Charles S. Cockell *Editor*

Human Governance Beyond Earth

Implications for Freedom

Space and Society

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Preface

Finding a definition for 'liberty' or 'freedom' has never been successful. It is not surprising as these words encompass a vast variety of things. We might speak of freedom from state interference or the freedom to achieve our personal capacities with the help of the state. We might speak of freedom to choose our own government. We can talk of freedom of expression, of thought, of religious belief or freedom of movement. Many of these notions of freedom are interlinked, and some are even inseparable. Many of them can also be examined as separate social or political challenges, confounding the difficulties in finding a coherent self-consistent set of ideas that can be summarised as liberty.

Nevertheless, it is also wise not to allow this complexity to lead one into cultural relativism: that all versions of liberty are just cultural permutations and combinations of these different ingredients, and therefore no human settlement or nation defines a better version of freedom. Freedom of expression, for instance, is not a particular type of liberty legitimately liked by some and not by others. The ability of a human individual to freely articulate their views, in the written or spoken word, on their society or those who govern over them without constant threat of imprisonment or execution is an objectively good type of freedom to expect and demand for all humans. It is right that human individuals should not be denied the opportunity to hear the views of other human beings because those other people have been murdered by a government that happens to find their views disagreeable. If human communities are not to degenerate into collections of contented slaves under the orders of despots, then encouraging independence of mind, and with it freedom of expression, is one objectively desirable form of liberty to pursue at all times and in all places. Freedom of expression is as good on the other side of the Milky Way as it is on Earth.

Maximising liberty in its various manifestations lies at the core of some of the large-scale ideological struggles and even military conflicts of human history. Although it is possible to identify some aspects of liberty that most people can agree are desirable, the conflicting views of what constitutes too much collective oversight and control and what constitutes enough space for individual ideas of the good life can probably never be completely resolved. So long as there are humans with

differing views of what constitutes a fully formed notion of liberty then disagreement will exist. And indeed, if all humans did agree on what represents a complete package of human liberty, then ironically it would probably spell the end of free thought and discourse.

The most constructive way to deal with these differences is to build open and free societies where people can debate their ideas of freedom and to construct the political and economic systems that allow for these ideas to be turned into governance and for this governance to change as ideas and opinions alter.

In no place are these challenges more apparent than in outer space. Confronted by lethal conditions, social isolation and the technical complications of supplying the basic needs of air, food and water, extraterrestrial settlements are the locus of a newfound discussion on the nature of liberty. They force us to continue a discourse that began in the emerging democracies of ancient Greece and has continued into the societies of present-day Earth. What sort of freedoms can, or should, people expect on the surface of the Moon when great collective efforts are needed to provide even oxygen to breathe? How can we ensure that people are not driven to desperate depths of depression by the utterly monotonous grey landscape that may sap the sense of self-worth and sense of freedom of mind? Are these questions answered differently on Mars or on an isolated spaceship traveling to a distant planet or even star? These questions merely point at the enormity of the branch of political philosophy that examines extraterrestrial liberty.

On 12 and 13 June 2014 we continued a conversation begun by the UK Centre of Astrobiology and the British Interplanetary Society in 2013. It focussed on the means by which governance structures in space are to be built in a way that maximises the chances for different forms of liberty to flourish. It built on the 2013 discussion which 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.[1] Governance in space has been examined before, but there has remained a deficit of discussion about the specific links between governance and human freedom. The chapters presented in this volume are mainly derived from this second discussion at the British Interplanetary Society (Extraterrestrial Liberty II: Human Governance) with added contributions to build a coherent volume.

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

As with our first volume, this book is in one sense a present-day stimulus for discussion. Our motivation was to explore the notion of liberty beyond Earth as a genuinely interesting and important discussion essential to the effort to establish a permanent human presence beyond Earth. However, in another sense, it is also a set of ideas for the benefit of the future inhabitants of the space frontier. Living in these environments, they will have a much better concept of what liberty is and how they

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[1]Cockell, C.S. (ed.) (2014). *The Meaning of Liberty Beyond Earth*. Springer.

are to realise it than we can probably imagine. Nevertheless, with volumes on liberty, they may at least find themselves with a set of historical ideas that will add to the richness of the totality of available thought. The more ideas there are, the more likely balanced concepts of freedom can be formulated. And, as this volume makes clear, in the lethal extremes of outer space, ideas and concepts of freedom will be in high demand.

