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Charles S. Cockell *Editor*

Dissent, Revolution and Liberty Beyond Earth

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Dissent, Revolution and Liberty Beyond Earth

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Preface

Faced with a political decision, a law or even an entire government that we find disagreeable, how are we to dissent? The question has perplexed social scientists for a long time and the resolution to this question has been extraordinarily diverse. From a minor and non-violent act of civil disobedience (such as refusing to pay taxes) to a full-scale geographically widespread bloody revolution, humanity has embarked on a dizzying array of methods to change ‘the system’.

However, it is not clear if these methods (or at least the ones we might decide are desirable) can simply be transplanted into the space frontier; for example, a revolution that destroys infrastructure and causes depressurisation might kill everyone. Consequently, it is necessary to embark on a new discussion on the nature of dissent in space. How can we go about disagreeing with, and changing, the structures of governance put in place? How can liberty be preserved in the process?

On 11 and 12 June 2015 we continued the third and final discussion on extraterrestrial liberty begun by the UK Centre of Astrobiology and the British Interplanetary Society in 2013. It focused on the means by which dissent can be organised in outer space. It built on the previous two volumes resulting from our meetings on extraterrestrial liberty. The first volume examined the more general idea of what liberty is beyond Earth and what conditions might be necessary for liberty to survive in the extreme conditions of space (Cockell 2014). In the second volume, we took these concepts of liberty and gave them form by considering in more practical terms governance structures in space and how they might influence the type of liberty experienced by people in space (Cockell 2015).

This third and final volume in our trilogy on extraterrestrial liberty considers how we might rebel against the very social and governance structures we have created in space. How can we disagree with or dismantle organisational structures that no longer serve the purposes they were intended for?

We, the authors, would like to thank the British Interplanetary Society for supporting the discussion that has led to this collection. We would also like to thank Ramon Khanna and Alessia Valdarno at Springer and Doug Vakoch at the SETI Institute for bringing this book to fruition.

As has been said in the prefaces of the previous two volumes, the trilogy we have created has two functions. First, it is a set of essays written with the intention of contributing to a new branch of political philosophy concerned with extraterrestrial liberty. Second, these essays are a record of some of the thoughts of people in the twenty-first century who have never lived in space, but with the benefit of the expansive literature on liberty developed on Earth, the authors offer their ideas and thoughts on how liberty might develop among permanent denizens of the space frontier. At the end of this exercise, all of us who have taken part in these discussions and written these essays have only one message for those on the space frontier: good luck with your efforts to build spacefaring societies in which liberty can flourish!

Edinburgh
2015

Charles S. Cockell

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Chapter 1

Introduction: Dissent, Revolution and Liberty Beyond Earth

Charles S. Cockell

Abstract Faced with an instantaneously lethal environment, it would be easy to believe that dissent would stand no chance in space. People in extraterrestrial settlements will become conservative since radical political, economic and technical change may threaten their existence. The authorities that run settlements, if nothing more than for their own credibility, will err on the side of caution and seek to quell dissent that either leaves them powerless or implicates them in a failure of leadership if the results of dissent lead to catastrophic structural failure. However, dissent must occur if extraterrestrial settlements are not to degenerate into places occupied by slaves doing the bidding of private or state enterprises. In this collection of essays, we examine how dissent and disobedience may manifest on the space frontier and suggest ways in which dissent may be allowed, even encouraged, to further political discussion and discourse in space. We examine how the conditions for dissent can ultimately influence the conditions for diverse forms of liberty in space.

Keywords Liberty · Dissent · Revolution · Government · Laws

‘I like a little rebellion now and then. It is like a storm in the atmosphere.’ So said Thomas Jefferson in 1787 in response to Shay’s Rebellion. But can rebellion be tolerated in an environment where destruction of crucial infrastructure could deny people the air they need to breathe?

The extreme conditions of outer space that mandate collective efforts in survival and resource acquisition do not on the face of it lend themselves to free-thinking dissenters who want to do things ‘their way’. Nor do they seem very conducive to the sort of civil disobedience that might be needed to change laws imposed by a despotic corporation or government agency charged with ensuring the survival of a group of people in outer space.

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Having explored the general conditions for liberty in space (Cockell 2015a) and the influence of governance structures on that liberty (Cockell 2015b), we are left with the final questions: how are people to dissent from their structures of governance if they disagree with them? How can the freedom to dissent be realised in enclosed isolated outposts in space?

In this volume of essays, we take on this task, considering from a number of directions how dissent and revolution can be managed in space if they occur and how, on a more general level, healthy political and economic dissent and discussion is to be encouraged. As with our previous volumes, the authors come from diverse backgrounds, for example social and political scientists, planetary scientists and science fiction writers. It is this diverse set of viewpoints that provides us with a rich seam of ideas to examine how liberty will be expressed in space. Examining the future of liberty in space requires a quite disparate set of information. It will be inextricably linked to the environment, in the sense that the extreme conditions on any planetary body or in the open plateau of space will influence the political and economic conditions for liberty, for example by causing economic isolation and mandating political structures to ensure the safety of inhabitants. Thus, we need planetary scientists to bring knowledge of the physical conditions to be found in space.

