely pushes others to pursue such changes. She recognizes that even if she thinks of the changes as good, it matters what others think about them.

Perhaps what matters most is not the idea that Swan has chosen her modification, but the society within which she has chosen them. It would matter for justice if Swan's modifications were the sign of her privilege, or if she was pressured by family, friends or the tyranny of the majority, to modify in order to fit in. However, Robinson's novel gives no evidence of such pressure. As Zasha's critique makes clear, this is not to say that Swan lives in a society that is simply indifferent to what she has done. But what seems to be absent are recognizable systems of oppressive power shaping Swan's choices in coercive ways. As evidence for this consider the most Nussbaumian moment of Robinson's novel:

health, social life, job, house, partners, finances; leisure use, leisure amount; working time, education, income, children; food, water, shelter, clothing, sex, health care; mobility; physical safety, social safety, job security, savings account, insurance, disability protection, family leave, vacation; place tenure, a commons; access to wilderness, mountains, ocean; peace, political stability, political input, political satisfaction; air, water, esteem; status, recognition; home, community, neighbors, civil society, sports, the arts; longevity treatments, gender choice; the opportunity to become more what you are that's all you need. (Robinson, 2012: 529)

This is list 15, appearing a little more than three quarters of the way through the novel. Its narrator is not particularly clear (as with the other lists) and while it is not a description, necessarily, of Swan's society, it is closer to a description than mere wishful thinking (the novel has given evidence of most of these items on the list,

although that evidence is not conclusive for all members of Swan's society). The list might, at first, seem to be a list of resources; but, on closer inspection, it becomes clear that this is instead a list of things that people should be able to do and be. And the concluding remark 'that's all you need', nicely captures the list's normative intent. The list is clearly not someone's individual wish list; such a list could not be 'all one needed' if it was a list specific to only one or a small subset of people within a society.

Connecting this list to Zasha's concerns about Swan's becoming posthuman (some 'post-human thing') two points emerge. First, Zasha is not claiming that what Swan has done is unnatural. Zasha is not comparing Swan to some universal, natural human norm. Zasha's objections seem particular to Swan (Swan herself is changing) and seem rooted in Zasha's worry that Swan will irrevocably harm herself: Zasha cares about Swan and worries that the changes are dangerous. Second, Zasha is not disgusted by Swan's changes. She is not repulsed by Swan, exasperated, but not repulsed. Swan is not Haraway's cyborg, present to disrupt the perceptions of humanity of the society in which she lives. Swan is not so different from many others within her society and, as noted above, she is a relatively privileged member of that society. Jamisia is not privileged, but she is also neither the object of disgust nor taken to task for being unnatural. She is sought out because she is the result of an experimental attempt to create a human who can pilot the ainnig, she is classically treated as a means to another's end by Shido. But the worlds that she encounters in the up and out recognize her as a human deserving of dignity. In both novels the bodies of these characters are an issue for the novel but not necessarily a problem to solve. These novels present readers with bodies that challenge our understanding of what a body is and should be, but as novels they also encourage us (successfully, I believe) to see these characters fully, to recognize their dignity and their humanity.

Does choosing matter?

The above exchange between Zasha and Swan illustrates that how we see others matters for the ways in which bodies are able to be (and do) in the world. Zasha and Swan (who had partnered and parented a child together) do not spend as much time

together, in part because of these choices that Swan has made. So what really matters here? Is it the *fact* of choosing – both in who gets to choose and what it is that they choose – that matters most? Is it the consequences of such choices – the way in which such choices impact the way others see, interact and think about one that matters? Or is it the very idea of having a choice that matters for justice? Answering these questions is facilitated by thinking about the perceived opposition between chance and choice.