Edinburgh, 2015   Charles S. Cockell

Contents

Chapter 1
Introduction: Human Governance and Liberty Beyond Earth

Charles S. Cockell

Abstract Equipped with ideas on the greatest opportunities to maximise liberty in outer space and some of its existential threats, it is possible to proceed to consider how the freedom of space settlers can be incorporated into the governance structures of extraterrestrial settlements. This volume of essays pursues this discussion from an assortment of angles, examining what we can learn from existing and past human communities and political experiences, investigating how free scientific thought and artistic creativity are to be maximised in space and how liberty can be engineered into the very infrastructure of extraterrestrial settlements. Different political and social mechanisms are considered for how impartial laws and governance are to be established. The collection underscores the quantity of information we can use from past experiences of liberty on Earth and the new efforts and ideas that will be needed to prevent the onset of tyrannies in space. Despite the tyranny-prone conditions in the extreme environments of outer space, there are ways in which liberty can be encouraged to thrive and there are approaches that can be formulated long in advance of a permanent human presence beyond Earth.

Keywords Liberty · Governance · Organisation · Constitution · Government

Of the seminal speeches that ring across the ages, there can be little hesitation in saying that Pericles' Funeral Oration, spoken almost two and a half thousand years ago, deserves to rank among the highest. His glorification of the might of Athens and its military prowess may be less appetising in, one would hope, more enlightened times; however, his observations on the virtues of Athens which were the mainspring of the deeds to which he spoke defined a new type of social order:

> Let me say that our system of government does not copy the institutions of our neighbours. It is more the case of our being a model to others than of our imitating anyone else. Our constitution is called a democracy because power is in the hands not of a minority but of the

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whole people. When it is a question of settling private disputes, everyone is equal before the law; when it is a question of putting one person before another in positions of public responsibility, what counts is not membership of a particular class, but the actual ability which the man possesses. No one, so long as he has it in him to be of service to the state, is kept in political obscurity because of poverty. And, just as our political life is free and open, so is our day-to-day life in our relations with each other. We do not get into a state with our next-door neighbour if he enjoys himself in his own way, nor do we give him the kind of black looks which, though they do no real harm, still do hurt people's feelings. We are free and tolerant in our private lives; but in public affairs we keep to the law. This is because it commands our deep respect.

The oration, recorded by Thucydides (1972, p. 145) and delivered in 431 BC after the first year of the Peloponnesian War, was part of Athens' annual tradition to commemorate its war dead. It is remarkable because it admonished its listeners to rally round a set of institutional arrangements and ideas rooted in the notion of freedom. Throughout human history, the masses have been cajoled and galvanised into action by the charisma of dictators or by ideals that are themselves rooted in the power of dictators, monarchs or one-party states. Here we have a speech that justifies sacrifices and implores its listeners to feel pride for the abstract concepts of democracy, a free and open political environment and even letting your neighbour behave how they want without receiving disapprobation, even in a look. Granted, the franchise was not one we would recognise today as very open—women and slaves were excluded from these high-minded ideals—but nevertheless his speech, in its direction, was remarkably modern. Many texts on liberty do not do much more than elaborate on the basic precepts of which Pericles spoke.

The ultimate demise of Athenian power and the fact that two thousand years on we still live in a world where the values that Pericles espoused are enjoyed by a minority of humanity shows how difficult it is to inculcate the abstract ideas of liberty into the minds of people as something worth defending and constructing a society around—how much easier it is to impress them with the physical flesh and bones of a determined dictator.

Yet, this task is indeed difficult, and this observation is made more sobering by realising that in many areas on Earth, there is sufficient availability of water, food and not least air to breathe, thus reducing the number of excuses that despots might have to coerce populations.