To take this information and place it into the classic context of liberty—the centuries of existing discourse that started with the ancient Greeks and found particular strength in the literature of the Enlightenment—requires social scientists and political philosophers to bring their knowledge into the fray. It is pointless, and wrong, to consider the frontier of space some utterly new place for liberty when liberty will evolve in ways probably familiar to us in many respects and at least in ways linked to our past experiences of attempting to pursue liberty on Earth. Thus, this strong heritage of ideas must be harnessed.

Furthermore, although the discussion on liberty as a branch of political philosophy is new, liberty per se has not escaped the attentions of science fiction writers. To construct imaginative scenarios for human settlements beyond Earth, these writers have been forced to consider institutional arrangements and, by extension, the consequences of revolution and dissent in space. Science fiction is an extraordinary source of information for looking at various alternative futures and trajectories of liberty in space.

Thus, as with our previous volumes, this set of essays takes these various influences and here offers a set of ideas on how dissent could occur in space and what its major characteristics might be. We offer it as another contribution to the branch of political philosophy that deals with extraterrestrial liberty.

Dissent in space involves an adjudication of a range of competing interests. In a chapter that examines the challenge of how dissent might emerge in space, Tony Milligan investigates the range of competing interests in space that might complicate the extent and type of dissent that can be expressed. In particular, he suggests that the interests of future generations must also be considered. These differing interests have implications for the sort of political systems that might optimally support them while also allowing for disagreement. Constrained dissent, he

suggests, might lead to a type of consensus politics whereby dissent acts as a temperature gauge to moderate the political process.

Charles Cockell explores the arena for civil disobedience in space. He suggests that anyone should wish to curtail violent disobedience and dissent because of the potential catastrophic consequences of the destruction of infrastructure, for example damage that might cause widespread depressurisation. The question then remains: how is anyone to rebel? Cockell discusses other courses of non-violent civil disobedience and suggests that many of the methods used on Earth could be applied in space. Nevertheless, the central point of his essay is that the extreme conditions of space make it easy for authorities to crush dissent in the interests of the safety of the people. Thus, active attempts must be made to allow for civil disobedience. One way to do this may be to establish a set of general rules or codes of behaviour, particularly those dissuading destructive violence, that would thereby explicitly allow for civil disobedience but establish boundary conditions based on civility in the extraterrestrial environment.

It would be easy to use the excuse that the extremity of the space environment requires dissent to be prevented at all costs, and certainly we might expect future authoritarian settlements to use this as an excuse to quell discord. A fundamental question therefore emerges: to what extent is dissent manageable and how much dissent should be allowable in confined space? James Schwartz explores the problem in the context of the Moon and looks at labour relations in lunar settlements. He concludes that strike action should be allowable, using analogies on Earth to bolster his case. His essay more generally underscores the importance of debating the extent of extraterrestrial liberty and which acts of disobedience should be protected and which not. His arguments apply equally to Mars and other locations beyond Earth. As labour relations underpin the entire economic and political functioning and success of any settlement, his essay homes in on one of the most important debates in extraterrestrial liberty: to what extent should the workers have the freedom to direct or withhold their own labour?

As in strike action, peer pressure has a large influence on the way in which people perceive their capacity to dissent or behave in ways not in accordance with a collective. Andrew Thomas examines some aspects of power and discipline in an extraterrestrial settlement and shows how the perception of being an outsider may have a powerful role to play in influencing whether people are willing to dissent. This problem, which touches on the 'tyranny of the majority', is made acute by the confining physical spaces of extraterrestrial settlements and the forms of discipline that emerge there. The chapter focuses the reader on the necessity to consider how power and discipline might develop in settlements and how it is to be managed and directed in constructive ways that do not unnecessarily undermine the freedom of the individual.

One clear way to understand the possible motives for dissent and how it is to be managed is to look at real examples. In a chapter that explores the precedent for mutiny in space, Mukesh Bhatt first looks at what constitutes dissent and mutiny and then explores examples of how this has occurred on space stations. He examines how existing legal structures, such as the Antarctic Treaty, might give us

insights into how mutiny is to be managed and explores examples from fiction. This chapter touches on an aspect that is clear in other chapters as well: dealing with extraterrestrial dissent and attempting to maximise liberty in more permanent extraterrestrial settlements will not be an entirely new endeavour. There are a wide variety of experiences, including modern space exploration experiences, to effectively manage dissent and disagreement in space.

One of the most deleterious forms of dissent is terrorism—perhaps the most extreme and dangerous forms of dissent in confined, pressurised spaces. John Cain embarks on a discussion of space terrorism. He discusses both the means by which terrorists might go about trying to accomplish their goals and the ways in which they might be prevented. These countermeasures include punishment and legal means to discourage it in the first place. This chapter forcefully reminds us that with all the best planning and thought, we cannot prevent a rogue actor or actors from seeking to cause mass destruction. A settlement can be carefully engineered to maximise liberty, but this only works for the population willing to comply. Any consideration of extraterrestrial liberty must take into account those individuals, who, in seeking dissent through terrorist activities, will disregard any existing political, legal or even physical infrastructure. As terrorists could cause enormous damage in isolated space settlements, this unsavoury aspect of human disobedience must be considered as an important field of investigation in extraterrestrial liberty.

