JOURNAL OF FUTURES STUDIES

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Futures of Genetics and Disability

EDITOR'S INTRODUCTION

The May issue of the Journal of Futures Studies is largely focused on the futures of genetics and disability. Many of the articles—the two pieces by David Turnbull, Sandy Taylor and Sohail Inayatullah—derive from a symposium held on the topic in Brisbane, October 7, 2002. In their own style, these articles attempt to develop a third space to understand the futures of genetics and disability, that is, a space that moves beyond the technospace (the imperatives of science) and the rights space (disability as natural with the onus on society to change its values and institutions). This third space, writes Turnbull, "is a dialogue in order to examine the possibilities and tensions between technically intervening in nature and endorsing and celebrating all our relationships". This third space accepts technology (but not uncritically) and social advocacy (and remains concerned of future generations) and seeks ways to combine them—structure and agency, if you will. Thus, both the position that technology will solve the problem of disability and the position that disability is not a problem are questioned.

Turnbull develops these arguments further in his article on eugenics, disability and justice. Sandy Taylor pursues this discussion through exploring specific complexities and implications of predictive medicine within the context of the inherited disease of Huntington's disease. Richard Smith develops his scenario-lite method to develop scenarios with the disabled. The variables he uses are: technology and the shifts in our sense of social responsibility. I engage in this issue by using the futures triangle, CLA and scenarios to map gene and disability futures.

Lyn Carter and Caroline Smith take a broader view, investigating the nature of science education and how futures approaches and methods can be used to revision and create a more open science education (moving toward the third moral space).

Marcus Anthony provides a critique of Michio Kaku's visions. He concludes that the book remains at the litany level, glossing over social, spiritual, ecological and moral issues—clearly a techno-utopian book, and from the first moral space as characterized by Turnbull.

The final related contribution comes from Sesh Velamoor. He provides us with a report from the Foundation of the Future 1000 year research program. Their focus was on the future human from three time perspectives: one generation (the next 25 years), ten generations (the next 250 years), and 40 generations (the next thousand years).

Jennifer Coote provides us with her regular Futurewatch report, and Colin Russo shows how community consultation used with causal layered analysis and action learning can lead to empowered communities —clearly moving in the third space direction.

The issue concludes with a poem from Alan Fricker, editorial board member, on tomorrow's modern futurist.

Sohail Inayatullah

Genetics and Disability: Exploring Moral Space

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Editor's Note:

The following text was delivered at "Genetics and Disability: Exploring Different Spaces, Different Futures" a workshop held on October 7, 2002, at the Brisbane Convention and Exhibition Centre by Queensland Advocacy Incorporated (QAI).

A workshop postscript

The following article, which was given originally at the workshop as a talk, discusses the idea of moral space. The Brisbane workshop on genetics and disability brought together a very wide range of people from clinical genetics, counselling, disability support groups and social advocacy, families and people with disability: all into one shared space. Such an event is very rare: I have never before been involved in this kind of interaction—much less organise it! One member of QAI (the social advocacy organisation for which I do bioethics work), said after the workshop, "Before October 7, I didn't even know genetic counsellors existed!" This comment mirrors a similar one made by Dr Michael Gattas from Queensland Clinical Genetics Service earlier in the year. Dr Gattas had previously been unaware of the existence of anything called 'social advocacy' for people with disability. This workshop was a very new kind of encounter for almost all participants.

So why talk about moral space? The reason I give to start with is that there is currently much confusion about what counts as 'moral' and in what space it belongs. Much of what is currently being written in the overlapping fields of genetics and disability simply reproduces this confusion and creates many more misconceptions. In what follows, I have attempted to point out some misconceptions about the relationship between science on the one hand, and ethics, religion and morals (perhaps termed by some, 'spirituality') on the other. Some people seem to think that these are implacably opposed, and that the one (whichever one is espoused) somehow has to extinguish the claims of the other. It is very convenient but misleading, for example, for a writer such as Lee M. Silver to say that objections to reproductive technologies are in the realm of spirituality, not science.[1] His argument depends on identifying claims about human freedom, dignity, and fairness as religious claims that are extinguished by science and reason.[2] In my workshop presentation, I have tried to show that science is, to the contrary, quite entangled with morality and also with politics, so getting the kind of neat separation that writers such as Silver envision is not quite so readily obtained.