How much more difficult would Pericles have found his task if instead of facing the masses in the sun-soaked fields of Athens, he was instead confronted by a multitude gathered under a dome protecting them from the lethal external environment of the Moon? If his oration was an invocation to make good on sacrifices made by people not for military victory, but for the survival of a population faced with instantaneous death caused by depressurisation or the want of liquid water and food, would the abstract ideas of democracy, an open society and allowing your neighbour the life they choose, be so effective?

Some might say that we must answer the question with the response that it must be effective. To deny this would be to accept that all people who venture beyond Earth wander into assured tyranny. To accept that the experiment in democracy and freedom that began in Athens, however many its imperfections, was merely a

flourish born in the environment of the Earth and destined to die here would be to consign all hopes for the human settlement of space into the hands of dictators.

In an academic volume such as this one, which considers governance and liberty beyond Earth, there is a certain requirement for objective detachment. First, one must examine the conditions of certain types of liberty beyond Earth and then decide whether they are viable or not. This is a task that a number of us set upon in a previous volume (Cockell 2014).

But there is a more forceful approach as well, namely to recognise the tyranny-prone nature of the extreme extraterrestrial environment and to attempt to find solutions to it. To suggest ways in which we can actively construct governance structures that would allow for a Pericles-like vision of society to emerge and succeed seems an acceptable point of discussion. Academics must be objective, but they should feel no guilt in using their ideas to seek to advance the very liberty that allows them to think freely.

In this volume, we approach the subject of governance and liberty with chapters that examine both the conditions for liberty and the ways in which liberty might be maximised.

Although authoritarianism seems a likely outcome in an environment that is instantaneously lethal, it is not a forgone conclusion. It only seems inevitable because we often extrapolate our experiences on Earth into the extremity of the space environment without modification. However, with prior knowledge of these environments long before we establish human settlements, knowledge gained by robotic craft and humans, we may be in a position to ameliorate the influence of totalitarianism.

Tony Milligan explores the role of social hope and democracy in building extraterrestrial societies and suggests a practical means by which such societies might be constructed. He discusses the use of John Rawls's famous veil of ignorance to consider how we might put in place the constitutional structures to minimise tyranny. That we have time on our side—the opportunity to plan such societies before they are built—gives some hope to his approach. His analysis also uncovers another point that to talk of extraterrestrial liberty now is not premature. It would be easy to ask: Why discuss extraterrestrial liberty when there is no settlement currently in space to worry about this problem? However, the very lack of settlements in space is precisely why we are offered an unusual opportunity in human history to deliberate and discuss human institutional arrangements prior to the settlement of a new environment. This has rarely, if ever, been a possibility before. Even in modern polar stations, governance structures have evolved and developed from haphazard experiences in the early years of polar exploration. We can be fairly sure that whatever solutions are determined for the extraterrestrial case, they will turn out to be in need of modification, but we can take the opportunity to fashion useful ideas and approaches for maximising the chances that the outcome will be felicitous for those inhabiting extraterrestrial environments.

In a chapter that continues the theme of frustrating the extraterrestrial society's slide into tyranny, Charles Cockell discusses what can be done to plan for liberty with a focus on some institutional arrangements but also some very practical

every-day considerations. For example, we could approach the task of maximising extraterrestrial liberty by asking ourselves what are some of the most cherished facets of freedom on Earth, or even what facets of freedom are so taken for granted that we generally ignore them. An example could be freedom of movement. On Earth, the ability to walk freely into the outside world without being instantly asphyxiated by the atmosphere (or lack thereof) is a fairly fundamental type of freedom. Indeed, so technically difficult is it to deny people air or the correct atmospheric pressure (without deliberately putting them into a gas chamber) that we rarely address this issue at all in discussions of liberty. However, in extraterrestrial environments, the matter is different and all people must live in pressurised habitats or spacesuits continuously. This inevitably has a curtailing effect on freedom of movement. At once we see a potential conflict. The tyrannically inclined will tend to control the supply and repair of spacesuits and habitats as they will have at their disposal an enormously effective lever for exerting coercive control over a population. However, if we want liberty to be maximised, we should seek to build mass-produced, reliable, easily repaired and easily donned and doffed spacesuits that will enhance the ease with which people can get around, move to other habitats and escape the confines of a settlement. The point is that maximising liberty can be physically engineered as well as incorporated into the more abstract ideas of social and political arrangements.