Stephen Baxter takes up the problem of how to allow dissent without catastrophic consequences. Specifically, he explores how the architecture of space settlements might be designed to allow dissent, even revolution, drawing on a rich legacy of science fiction in which these concerns have been raised. In particular, technological solutions, such as rovers that can be easily used to travel and effective methods to access resources in space, are ways in which people may derive the freedom to move around and leave settlements, reducing the chances that they will fall prey to despotic zealots in one location. His general premise—that there are technological methods to enhance dissent and thereby freedom—suggests that even prior to the large-scale colonisation of space, we can engage in engineering designs to maximise the opportunity that people have to establish free economic and political systems in which dissent is tolerated.

Developing a similar line of thinking, the essay by Lewis Pinault looks at how liberty and dissent might be engineered into societies beyond Earth, in particular looking at modern space endeavours and the movement of commercial enterprises into the space sector. In many ways, the efforts by national space agencies, such as NASA, to partner with commercial enterprise in the exploration of space already represents the changing patterns of liberty in space. When these new organisations disagree with existing agencies or try to change their policies, then they are already actively engaged in dissent in the space frontier—even if vicariously implemented from Earth in many cases at the present time.

Another way in which dissent can be expressed is through art. Art has the capacity to change our view of the world around us, but it can also be used as a channel through which to express revolutionary ideas. Drawing from her own experiences, Annalea Beattie explores the role of art in fashioning freedom beyond

Earth and its possible contribution to dissent. In the lethal extremes of space, art may take on an importance greater than on Earth as it provides a way for revolutionary ideas to find expression without physical disruption. It can become a means of quiet disobedience. We might even encourage all the various forms of art, from painting to theatre, as a way to neutralise, in a non-destructive way, dissent in extraterrestrial settlements.

Educating people in extraterrestrial settlements to be able to express their capacities and maximise their freedom, but at the same time to understand that they live in an environment that requires a sense of collective responsibility, will be crucial to the long-term success and sustainability of these settlements. Janet de Vigne explores an extraordinarily important part of the human lifespan: the teenage years. Full of angst, uncertainty and hormonal changes, how do we manage and educate the teenagers in a confined space where youthful errors allowed on Earth might threaten everyone in space? How do we achieve this without creating people who harbour a deep resentment against the settlement for what they perceive to be their restricted teenage years, yet the restrictions were necessary for the survival of the population? This chapter explores the multiple issues that underpin the education and channelling of the teenage years in space and how we might approach, in a systematic way, the education of teenagers.

When all else fails, one way to dissent is to flee. But this option is not always open to people and on the geographically confined surface of a sphere, i.e. Earth, movement may be possible but easy for governments to prevent. The vast expanses of space offer the possibility of flight as a means of dissent, but of course this capacity can only be realised if people have the means, such as spacecraft, to escape as well as another settlement to go to. Paul Rosenberg addresses the importance of flight in dissent and concludes that being able to flee is fundamental to our freedom. If his conclusion is correct, then we might even try to actively find ways to maximise the potential to flee in space to dilute the capacity for dictatorial control. Clearly, the vastness of space is a good start, but for people to be able to use this expanse to flee from autocrats, then we might consider constructing reliable trade routes and transport between settlements and, in the long term, maximising the number of settlements that exist so that people actually have the option of fleeing to somewhere else. In the early stages of human space settlement, fleeing may not be possible because of the limited extent of infrastructure beyond Earth, but as the effort progresses, the capacity for flight may improve.

Dissent can occur from individuals, but it may also occur at the scale of entire colonies. Kelly Smith investigates, using historical examples, how settlements may have imposed the conservative norms of individuals' founding mother country or world upon them, but eventually, in adapting to their environment, they generate new types of cultures that not only benefit the people but also the founding culture. Thus, dissent beyond Earth, particularly in establishing larger-scale novel patterns in culture, may be beneficial for everyone. His chapter shows that we should not merely consider dissent to be some sort of antagonism, but when practised at the scale of entire settlements, it may provide benefits for the whole of civilisation.

Continuing this theme of dissent at the scale above the individual, we might consider how the space economy could rebel against Earth by establishing a new direction for its development. Andrew Kennedy examines how the preservation of Earth can be made compatible with the exploration and settlement of space and explores models of how the space economy might be developed so as to become independent and successful. This includes the development of its own currency. The chapter is not so much a discussion of dissent and revolution within a settlement, but its underlying thesis is relevant to the way in which space settlements, and ultimately the entire space economy, might dissent from previous modes of economic and political development on Earth and establish its own trajectory.