However, I do think that making some separations in what I term 'moral space' may be in order, for the very simple reason that on different occasions, people may want to talk about, and prioritise, different matters. On some occasions, we all need to think through what is going on in different places (spaces) in which different

matters are prioritised. I have given a definition of moral space in the presentation and then I have described three kinds of moral space. I haven't attempted to name them as anything other than first, second and third moral spaces. First space is characterised by choice and control over nature. Nature is seen as defective: as requiring technical intervention in order to create improvements. Second space is characterised by an emphasis on a wide range of 'substantive goods': those things in life we are presumed to have at our disposal already, through nature and through relationships of equality and the utilisation of capacities for support and caring—all able to be appropriated given sufficient freedom from oppression. From the perspective of this space, a singular emphasis on technical intervention may be regarded as a threat. Third space is a dialogue in order to examine the possibilities and tensions between technically intervening in nature and endorsing and celebrating all our relationships.

The hope for the workshop was that all participants would gain some realisation of the possibilities inherent in third space during the event. The aim was to achieve a space in which we could step back temporarily from our most pressing commitments so that almost anything, just for a moment, might seem worthy of consideration and that even our most cherished ideas might seem able to be reviewed in the light of fresh insights and information. We hoped to begin to model an open discussion in which various potentially conflicting ideas are listened to. I do not know to what extent we succeeded. The answer to that question is not very important. The workshop was, after all, just a beginning.

October 7 2002 Presentation

There are two main reasons why I have chosen to talk on moral space in the context of a workshop on genetics and disability. Moral space can have both positive and negative qualities. We need to draw on its positive qualities to create a better approach to this topic than is often given, for example, in mainstream political processes. I will give some examples of what is lacking in the mainstream political process shortly. We need to talk about the negative qualities of some current types of moral space in order to correct quite unnecessary practices and perceptions of what is taking place at the intersection of genetics and disability.

But what is moral space? Moral space is what we live in, all of the time, and often without giving it the attention it deserves. It is any space formed from the relationships between natural and social objects, agents and events that protect or establish either the conditions for, or the realisation of, some vision of the good life, or the good, in life. You will notice that this is a very broad definition and could easily encompass something like a war zone. You will also notice that this conception of moral space places the emphasis on relationships, but not only human ones: all relationships are significant. This is a relationalist, as distinct from an absolutist conception of moral space.

Fig. 1

What is moral space?
Moral space is any space formed from the relationships between
- natural and social objects, agents and events
- that protect or establish
- either the conditions for, or the realisation of,
- some vision of the good life,
- or the good, in life

Speaking of positive qualities, what the organisers of this event have attempted to create is a moral space that meets, as fully as possible, a number of conditions that we think will be conducive of an ethical engagement around the topic of genetics and disability. (Here, on the day, I described the objects, the technology, the windows and doors to the environmental surroundings, and the way the use of the space creates possibilities for the future, and for the production of other similar spaces...)

So the first reason for talking about moral space is to draw our attention to the positive possibilities inherent in this space. These possibilities are a combination of what we choose to do with the objects at our disposal, and the inherent qualities of both ourselves and those objects. Thus I will say that moral space is constituted by both

volitional qualities (power to make choices) and by substantive goods. It is this duality of moral space that I want to say much more about.