Of all physical assets that lend themselves to appropriation by tyrants, none is more enticing than land. Land ownership was one of the motivating principles behind John Locke's original ideas for private ownership (Locke 1988) and it has remained a contentious point in thoughts on liberty since then. If there is to be freedom of movement or freedom to establish new settlements independent of other settlements in space, then it is probably essential that land in any given location is not all controlled by a single individual or corporation. Jacob Haqq-Misra discusses ideas for how the acquisition and sale of land can be managed in such a way as to maximise liberty and formulates some new concepts for the private ownership of land.

Despite our best intentions and efforts at engineering, we still have nagging unavoidable challenges of great magnitude in the extraterrestrial environment. The most profound of them may well be access to abundant oxygen. Lack of water and food will certainly, in short order, cause social unrest and potential societal collapse, but a time buffer exists between the point these wants set in and the time to catastrophic famine and thirst. The unavailability of oxygen, however, will kill within minutes and so it commands a fear, a control over the minds of people, that few other commodities can claim. At the same time, it will exert unimaginable attraction to the power-obsessed. Adam Stevens explores the factors that will control the price of this most fundamental of commodities and how access to oxygen will ultimately fashion liberty. He recognises not only the likelihood that the availability of oxygen will influence the culture of liberty, but also that it may be categorically critical to determining whether anyone other than scientists, explorers or others paid to go to the space frontier will want to travel there. Crucial to the settlement of space seems to be creating the means to produce abundant oxygen.

The task that we confront here is not without precedent. Science-fiction writers have made forays, one might even say have been forced, to confront the problems of extraterrestrial liberty. One cannot discuss the unfolding fictitious fortunes of the denizens of the Moon or Mars without discussing their institutional arrangements, both among themselves and in relation to Earth. Inevitably, given the freedom to speculate on any form of these arrangements, science fiction has explored draconian and libertarian extremes and the moderate colonies in between. Stephen Baxter provides us with a comprehensive analysis of the way in which human governance has been explored in science fiction and the lessons that we might learn for liberty. Fictional narratives have one strong advantage: they allow us to explore the possible permutations of human organisation in all their varieties and examine the realities of how they might be avoided or implemented depending on their predicted outcomes. Revolution and liberty have particularly come to the fore when the relationship between Earth and new settlements on our nearest neighbour, the Moon, have been the focus of attention. Many of these narratives provide a stark warning about the influence of tyranny not merely on the unfortunate settlers subjected to it, but also its ultimate influence on the political and economic systems on Earth. Small population sizes, at least in relation to the multi-billion populace of Earth, do not equate to powerlessness when you sit at the top of the gravity well in which those billions live, assuming you control the exit and entry point to that world from the infinite spaces beyond (Dolman 2002). Extraterrestrial liberty is important.

There is much that can be learned from terrestrial societies in solving some of these problems. It is easy to confine past economic and political theories on Earth to the dustbin of history, but there may be approaches and ideas that find fresh impetus in the conditions of the extraterrestrial environment. John Cain explores Marxism in space and examines how his theories can be applied to constructing space settlements. His conclusion is not so much that Marxism will work in space, but that Marx's ideas provide a foundation for an examination of capital and labour relations in space. Even if we decide not to construct a society whose economic relations are operated along Marxian lines, we can at the very minimum attempt to prevent a repeat of some of the more disastrous experiments in Marxism witnessed on Earth.