1.1 Conclusion

In conclusion, this final volume in our series on extraterrestrial liberty completes a three-pronged approach to the political philosophy of freedom beyond Earth. In the first volume, we examined the conditions for liberty beyond Earth including the philosophical and practical foundations for understanding how liberty might develop beyond Earth. In the second volume, we transitioned into considering the political and economic implications of how liberty might manifest beyond Earth, in other words the implications for governance. In this final volume, we discuss what happens when those governance structures are not perceived to be serving the purposes and needs of an extraterrestrial settlement. The manner in which people and entire settlements can dissent and disagree, even to the point of revolution, is explored. None of these volumes on extraterrestrial liberty is exhaustive. Our objective was to contribute to a new branch of political philosophy concerned with extraterrestrial liberty. However, the essays presented here explore many aspects of this emerging discussion and should provide a solid foundation for further ideas on the future of liberty as humans continue their exploration and settlement of the space frontier.

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Chapter 2

Constrained Dissent and the Rights of Future Generations

Tony Milligan

Abstract The following paper will defend the viability, and constructive importance, of dissent within stable and more or less autonomous space settlements. That is to say, settlements of the sort which will come after the establishment of an initial human presence. (Which may have to be carried out under some form of command structure of a sort familiar from existing space programs.) The paper will, however, locate dissent and the entitlement to dissent within a broader cluster of commitments, placing it in tension with various other goods and duties which we are properly concerned to secure and fulfil. The politics of dissent in space are likely to be the politics of balancing out competing concerns. Specifically, it is assumed that some of us have a duty to try and help extend the presence of humans to nearby regions of space; that we also have duties towards future generations (and cannot inflict intolerable conditions upon them; and that we are and ought to be committed to various broadly-liberal freedoms including those concerning dissent). These concerns are individually plausible, difficult to abandon and also difficult to balance. It may be difficult to try to meet our duties without neglecting the legitimate interests of those who come after us and who cannot simply be sacrificed, in an illiberal manner, to our goals. Given that scope for dissent is basic to the freedom of any future generation, but also potentially dangerous, what seems to be important is that dissent of at least some kinds is (up to a point) both tolerated and constrained. The paper finishes with some comments upon the kind of political system which might be able to cope with the arising task of balancing out competing claims.

Keywords Dissent · Duty · Future generations · Authoritarianism · Liberal norms

What follows will suggest that there are some things which, surprisingly, we can and ought to do in space. Things such as engage in dissent: strikes, occupations, public demonstrations, non-cooperation, civil disobedience and (more generally)

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acts which publicly challenge those in authority and their right to dictate policy or to command allegiance. This is surprising because it would involve dissent in a life-threatening situation. The paper is also, in light of the very real dangers of disagreement and dissent under extreme conditions, at least implicitly concerned with what we cannot and ought not to do, i.e. engage in reckless actions of the sort which feature in various familiar instances of science fiction. Robert Heinlein's *The Moon is a Harsh Mistress* (1966) is a case in point. It depicts lunar colonists in revolt against the Earth, hurling rocks at the latter. This is something which (trivially and obviously) we ought not to do and something which others also should not do. What I am proposing, instead, is a moral license for what we might call 'constrained dissent'.

As a point of clarification, there is nothing specifically novel or second-rate about a discussion of dissent as constrained rather than unconstrained. There are, after all, traditions of dissent which stretch to the violation of the law, but are in various respects *limited* by a concern to avoid harm. One obvious example is industrial action by members of the emergency services. (A problem explored elsewhere in this volume by James Schwartz.)¹ Another is civil disobedience, understood in a broadly Gandhian sense as protest which abides by non-violence and by civility towards the other. (A problem explored in the paper by Charles Cockell.)²

Constraint, in this Gandhian sense, does not imply passivity or half-heartedness but rather a determination to protest while avoiding certain sorts of dreadful, unintended, consequences or a spiraling out of control. (There are occasions on which a temporary setback or defeat is simply better than the likely outcome of pressing on regardless.)

In at least some respects, a non-destructive dissent in space would have to be constrained in a broadly similar sense. Everything could not be permissible, everything could not be possible. Revolution would be an extremely risky business, a rare and possibly catastrophic exception within a broader more routine pattern of dissent. It is dissent of the latter sort that I will focus upon. Such dissent would have to be tailored to the restrictive circumstances of life in a lethal environment. What follows will explore the bounds of such dissent and the way in which the constraining of dissent on the part of future generations might lead us to regard at least some settlements as ethically flawed projects, as projects which (all other things being equal) should not be undertaken. The attempt to say something about the permissibility and socially useful role of dissent will also point towards broader political requirements about the nature of the political system, the kind of democracy, which might work best elsewhere as a successor to the command structures of the first human settlements.

¹See J.S.J. Schwartz, 'Lunar Labor Relations' in this volume.

²C. Cockell 'Disobedience in Outer Space', in this volume. For the Gandhian roots of this approach see Milligan (2014).