Fig. 2

Duality of moral space:

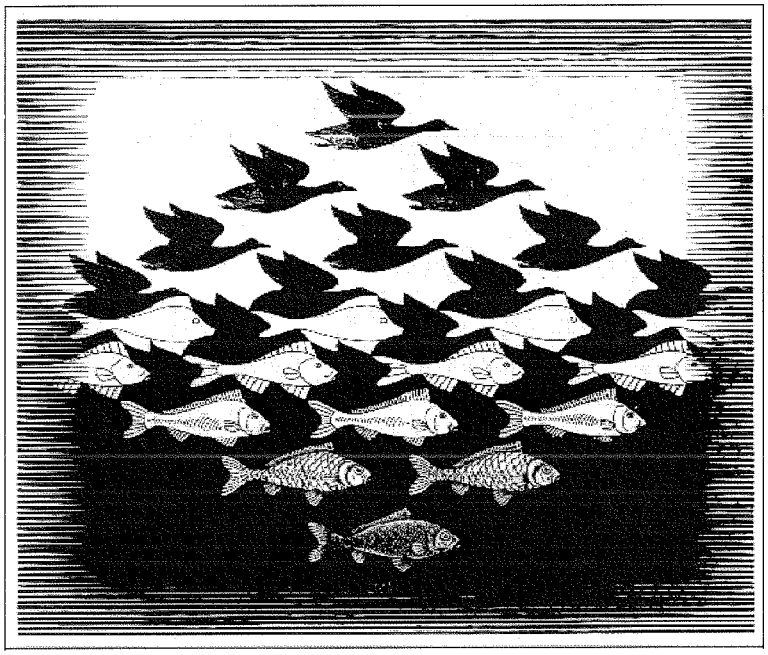
moral space is constituted by

- volitional qualities (power to make choices)
- substantive goods

Moving on now to the second reason which deals with negative qualities. To recognise that moral space exists in a relational sense is one thing. To describe the manner in which it exists—to say what we know about it—is quite another. When it comes to issues of genetics-that is, the science of genetics-there is a conventional way of talking about science and its moral place in society—a rhetorical mould—that genetics seems to fit. I am going to say why I think the conventional account is misleading and has quite negative repercussions.

In order to provide a graphic metaphor for the conventional account, let's look at the Escher work, "Metamorphosis".

Fig. 3



In this picture, fish do not become ducks. Rather, the dark space around the white fish becomes a duck shape, and out of that duck shape, black ducks fly off into the white space of the sky. It is a pictorial study in how ideas become representations of reality. For some it seems, this pictorial representation becomes an absolute version of reality. From here a further account can be given of how people come to tell the conventional story of science in society.

In the conventional account, science is represented as coming out of the spaces left over from ancient practices of witchcraft, sorcery, alchemy and religion. All this is regarded as just so much superstition and ignorance. Science brings about the separation of moral spaces so that a clear perception of reality can hold sway over what is unclear and confused. Science is truth, enlightenment and the path to freedom. Science is like the winged ducks in the Escher work, becoming disentangled from the dark bondage and the murky depths of the human unconscious.

From this perspective there are at basis

only two forces: moral light and moral darkness; truth and falsehood. It says that those who would oppose the progress of science only have access to distorted representations of the world in order to get their message across to an equally unenlightened audience. It is remarkable how convincing and persuasive this rather stark contrast sometimes appears. The question is: Why does this portrayal of two opposing forces, and thus in a real sense two opposing uses of moral space-two opposing moral spaces even-seem to make so much sense to so many people? How is it that media representations of current debates in genetics and disability seem so clearly to conform to this conception of moral space as constituted by inherently adversarial agents and conflictual events?

My suggestion, and one given also by many other scholars, is that the answer can be found in cultural, philosophical and theological representations of moral space that have originated in and been passed down to us from a variety of converging historical traditions. In order to help our thinking about these issues I will talk about first, second and third moral spaces.

In brief, first space is characterized by voluntarism (free choice of ends) and by control over nature. The key point is not that all choices are free, but that at the locus of control, there is assumed to be a freely willed decision. The voluntarist assumption of modern science, plus its concern to control nature and the concentration of resources into this project, is what marks out first moral space. So first there is a choice of ends; second there is discovery (or production) of the means to achieve those ends.