More modern worlds provide other lessons. From the 19th-century intellectual and 20th-century practical experiments in Marxism, we can move to investigate the late-20th- and 21st-century experiments in virtual worlds. John Carter McKnight explores the lessons from virtual worlds. Built by computer programmers with anarchic and libertarian ideas of what the virtual presence should mean in terms of social organisation, these models were largely rejected by those who occupied these spaces. Instead, he suggests that the lesson we should take from this experience is that it would be worth turning to more communitarian societies, such as indigenous communities, to learn something about how small isolated communities might be governed well while respecting liberty.

Alternative experiences with liberty on Earth provide us with additional examples of how not to do things. Erik Persson explores a particularly pertinent example

in the light of the growing presence of private companies in space, namely settlements run by corporations. The history of corporate settlements has not always been a happy one. Slavery and coercion have been common outcomes when corporations have been able to act as both government and operators of profit-driven motives. Persson suggests that these experiences should not make us averse to corporate success and expansion in space, but that a clear separation between those making profits and those making laws needs to be observed. This probably translates into an independently elected civil government whose laws can protect citizens against the worst excesses of corporations. He suggests that the growing role of the private sector in space exploration and settlements makes this an apposite time to discuss extraterrestrial liberty.

For constitutions and other mechanisms of governance to successfully emerge from the legal environment in which settlements are established, there has to be sufficient flexibility. John Rummel explores the existing international legal context in which space exploration occurs, in particular the United Nations Outer Space Treaty, and explores ways in which these structures can be interpreted to successfully balance the need to prevent a free-for-all that destroys extraterrestrial environments and the need to encourage space settlement, particularly by private corporations. His chapter underlines the opportunity to modify existing legal instruments to maximise the effective realisation of liberty and space settlement.

Mukesh Bhatt similarly explores the nature of constitutions and how they will affect the development of settlements in space. In particular, he examines the locus of power and considers how the autonomy of the individual can be maintained. His analysis invokes both present-day constitutions and social arrangements and constitutions that have previously been imagined for extraterrestrial settlements.

Extreme environments on the Earth can tell us a great deal about how policies and competing interests have been managed in the past and how we might avoid these problems in space, or at the very least, use previous governance instruments from these environments to consider how to apply them in space. Like outer space, no person currently lives permanently in the ocean. Thus the management of exploration in this arena might tell us something about space. Lewis Pinault discusses the International Seabed Authority and explains how principles and lessons learned in the implementation of that authority might guide the management of settlements in space with its implications for liberty.

Where do science and art sit within these complex political and economic arrangements? An intriguing and undeniable link exists between liberty and science (Ferris 2010). Scientific culture depends absolutely on a culture that allows freedom of thought, and in the long term this is linked to systems of political institutions that do not coerce and manipulate scientists and the scientific environment. To a great extent, an open society is also dependent on a successful and productive environment of free scientific thought, which is part of the wider health of open, expansive intellectual enquiry. James Schwartz explores how science is to be supported in the extraterrestrial environment to protect this culture of free thinking. He investigates some models of how extraterrestrial authorities might go about funding and generally advancing the culture of scientific work. We might also remember that this

task becomes particularly essential in the extraterrestrial environment where the great technical complexity of life-support machines gives authorities the possibility of wielding uncompromising technocratic control over the population if the people do not possess the basic scientific and technical wherewithal to understand the systems that keep them alive. With scientific knowledge comes the ability to question and investigate the decisions of those in power. Scientific knowledge is liberty.

Quite apart from the economic, political and scientific realm, there are ways in which art and culture can be used to mitigate the conformity-driving extremes of the extraterrestrial environment. Annalea Beattie explores how art practices will not only provide a way for the inhabitants of extraterrestrial societies to create new types of art, but they can also be used to positively advance a number of aspects of an extraterrestrial settlement including personal development, social diversity and a sense of inclusion of people in the settlement, the development of freedom of expression and the health of social interactions. Art should not merely be allowed, but its open and free expression should be used as an instrument for good governance and be incorporated into the political instruments of the settlement.

Underpinning the longevity of liberty is general education in addition to its scientific and artistic dimensions. Maximising liberty cannot be done without a well-educated population and mechanisms to pass knowledge to subsequent generations and open the field for discussion. Janet de Vigne investigates the conditions for education in space and how we might incorporate structures of education into the governance of extraterrestrial settlements.