2.1 Picturing a Space Community

The initial human presence in a Moon base or on Mars will, no doubt, inherit the military-derived command structure of familiar forms of space exploration complete with mission commanders and the authorization of autonomous decision-making combined and ultimate answerability to agents back on Earth. The most appealing part of this picture is perhaps autonomy and it is likely to be part of this picture because of the difficulties of time-lags and the impracticality of distant decision making. We know this much from the Apollo program where the initial landing required a local over-ride of the targeted landing site in order to avoid mission failure. Even so, in combination with a degree of autonomy, a broadly military chain of command, stretching back to the Earth, is likely to be preserved. This is not, however, a political structure which would be indefinitely sustainable in the face of a more expanded human presence anywhere except perhaps on the Moon or in some sort of O'Neill habitat parked conveniently at a Lagrange point within easy reach of the Earth. The decisive issue is, again, proximity and practicality. Even on Mars, the pressures towards a preponderance of autonomy and of local control would be difficult, over the course of time, to resist. At some point, any settled community is likely to regard the Earth as too distant and lacking in an immediate grasp of local realities. The more distant the colony is from the Earth, the stronger the pressure towards local autonomy is likely to be. Yet autonomy is consistent with the shortening of lines of communication between elites, bureaucracies and security personnel. It is consistent with the local dominance of authoritarian and military-style command structures rather than anything resembling a democracy.

Nonetheless, from a settlement survival point of view and assuming a capacity for any settlement to be self-supporting (if necessary), the promotion of autonomous-control could be possible and could be the right thing to do. There is an obvious sense in which the hands-on practicalities of community building are likely to be understood far better by those in situ rather than by agents who are months away in terms of journey time and perhaps more distant still in terms of mindset. (Again, Mars is a better model here than the Moon, which is still nearer to us in journey time than the Americas were to the main seats of colonial power in early modern Europe.) This 'locals know better' claim does not, of course, apply to all knowledge or to all survival requirements. Sometimes those on Earth will have a better breadth of vision and will know what has to be done far better than a settler community. They may have a better appreciation of the bigger picture of what makes a community sustainable over the course of time. Arising from this, there are ethical issues in play concerning the disclosure of risk and levels of difficulty. There is information that authorities on Earth might sometimes be tempted to withhold in order to sustain trust, co-operation and morale. Yet there will still be at least some epistemic advantages which settlers will (almost unavoidably) have over agents who are situated within a terrestrially-based command system. Most obviously, settlers will have a better grasp of the terrain and the phenomenology of 'being a settler', a better grasp of 'what it is like' to experience such a situation. While the

motivating rationale for settlement may include the interests of agents who remain emphatically Earth-bound, too much terrestrial resistance to settlement autonomy may be unwise for all concerned, although timing may matter. The outlook of those born into a settler community is likely to be very different from that of the pioneers, adventurers, misfits and escapists who are deemed to have the right stuff to join an initial settler body. Too rapid a transfer of control may be as bad as too slow a transfer. One upshot of this way of regarding matters is that it may be better to speak, in the above manner, of ‘settlement’ as the ultimate goal of an offworld expansion rather than ‘colonization’, given the answerability to a power elsewhere which the latter implies. ‘Colonization’ also carries unwelcome overtones of exploitation and dominance which may, similarly, be something of a bad start. ‘Settlement’ and talk of ‘settler communities’ may not be entirely free of negative associations however these associations are at least somewhat weaker.

In what follows, the focus will not only be upon routine dissent, but upon such dissent within a particular type of context, the type of context supplied by more or less autonomous and stable non-terrestrial communities of a scale which is greater than that of any initial settlement party and, a little more precisely, beyond the scale on which an initial quasi-military command structure would be either appropriate or adequate. We might, of course, argue about exactly how large the population would have to be before this was the case and somewhere in such a discussion appeal might be made to the thousands-strong communities of humans already living in the polar extremes on Earth. The population of Antarctica is about 4000 throughout the year with about 1000 people wintering over. However the fluctuating numbers of such communities indicates that they are not communities of the right, more or less stable, sort. Stable communities will, instead, have a concern for social reproduction, for the reproduction rather than the replenishment of population from elsewhere; for the local reproduction of the means of existence (assuming the self-sufficiency specified above); and for the reproduction of various social goods, such as solidarity, respect and mutual recognition as well as any material goods which might be required to avoid the alienation associated with a strong sense of deprivation and inequality of circumstance.

I will take it as important (for survival purposes and not simply morale) that members of such settlements do not feel themselves to be, in relation to the Earth, permanently at the edge of the fun fair but never quite able to join in the festivities. In short, for the sake of sustaining a sense of social hope, some approximation to a good life must be possible. Social hope of this sort, although it has been defined in various different ways (by philosophers such as Richard Rorty, social theorists such as Manuel Castells, and political figures such as Vaclav Havel), seems to be an important factor in convincing agents that some sacrifices are necessary for the common good and that the common good itself is the good of a community which is actually worth safeguarding (Rorty 1998, 1999; Castells 2015; Havel 1991). And while hope and sacrifice may also be consistent with penal settlements, in which compulsory labour is followed by freedom and citizenship, what I will assume here is that settlement membership will not be either a form of punishment or an idealistic sacrifice for the sake of mankind (and not a foolish mistake by those who do

not realize what they are getting). What is envisaged is neither a penal community nor a saintly community, and certainly not a ship of fools, but rather a modestly sized ordinary, stable community of people living out their lives under extraordinary circumstances. People who, moreover and by virtue of their ordinariness, will be inclined to complain about their lot when they regard it as in some way intolerable or at least unjust.