Fig 4.

First moral space is characterized by:

- voluntarism (free choice of ends)
- control over nature
- concentration of resources into this project

The term 'first space' gives recognition to the dominant place voluntarism occupies in this society and the modern world. Its rise to prominence can be traced to political developments from the 16th century onwards. Voluntarism is, in itself, a metaphysical belief that was adopted by influential early modern thinkers such as Descartes and Newton. Descartes used the doctrine as providing legitimacy for setting up natural philosophy (modern science) on independent foundations to theology. According to this rationale, scientists can discover what God has willed concerning nature, by examining nature's order and regularity. To the extent that science can control the course of nature, that also falls within the scope of the divine will. Thus, for example, if science can discover the means to alter the course of an illness, by providing a method of recovery rather than accepting death as inevitable, science is merely co-operating with an already willed-into-existence divinely planned natural order. This lays, in theory at least, the foundation for the separation of science from religion, because science is able to discover, quite independently from religious teaching, what is and what is not possible to effect within the natural order.

However a problem emerges for this bare account of moral space. This is moral space stripped down to two ontological ingredients: atoms and choices. There is, in this space, no substantive account of the good. So second space emerges as a re-assertion of much more full-blown, substantive accounts of the good. But because science has in a sense forced the separation, second space becomes identified with religion, superstition and ignorance, by those who have believed that science gives an adequate account of everything.

Yet separated from its theological and cultural-humanitarian roots, and if effectively unopposed by second space traditions, science may descend into such practices as were devised by the Nazis. The reason is simple: Voluntarism does not provide a substantive conception of the good. The good merely is what is chosen. This

creates a radical problem for theology and cosmology; particularly when presented with claims about evolution and the struggle in nature for domination and survival. How can evolutionary struggle, with its complete disregard for the experiences of its combatants, be good in itself? But, some proponents of science claim to answer this question by limiting the scope of its concerns. On a more restricted level of human actions, if there is a moral exemplar, then science escapes some, at least, of the charge of being an open license. Put quite simply: if a procedure is technologically possible, and it is in accordance with accepted moral exemplars, then it is a legitimate activity for science. But what is an example of this? The entire Judeo-Christian as well as the Hippocratic tradition authorizes and gives many examples of healing, thus paving the way for the moral basis of clinical medicine. This suggests, however, that substantive conceptions of the good may be smuggled into the project of science as a means of its legitimation, or of protection against claims that it is amoral. The reason for this 'smuggling' operation, is I suggest, because there is assumed to be an adversarial relationship between first and second spaces, understood simplistically as an opposition of science and religion. Contrary to this assumption, I would argue that science requires these substantive conceptions not just for its legitimation or for its own protection, but for an adequate development of moral space into something that is not inherently adversarial.

Fig. 5

Second moral space: substantive conceptions of the good
Examples may be found in:
- Judeo-Christian and Hippocratic traditions
- many instances of healing

But what substantive conceptions of the good are actually being presented on the world political stage, as reported in the media, regarding genetics and disability? Some claimed substantive conceptions of the good are hardly re-assuring; and there is,overall a distinct absence of discussion about the good, substantively speaking. The focus, it seems, and nowhere more than in genetics, is more about promoting the expansion of choice or about combating a vaguely discerned evil in the practices of science, than promoting something that is a distinct good.