Various common themes are evident within all of these chapters, but two of them stand out.

First, space is not entirely a blank canvas. There is a tendency for people to think that it offers an opportunity to begin afresh, to start a new course for humanity without all its past errors and imperfections. This view is both inaccurate and undesirable. It is inaccurate because many of the facets of the human persona will not change in space. We take our biological and social baggage with us. Society is not a *tabula rasa* to be moulded by the conditions in space into utterly new forms. Different forms indeed, but not categorically separated from their forebears on Earth. It is undesirable because we have over 2000 years' experience of totalitarianism and freedom in governance on Earth, some experiments catastrophically bad, some not so bad. It would be folly to discard these experiences on account of a wild utopian dream and believe that we can begin in ignorance from scratch and build something better. We can learn a vast amount from existing and past human communities that will enable future space settlers to minimise their mistakes and give them the greatest chance of maximising their liberty.

Second, liberty needs work. That isn't a new insight. Individuals on Earth who have cherished freedom of expression have paid considerable prices in social order, money and human lives to advance this single precept of liberty. However, in this volume, we learn a remarkable amount about the specific efforts that are needed to advance liberty on the space frontier. For example, we learn about the intensified problems of separating law-making from profit-making in communities run by

private space industries. We learn about the inherent problems of taking libertarianism to extremes in environments where instantaneously lethal conditions demand some collective responsibility. We may want to encourage a deep sense of community precisely for the purposes of saving individual liberty. We learn how art takes on an importance not necessarily appreciated on Earth as an antidote to extreme environmental conditions. We explore how scientific knowledge is necessary in a technically driven extraterrestrial society for people to understand, and even challenge, their authorities. We see how we can consider physically engineering liberty into a society by making technology widespread and easily repaired, thus minimising the potential for control over movement and the production of food, water and air. Among these technologies are spacesuits and oxygen-producing machinery. We can educate people to understand liberty and to think about it. Environmental conditions requiring protean efforts in collective organisation can lead to dictatorship. However, thought, effort and hard work can build liberty-seeking societies even in the most tyranny-prone extremes in space.

The chapters here have a certain feel of prodding in the dark. Each chapter explores its own line of thinking. We are not quite sure how despotism might emerge in space, what aspects of liberty will be the easiest to implement and which the most difficult, and we do not know what aspects of liberty will take centre ground in debates on freedom in locations beyond Earth. These questions can only be resolved by those living on the space frontier. In the meantime, it seems sensible to pursue all paths in the hope that all of them in some way intersect with the real issues that will eventually take shape in the settlements and outposts of the space frontier.

References

Cockell, C. S. (Ed.). (2014). *The meaning of liberty beyond earth*. Berlin: Springer.

Dolman, E. C. (2002). *Astropolitik. Classical geopolitics in the space age*. London: Frank Cass.

Ferris, T. (2010). *The science of liberty: Democracy, reason, and the laws of nature*. New York: Harper.

Locke, J. (1988). *Two treatises of government*. Cambridge: Cambridge University Press.

Thucydides, (1972). *History of the Peloponnesian War*. London: Penguin Books.

Chapter 2
Rawlsian Deliberation About Space Settlement

Tony Milligan

Abstract A genuine political realism about space settlements might allow for the endorsement of a form of settlement democracy, albeit subject to constraints. The value and defensibility of establishing any particular settlement will then depend, in part, upon the constraints which need to be brought to bear in order for survival to be possible. As a more detailed breakdown, Sect. 2.1 will try to show that although there may be strong pressures toward authoritarianism in space, some non-authoritarian political structures may nonetheless provide the most pragmatic candidate option. Section 2.2 will attempt to strengthen this claim by drawing a connection between democracy and social hope, with the latter functioning as a key aspect of any sustainable and worthwhile political culture. Section 2.3 will transition more directly to the context of space and will look at the issue of abortion in a space settlement in order to make a case for constraints upon democratic deliberation. Section 2.4 will argue that Rawlsian deliberation might provide a way for we who are not actually space colonists to realistically theorize such constitutional constraints. Section 2.5 will conclude by suggesting some space-sensitive modifications to the Rawlsian approach.