Finally, in line with previous work (Schwartz 2015; Milligan 2015b), I will assume that such deliberation need not be mere conjecture and may reasonably be constrained by appeal to a Rawlsian ‘veil of ignorance’ test for extraterrestrial political systems (Rawls 1971). In brief, to consider whether a candidate proposal or approach to political organization is at all viable, we should consider whether or not we would agree to it under circumstances where we happened to be unaware of how it would impact upon us. While this might not be the best approach to terrestrial political arrangements (because we know already happened to know what it is like to be terrestrial agents, how we are actually situated in the world and what would and would not constitute terrestrial justice) it is an approach which has a good deal to offer in relation to deliberation about the novel (as yet un-lived) circumstances of life in space. Until we have a better constraining strategy for deliberation, a variant of the Rawlsian ‘veil of ignorance’ may offer the best test of the *fairness* of any extraterrestrial political theory.

2.2 The Problem of Competing Goods

Our attitude towards any such stable but ordinary community faces something of a difficulty, beyond lack of experience concerning actual space settlement. The difficulty arises because a number of our more plausible ethico-political commitments concerning power, rights, dissent and the state, turn out to be in tension with one another. Such tension is not, however, a sign of any obvious adherence to one-commitment-too-many or mistaken allegiance to a belief which need only be removed in order to secure a tension-free consistency. Rather, I want to suggest that tensions of the relevant sort tell us something about what it is to be human and consequently to value different goods at one and the same time. Elsewhere, I have suggested that space ethics is, in certain irreducible respects, dilemmatic for precisely this reason (we are naturally and perhaps inescapably pluralists when it comes to goods). This is a claim which I would like to extend now to ethico-political matters. More specifically, the following three claims identify different sorts of duties which go hand in hand with the goods of human survival, the opportunity of a good life for future generations and the goods associated with liberal freedoms. While they are individually plausible, when brought together they generate difficulties:

- (1) Some (not all) currently-existing agents have a duty to try to extend human life through space settlement.
- (2) Assuming that we are agents of the sort specified in (1), we are also agents who have duties towards future generations (wherever situated).

And

- (3) We are and ought to be committed to the survival of at least some basic liberal political norms, such as those concerning the permissibility of dissent.

These claims do not generalize in a way which places an impossibly demanding burden upon any humans. Those who are extremely poor and, to all intents and purposes powerless with regard to consciously exerted influence upon humanity's future, cannot reasonably be said to have duties of the sort specified in the first two claims. Only some of us can have duties of the relevant sort and the assumption here is that some of us do indeed have such duties. However, this fact alone does not remove the tension between these claims. Nor is it obvious that such a tension should always be resolved in favour of fulfilling the duty which is specified in (1) at the expense of the liberal norms alluded to in (3). Indeed, one of the running themes of the Extraterrestrial Liberty discussions out of which this text has emerged is the suitability of deliberating about short and medium term space objectives from a broadly liberal and pragmatic standpoint rather than from a standpoint which is dominated entirely by a sense of the need for survival and by what Stephen Baxter has referred to as 'the cold equations' of some kind of neo-Darwinian survivalist ethic, an ethic which would simply be unlivable over any protracted period of time for most human agents (Baxter 2015).

Additionally, some space settlements (even if they could be stabilized) would not obviously be worth establishing even if doing so helped to further the duty specified in (1). As an extreme example, a settlement which would require or collapse into a dictatorially abusive junta-dominated system does not seem to be an ethically worthwhile goal. Solving the justification problem for space settlement (explaining why it might *sometimes* be worth the required resources) is a difficult task. Doing so for some manner of 'Iron Skies' option is likely to prove impossible. Here, I allude to a popular, and rather lightweight, science-fiction film about a Fourth Reich on the Moon and also to Jack London's classic dystopian novel of resistance to tyranny, *The Iron Heel* (1908). But even without the introduction of space-juntas, jackboots or tanks upon the lawn, more common or garden curtailments of freedoms may be anticipated as a real possibility. Abortion rights as well as freedoms to carry to term without severe penalties may be compromised in the interests of community sustainability depending upon the carrying capacity of a local settlement and the difficulty of becoming pregnant and producing offspring under non-terrestrial conditions (Milligan 2015b). More generally, if a space settlement is too liberal in its freedoms and entitlements to dissent then it is unlikely to

survive. But if it is too illiberal then establishing it might not be a worthwhile or defensible goal (and, for such a strongly-illiberal settlement, survival problems are also likely to emerge over the course of time, for reasons specified below). Beyond a certain point, we may well decide that the exercise of settling some location *L* may be too likely to compromise our understanding of basic liberal norms.