Here is an example from the recent flurry of debate about embryonic stem cell research. One of the voices in opposition to the research was a theological college lecturer who said:

> The Christian objection to these practices, shared by many in this community, is that despite the possibly positive outcomes, we are turning into a society who consumes our unborn for our own benefit.[3]

Clearly the objection is in the notion of "consuming our unborn", an oblique reference to cannibalism. However in no sense could this be said to be literal cannibalism, or even literal consumption. The embryos used within embryonic stem cell research do not even, in a literal sense, have anything to do with "our unborn." The embryos in question were never, ever, going to be born. They are not even in a human body. They are pre-implantation embryos. The moral space that those embryos are in, consists of scientific equipment, and scientific hypotheses about the uses of stem cells. As well, they exist quite literally frozen in time. One has to be an objector to IVF in the first place, to even begin to mount a credible opposition to embryonic stem cell research on the basis of it being intrinsically wrong.

The objection raised by the theological lecturer makes no strong impact in the ears of scientists because it uses metaphorical language to describe the claimed wrong. And that is about as close as that form of objection can get, in the minds of genetic scientists, to identifying something that is in itself wicked or repulsive. Somehow pitting this sort of metaphor against science does not really work. And the reason it does not work for people who believe in science,

is that they believe that science does in a literal sense—that is, in a clear and unmistakable sense—provide real answers to real problems. From his own written word, the theological lecturer confirms the suspicion that many people have—that religion deals in indistinct and hazy ideas that only persuade those who already want to believe the pronouncements.

Outside of mainstream Christianity, such anti-science metaphors abound also. The earth, according to some indigenous and ancient pagan traditions, is a mother. The contemporary pagan revival takes up the same theme. Science, in sinking mine shafts into the earth, is raping the mother; in creating technological cities all over the earth based on the products of that mining, science is polluting and defiling the body of the mother. Scientists can see no point to such claims. Reality after all, is made up of atoms and molecules, not metaphors. Do metaphors build bridges, maintain hygiene and heal diseases? Science seems like the winner of this particular debate.

And yet this is overstating the case for science. Not all that science delivers is clear and distinct ideas and real results. Often science produces an array of vaguely described entities, unclear statistics and imprecise future projections, invoking an equally impressive vocabulary of metaphor. What greater metaphor can there be than the idea of a 'genetic code'—literally an actual language at the level of molecules. Does messenger RNA literally take real messages to other molecules? There is an ambiguity here. There is either a real message—a piece of real language—or there is not. Science seems to make great mileage out of this ambiguity. So let's put the onus back on science. If science is reducible to the motions of atoms and molecules, (or their subatomic constituents) then how is it that a code forms the basis for life? Perhaps science has re-discovered its theological roots, in the theological claim that the world was spoken into existence by God. If that is so, then it is little wonder that the genetic origins of life exist in coded, meaningful form. There is certainly no doubt that the social and cultural origins of life is richly imbued with meaning, not just in written codes, but in the significance of all the agents, objects and events that together, form moral space. Indeed, there are many meaningful ideas of a philosophical and a theological nature that are not in themselves scientific discoveries, and these are just as clear and distinct as anything science has to offer.

What these examples demonstrate is that moral space, as divided in this way into two adversarial 'camps' has a number of negative qualities—it has some casualties—not the least being genuine metaphysical honesty as a result of cheap point scoring. In the contest for moral space, it has to be said also, science is not above politics. And where there is politics, particularly the current American or Australian varieties, there is often confusion.

In America, right now, there are two opposing politicised uses of science, coming out of two implacably opposed camps: 'pro-choice' and 'right to life'. On the one hand, there is it is claimed "a booming" industry in pre-implantation genetic diagnosis.[4] The issue here is choice, and the ability to have a "designer baby". On the other hand, the Bush administration has just extended health care benefits to foetuses, including the foetuses of illegal immigrants.[5] What this means is that whilst an illegal immigrant herself has no rights to health care, her unborn baby, conceived on American soil, does. In effect, if there were to be a situation in which a mother's health was endangered by her pregnancy, and a decision had to be taken as to whether to save the life of the mother or the baby, in the case of an illegal immigrant, all the rights would be on the side of the baby. The moral of the story? Science, just like religion, does not operate in a political vacuum, and the uptake of science is not just along unenlightened religious/enlightened non-religious lines. Questions about the political uses of science demand a more philosophically and socio-culturally astute examination of moral space.