A Rawlsian resourcist approach to these questions might ask about access to the kinds of changes that Swan chooses – how are such bodily variations distributed among people as choices? On Nussbaum's standard of justice, the choosing might matter less than the consequences of the choice – how does Swan's being able to do and be in these ways potentially negatively (or positively) impact the being and doing of others? Swan clearly chose her own augmentations, even under the disapproval of family and friends. There is no evidence that there was systemic or structural pressure for her to act as she did. She has bodily integrity if she is able to choose for herself the kinds of augmentations that she wants. And yet Zasha's disapproval shows that such choices have consequences – not just for one's own body, but also for living among those who think that your choices have changed the very being that you are. Zasha gets to choose how much she wants to interact with Swan after these alterations. Swan chooses many of her alterations, but not all. The smalls and talls of 2312 are chosen for, their bodily expression is not based on chance. 9 But it is chosen prior to birth, and so it might as well be chance from the perspective of anyone chosen for. Having been chosen to be a small or a tall or a round has consequences for your life (smalls are best suited for longevity, for example) and the evacuation of the spaceship shows other advantages to being a small, but the advantages and disadvantages are neither linked to an issue of chosen or chosen for, nor are they based on established and already existing hierarchies understood by all.

⁹ Habermas (2003) objects that interventionist prenatal choosing for is a violation of the dignity of the person to come.

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But the tension here is a tension within normative bodily standards and systems of justice. We may know that we want to avoid the kinds of alterations Jamisia experiences: which are coercive, purposefully harmful, experimental and non-voluntary. But this does not mean that the Hausman Variations, those whose bodies were radically changed by chance, are experiencing the same kind of injustice Jamisia received from Shido. Again, what matters here are the consequences of those chance-based changes. Nussbaum argues that we need a system of justice that focuses on a life of human dignity. And it is the capabilities, the entitlement to be and do in the myriad of ways that Nussbaum outlines, which give foundation to that dignity. Swan is free to choose as she will because she lives in a system that supports choosing and respects that she gets to choose. On the other hand, Swan lives with and among others who are not always happy about her choices – perhaps for good and perhaps for not so good reasons. This is the familiar tension between freedom and getting along. If everyone's body is entitled to be and do then tension is an unsurprising consequence.

Robinson's novel describes Swan and some of her choices, eating the alien life forms and implanting an internal AI, as ones that few others in the novel support. In general Swan is a difficult character – demanding, capricious, passionate, easily bored and needing excitement. But Robinson's novel also shows Swan surrounded by those who love her, either through familial proximity or by their own choice. This issue lies at the heart of the capabilities. If we are living in a system that supports this minimum threshold of justice for bodies, if we evaluate human being and doing in the ways the capability approach outlines, then we are clearly living in a jumble of potentially competing and contradictory choices. Nussbaum does not order the capabilities; we cannot provide life and bodily integrity and then put off play or other species for some later moment in society. But it is not the fact of the choices that needs evaluation from a justice standpoint. Instead it is the consequences of the choices. This seems clear in the case of Jamisia as well; that she was treated unjustly by Shido is true, but not particularly helpful when you consider her future. Once an injustice has been identified, what matters is what we do as a consequence of the

injustice. Jamisia is offered a place on Guera, the place best suited to accommodate her particular body, the place where she is most able to be and do as she is at the end of the novel (and the best able to give her the tools to do and be differently in the future). The consequences of the lives that Swan chooses and that Jamisia experiences are what matters. These two characters allow readers to evaluate systems of justice, not life choices. And Nussbaum's theory is the one that makes the most sense of how we should live together.

The capabilities approach provides a framework for seeing why the positive interactions among characters in these two novels are not simply cases of people being nice or charitable. It is not that both Jamisia and Swan are the recipients of charity, surrounded by people willing to sacrifice to bring each into community. Instead, the capabilities approach reveals that these two novels include systems of interaction for differing bodies. But underlying all of the differences of these bodies is the common fact of any given body's fragility. Theories of justice need to acknowledge the fragility of the bodies in which we live. And while we live in those bodies we need a body based theory of justice. James Madison famously claimed in Federalist 51 that 'if men were angels' there would be no need for government (Madison, 1987: 319). Perhaps we too should analogously recognize that if humans had no bodies then systems of justice (or at least not ones we would recognize) would not be needed for our living together. But given the kind of humans we are, and also the bodies that we might become in the future, we need systems of justice that recognize our interdependence, and recognizing this interdependence means recognizing bodily diversity and vulnerability. Understanding justice as a system for breakable bodies living together does not have to mean limiting our imagining of what such future bodies might be. If our bodies are potentially problematic, particularly in the tensions of living together, we can ameliorate that tension with a theory of justice open to the idea both of our having bodies and to the different kinds of bodies we might have, now or in the future.

Competing Interests

The author has no competing interests to declare.

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