Admittedly, some of these comments take us into a very grey area but, in a sense, that is the natural element of liberal political discourse and it gives no immediate reason for us to retrace our steps in order to look for a better way to smooth out all tensions or to reconcile all competing commitments. What we can say with some confidence is that an entitlement to dissent is basic to liberal political norms, basic to stability and to social solidarity and basic also to respect for persons. So too is an entitlement to *tolerant response* in the case of protest which, even if sometimes illegal, abides by reasonable standards of civility such as the avoidance of reckless endangerment. Legal penalties may be expected in the latter case, but they should differ in terms of stigma and severity from those applied in response to more commonplace forms of lawbreaking and in response to life-threatening political violence (such as terrorism or the use of revolutionary political force). A difficulty still arises here because it is by no means obvious that this approach *can* be put in place for *all* extraterrestrial communities in *all* places and at *all* points in time. Dissent which might have no great detrimental terrestrial impact on Earth could, conceivably, yield a Hobbesian meltdown in at least some contexts elsewhere, given prevailing conditions of extreme vulnerability. What does not constitute reckless or life-threatening action *here* might constitute both *elsewhere*.

And two further points make matters even worse. Firstly, a point stressed on several occasions by Charles Cockell: the conditions of vulnerability and dependence in space will generate a tendency towards authoritarian political control within any settlement. Whoever controls the air, food and water will be in a position to control the people (Cockell 2013). Secondly, a point which owes something to Mikhail Bakhtin's Classic study of popular early modern carnival and dissent: authoritarianism creates its own counter-culture (Bakhtin 2009). This claim seems to be borne out by any reasonably detailed examination of human history at any historical period. Dissent, like the poor, seems always to be with us. It is not something we can reasonably wish away even if we wanted to do so. It is not something which could be eradicated from communities of the sort specified above, even through the use of determined authoritarian measures and even though the dissenting agents will be acting in the life-threatening environment of space. Accordingly, even if it was morally permissible to support an Iron Skies option of radically authoritarian political control, such an option would not actually eradicate the pressures towards dissent and it might, because of its extreme inflexibility, prove to be ultimately counterproductive. Rather than imposing obedience by main force, it might generate problems which could well cut across the fulfilment of the duty specified in (1) to extend human life.

2.3 A Closer Look at the Commitments

The first two commitments are broadly communitarian, the third is more ambiguous and may be read in either an individualist or a communitarian manner, as a concern for individual rights and entitlements or as a concern for collective entitlements such as the right to strike, to form and join trades unions, and to protest or speak out against the government. Upon closer examination, all three commitments have a degree of ambiguity about them. The idea of extending human life in (1) can be read in at least two quite different ways, as a claim about the preservation of our species or as a claim about the preservation of our ‘moral community’ (the bounds of which are not necessarily set by common biological origins or shared patterns of DNA). The idea of duties to future generations, cited in (2), can also be read as an obligation to particular future agents or to future groups of humans no matter who they turn out to be. In line with a previously supported position (Milligan 2015a) I will suggest that we resolve the former ambiguity by endorsing the idea that our primary obligation to humanity is to a moral community (rather than a species) and that we resolve the latter ambiguity by accepting that our duty to future humans is, in some sense, to a collectivity rather than to particular individuals.

One important reason for the former move is that a species-focused reading of our duty to humanity generates too many anomalies. For example, if it were discovered that a section of the population were ‘Spock-like’ and did not actually share human DNA would this in any way entitle us to exclude them, or their descendants, from our survival plans? Doing so would look suspiciously like a form of prejudice as well as being practically unwise. By virtue of their biological difference they might turn out to be better equipped to survive and to preserve the legacy of our shared community. Moreover, it is the species reading of a duty to extend human life which is connected to the kind of narrow and impractical consequentialism which holds that *any* sacrifice is legitimate if it is required to secure survival. The moral community reading of our duty to humanity is, contrastingly, tied to the possibility that through certain kinds of moral failures a community might (figuratively) ‘forfeit its right to survive’ or might undermine the value of community survival through a betrayal of the basic values on which the sense of community is based. In less abstract terms, it is better to be part of a short lived but good community rather than a long lived but morally bankrupt or even repugnant community. A Fourth Reich in space, no matter how long it lasted, could not count as success. With this understanding of our duty to humanity in place, we can begin to appreciate that while there is a tension between (1) and (3) there is also a commonality of concern. Together they combine into a commitment to survival under conditions which do not dehumanize but instead offer some manner of freedom, even if it is of the paradoxical sort referred to by Cockell (2015) as ‘freedom in a box’.