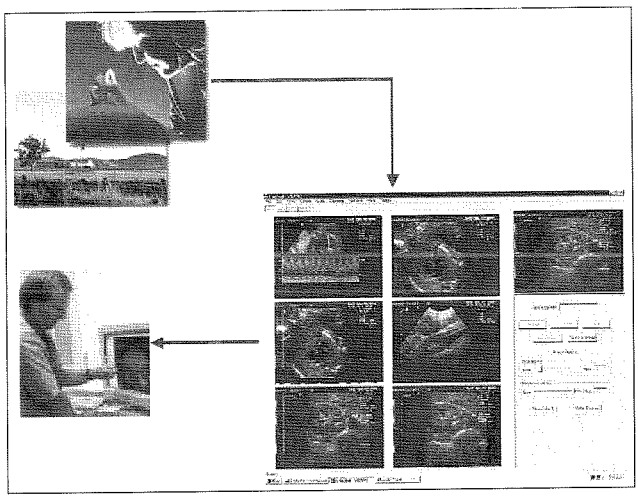
So if various political proponents use both science and religion within genetics debates to provide a stock of metaphors and myths that can be grasped and used to foster to political ambitions, what are the implications for moral space? Is there room for human beings to be moral beings at all in these spaces? And by 'moral', I mean something other than being driven willy-nilly by social or biological forces. Rather it is to seek to

act from a position of understanding and responsibility towards what is going on. Or are we simply to resign ourselves to whatever rhetoric is being used at the time? The issues have to do, quite distinctly, with how we are to come to terms with both choice and with substantive goods in the creation of moral space. Let us focus for now on science. What we need to understand is how science alters moral space, and whether in that alteration there is still room for all people to move as moral beings.

Science, space and morality

In a quite realistic sense, science can cause space to expand and contract. Space, according to relationalists, is the relationship between its constituents. We used to think we knew about the magnitude of space, in absolute terms, from the distance by which objects are separated. But now science can reduce the effect of separation between distant objects very considerably. Not only this, science enlarges the microscopic and sub-microscopic dimensions of the world, and projects them over distances that now only seem vast to those who want to limit themselves to the immediate dimensions and capacities of their technologically unaided physical bodies. This is not just playing with perceptions. It is in some sense, a real reduction of distance, and a real magnification of very small objects. Both these events alter the impact of space, and make it more under human control. This creates freedom, because people do not have to travel by foot, horse or car over long distances, or be constrained to simply remain in their remote houses, unable to access the new services. In Australia, this is very important politically: it enhances the ability of people to live in the bush and be the beneficiaries of modern modes of living.

Fig. 6 Telemedicine: having an ultrasound in the Australian bush



But where might this kind of reflection lead us? Perhaps these technical feats trick us into believing that science can accomplish anything, and people will be able to live, in a moral sense, anywhere. But there is still a difference between these notions of scientifically altered space and pre-existing experiences of space from which questions of substantive good have arisen. And these pre-existing experiences quite easily come back into our worldview. The language of scientifically altered space gives us a metaphor of space as under human control, but it is not the full account, because there is no total human control over space. To be pregnant, in labour, and stuck in the outback in the middle of floods with no technological connections to the outside world, is still in a very real sense to be back in the old conceptions of space. Communication thus becomes a very important shaper of space. Without communication, even very small dis-

tances between people become equivalent to very large ones. With technologically assisted communication, large distances become in some sense small; but then other vital communicative feats, like eye contact, may not be possible. The effect of these intersecting realities is that our notion of space becomes more complex. For example, the very idea of a doctor inside a busy city hospital examining the body of a pregnant woman on a remote rural property, but unable to respond to the body language of the patient, contorts previous understandings of doctor/patient relationships.

Examples such as this raise questions about, for example, moral communication. What communication gets lost or distorted over scientifically altered space? Then there are questions about results and their meanings. Will the doctor be able to deliver a more perfect baby as a result of the technology? But what does 'perfection mean'? Does it mean something like 'a perfect fit', as we would describe a shoe? There are also questions about moral authority. Who determines what has to be fitted to what? And will science also give us the knowledge of how to deal with these perfect babies, so that people don't just walk outside and make a mess of the nice new human being to which they have given birth? Even if there is enough knowledge available, is there sufficient strength of human will and character to carry these exploits through?

Then there are also questions about the difference between individuals, families, communities and entire populations. When genetics becomes applied to these various constituents of moral space, different results occur. For example, take the use of the now standard medical procedure for new-born infants, the Guthrie test.[8] This test is to identify the presence of a quite rare genetic disorder, PKU. PKU, if untreated, leads to severe intellectual disability in the child, who will certainly be unable to grow up normally to have children of her own. At an individual level, PKU is treatable through modified diet. Children who are treated by the special diet may grow up to have their own children. More of the genes for PKU are thereby passed on to successive generations. This has significant population effects. The prevalence of PKU is thus likely to be increased, not decreased (i.e. the eugenic intention of science creates dysgenic effects). There is a continuing onus on medicine to monitor PKU. At a political level in America, there are no health care benefits to supply poor people with the modified diet necessary to counter the effects of PKU. The diet is expensive. It is also bland and unappealing. The result is that there are children who begin life on the diet, but later go off it for social reasons, who then develop symptoms of the condition. They live their lives in a kind of twilight zone between normalcy and full-blown PKU. PKU provides an exemplary tale of the intersection between genetic science and disability. What then is the appropriate response to disability that is, in a strong sense of the word, caused by genetic science and its failures in a particular political environment?

All these questions and more arise because of space—space that has been interfered with by science—and therefore space that is altered in a moral sense as well. When science changes our concept of space, of the experience of space, and of what space is, we have to ask different moral questions.

So let's recap. The conventional account is that science gives us truth, and through truth, freedom; all other accounts are equated with superstition. Yet there is the potential to be tricked into thinking that we are freer than before. Science uses metaphor no less than its critics. New moral questions arise concerning our ability to make the most of new scientific possibilities even if they are presented to us. Therefore, the conventional account has to be questioned. The way I started to do this is by looking at two kinds of approaches to moral space that supposedly come into conflict with each other because of the scientific worldview. But when we do look at them together a plethora of questions start to arise.