The second commitment, concerning duties towards future generations, is like the first in the sense that it is a more obviously communitarian than individualist concern. Duties towards future generations really do seem to be duties towards

generations and not towards specific individuals for reasons specified in what is known as the ‘non-identity problem’ (Parfit 1986). If action φ involves environmental degradation which might, in 100 years time, lead to harm to members of a future generation, *Bob, Mary, Elizabeth* et al. I might try to avoid it. But in doing so I am likely to alter who comes into existence (which may no longer be *Bob, Mary, Elizabeth* et al.) because who ends up coming into existence is sensitive to even minor alterations in our current behaviour. (This is also the reason why time travelers in popular television programs and films are warned not to change anything because they might then end up not being born.) I can do ‘the right thing’ for the sake of (a) future generations whoever their constituents are, and (b) those particular future agents who will come into existence no matter what I do (and the number of these will tend towards zero as we move beyond the next generation). But I cannot ‘do the right thing’ for anyone whose existence I cannot actually and reliably foresee. This, again, stresses the broadly communitarian nature of the duties in question. And this is no bad thing. The right kind of ethic for space may (I think ‘should’) acknowledge the value of individuals as unique and irreplaceable, but it is unlikely to be a strong form of individualism. Although not focused upon particular discrete known-in-advanced individuals, such future-oriented duties do seem to be real. As a symptomatic but extreme illustration: we do not get to plant time bombs in the public square just so long as no currently living and determinate or identifiable agents will be harmed. There is no requirement that the likely victims of our actions must enjoy the terra firma of existence in order for us to have duties to avoid the actions in question. This kind of future-oriented deliberation is familiar from discussions of nuclear waste management and environmental harm more generally (Routley and Routley 1978). In short, we do not get to ignore any likely and dire consequences of our actions even if currently existing agents will not live to see or be harmed by them.

The third commitment is more focused upon individual rights or at least upon a combination of individual and collective entitlements. And so the way of resolving its ambiguity is not as clear cut as opting for one thing or another as an important good. It certainly does not reduce simply to a liberal valuing of choice. My suggestion that a problem arises from our duties towards future generations in space settlements is not the familiar one that it may be wrong to bring individual agents, involuntarily, into existence under the compromised circumstances of having to live somewhere other than in the midst of the lush greenery of the Earth. The latter claim may have something to it, but is problematic if pressed too far. After all, every human agent is brought into being under compromised circumstances which are also not of their own choosing. What matters is not so much choice as such but rather the nature of the (admittedly unchosen) circumstances. Those who think of space exploration in terms of a basic biological survival imperative may consider such issues moot because humans will breed no matter what ethicists say. But here we would do well to remember that not all humans will do so, that many couples in the West now choose to have only one child or none at all, and that slaves often tried to entirely avoid reproduction precisely because of the conditions under which any offspring would have to live. Yet here we may wonder about just how bad

circumstances would have to be before we were justified in thinking about matters in the same way in relation to bringing agents into being in space. On a crude consequentialist account it might be tempting to say that we ought only to bring humans into being where there is likely to be a preponderance of happiness over suffering within their lives, or where the net balance is likely to be at least neutral. But what makes it difficult to buy into this view is that it would make most human reproduction, now and throughout history, a mistake. We need not lapse into some manner of philosophical pessimism in order to accept the inconvenient truth that life has generally been quite difficult for most humans at most times in the past and this remains the case in many parts of the world even today.

Rather than appealing to some dubious consequentialist claim (in which things, overall, shall be well) it seems more plausible to hold that whoever we bring into being should have at least the *opportunity* for some sort of good life (on a complex understanding of the latter) even if suffering figures as a component part of such a life just as it figures as a component part of our lives and most human lives. It should be a life, in short, which the agent themselves could readily accept as meaningful in spite of suffering and meaningful and worthwhile in its own right rather than being simply a part of someone else's grand plan. To say this much is precisely to regard such a life in terms which are familiar from a liberal discourse of respect, integrity and individual worth. It is also to appeal to a sense of inter-generational justice. And this is where a Rawlsian test seems to fit quite well. Under imaginary conditions where we do not know which generation we were going to belong to (the present generation or a future generation in a space settlement) we might well hold that enough had been done to offer a good life no matter where we happen to end up situated, and no matter when. This being so, the opportunity of a good life is the kind of requirement which might lead us to regard arrangements as just or as an approximation to justice. They might well pass a Rawlsian test for political deliberation about the unfamiliar conditions of life in space.

To deny basic freedoms and any entitlement to dissent, simply in order to fulfil our terrestrially-derived plans, when we are sure of actually living in better times than those who might come later, looks like a way of regarding future generations only as a means to our ends rather than as groups of beings who will have ends and aspirations of their own, beings who will (in a familiar philosophical terminology derived from Kant) be *ends in their own right* and beings towards whom justice is due. In the light of this, the case for upholding claim (3) in relation to space starts to look strong. Indeed, the case for deliberating about an orderly transition from first landing to at least some political freedoms and entitlements to dissent within a settled autonomous community, looks more or less clear cut. If we cannot look ahead to the realistic possibility of political freedoms then the project of settlement will involve, from the outset, a notable moral failure of duty towards future generations. We may, of course, become trapped at some point in a tragic dilemma where some form of wrongdoing is tolerable because it is unavoidable, because we face only a choice of moral failures. But we may also have a reasonable hope for something better and this goes to the heart of what it is to have 'social hope' of the sort which political justice ultimately requires.