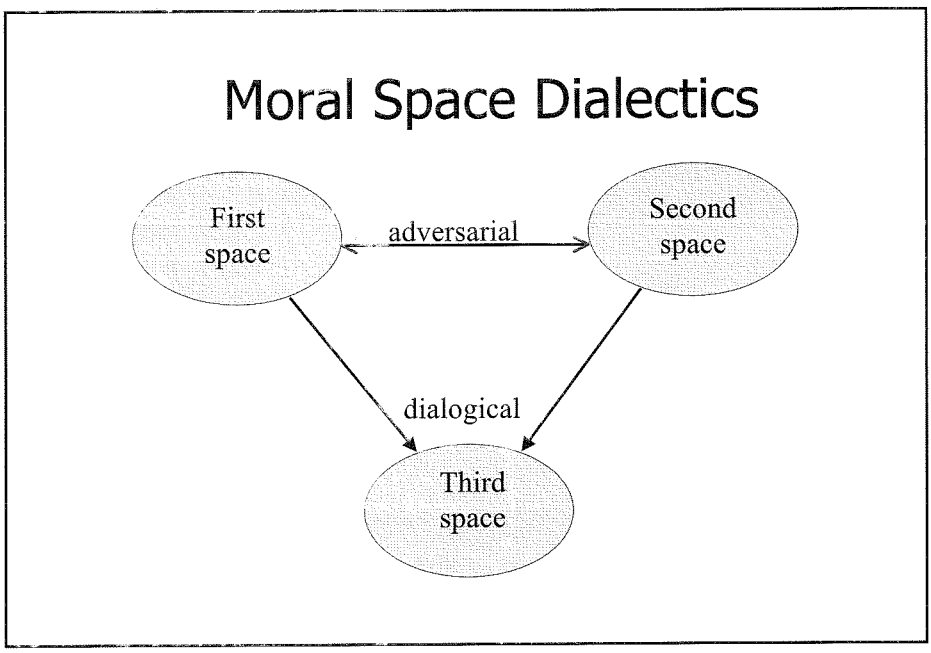
Fig. 7

The conventional account

- science gives us truth, and
- through truth, freedom;
- all other accounts are equated with superstition

What I have tried to do as a way of getting at these questions is argue that, rather than see them as necessarily conflicting, these approaches require one another as a conjoined duality. Though there is an apparent duality of moral spaces, neither approach can exist without the other, and still give us the capacity to be ethical. By our 'needing both aspects of this duality', I mean that we need both aspects to retain a capacity to make choices between substantive understandings or representations of the good. So conjoined to the increased opportunities for choice created by science, we do need substantive conceptions of the good. This might lead us to speak of 'third moral space'—a space made up of both approaches—and if that helps us think more clearly about, and discuss through open dialogue the situation we are all in, this will be one small improvement on the current spate of claims and counterclaims about who is being unethical. I shall term the entire process: moral space dialectics.

Fig. 8



There are many substantive conceptions of the good and talking about them all right now is beyond our scope. But the following are examples of conceptions of the good that have to be considered.

One claimed substantive good is a 'natural right' of persons—the right to be not interfered with or threatened in one's own person. This right is independent of anyone's will. The good protected by this natural right is having personal

integrity and a level of appropriate autonomy. But what level of autonomy is appropriate? That might be said to be determined by the good (e.g. wellbeing) that can be achieved or realised through the exercise of autonomy. However the difference in this conception from voluntarism is that the good is not produced as the good by that exercise of autonomy. Autonomy is merely the means to realising the good.

Another is the claim of a need for social justice—to have equal access to and participation in the goods of social life. The good in this case is not in the participation itself or in the contribution one makes (those merely define a person's life as social), but in the achieving or realising the goods of social life. But not everything that is social, or originates in the social, is good. Examples of particular social goods are friendship, work, play, recreation, shared imagination and invention. Achieving social justice requires achieving a higher order synthesis of these goods; these have to be arranged together in a balance that is evidenced in lasting happiness, fulfilment or satisfaction or some such measure, for all people (not just some or a majority). What social justice demands is access to the goods in social life in a balanced measure.

Another good is the right to be different. The good, in this case, is not in diversity as such, but in there being a number of different ways to being human. The good is in being human, in whatever way is unique for the particular human being, and in being entitled to an appropriate amount of respect from others. This again is not to say that all ways of being human are equally good. What the non-voluntarist conception of being human says that this is a matter for discovery, as not being brought about because it has been willed. Second space thus allows different humans to find different kinds, ways and means of good in being human and that there ought not to be any prejudicial treatment meted out, just because of difference.

From the basis of these substantive conceptions of the good, a number of projects follow. Social welfare, job-training programs, affirmative action, public education all derive from the view that there are substantive goods to be realised, and are worth defending against goods that derive solely as a result of acts of will and technical power. It is evident that second space projects are much more demanding than first space projects. Mere acts of will and technical expertise are much easier to arrange than the multitude of social projects that each individual life requires to fulfil anything like balanced happiness, fulfilment or satisfaction. And because of the impatience with such projects, or their costliness, first space assumes dominance.

Fig. 9

Substantive conceptions of the good (there are many)

- a 'natural right' of persons
- social justice
- friendship, work, play, recreation, shared imagination and invention
- a higher order synthesis of these goods
- different but equally respected
- social welfare, job-training programs, affirmative action, public education