Keywords Veil of ignorance · Social hope · Rawls · Rorty · Abortion · Democracy

This is a paper about framework rather than constitutional detail, about the possibility of sustaining some form of political realism while deliberating about the unprecedented circumstances of space settlement. I want to suggest that we need a provisional exploration of how to approach the problem of extending political discourse into this new domain if we are to avoid collapsing the discussion into inspired guesswork. The dangers here are perhaps rather obvious. Consider, for example, White Mars (1999) by Brian Aldiss, a text in which constitutional discussions among the political elite of a space settlement skid enthusiastically

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off-course and result in the creation of a Committee for Evil, dedicated to tackling the latter as a problem of much the same order as sanitation and public health. For those involved, nothing is beyond the scope of sound planning regulations.

To describe this attitude as Aldiss does is already (implicitly) to reject it. But perhaps nothing fits as a model of deliberation when space settlement is at issue. Perhaps everything that we say will be disconnected from political realities. And so, the very idea of deliberation about the political organisation of future space settlements may seem to be not just an outlier of political theory, or an exploration of counterfactuals, but rather a case of the wrong sort of science fiction. The sort that reproduces thinly-disguised versions of present day attitudes and then mistakes them for prophecy. Yet the odd thing here is that there may well be human settlements in at least the nearby regions of space in the not-so-very-distant future, perhaps not cities but something significantly larger than the International Space Station or a polar base, perhaps even stable communities with a reproducing population. Mars, for example, may well be reached before the end of the present century and settled within a timescale of further centuries rather than millennia. Although these lines are written in full knowledge that there have been and will be obstacles, setbacks and tragedies of the sort that might lead any of us to question the value of what is done, the value of exploration, settlement and especially commercial activity anywhere else but here. Such settlements, if or when established, will nonetheless allow for an existence which is very different from life as we know it. And they will also operate with some form of political organization which will be a descendant of our own flawed political practices and institutions. They will, to some extent, bear the stamp of our imbalanced political world just as our institutions and practices bear the imprint of the world of Locke and Rousseau.

And so, from the outset, we are faced with something of a dilemma: evasion of an important fact about the future (which thereby risks sleepwalking into it) and, alternatively, acceptance that fantasy is an acceptable risk (for which the Aldiss scenario stands as a proxy). I want to suggest that this dilemma can, *up to a point*, be overcome although my emphasis here is very much upon the *up to a point.* Beyond a certain level of precision, conjecture of an unmoored sort does begin to take over. Even so, this gives us room in which to operate and the possibility of a *bounded discussion* conducted in a realistic spirit. In what follows, I want to suggest that the realism which can be brought into play need not be identical to authoritarian realpolitik. Rather, and perhaps surprisingly, a genuine political realism about space settlements *might* allow for the endorsement of a form of democracy, albeit subject to various constraints. The value and defensibility of establishing any particular settlement will then depend, in part, upon the constraints which need to be brought to bear in order for survival to be possible.

As a more detailed breakdown, Sect. 2.1 will try to show that although there may be strong pressures toward authoritarianism in space, some non-authoritarian political structures may nonetheless provide the most pragmatic candidate option. Section 2.2 will attempt to strengthen this claim by drawing a connection between democracy and social hope, with the latter functioning as a key aspect of any sustainable and worthwhile political culture. Section 2.3 will transition more

directly to the context of space and will look at the issue of abortion in a space settlement in order to make a case for constraints upon democratic deliberation. Section 2.4 will argue that Rawlsian deliberation might provide a way for *we* who are not actually space colonists to realistically theorize such constitutional constraints. Section 2.5 will conclude by suggesting some space-sensitive modifications to the Rawlsian approach.

2.1 The Authoritarian Option

All talk about the politics of space settlements will, of course, be moot if no such settlements are ever likely to be built. If skepticism of the latter sort is correct then what follows *must* qualify as fantasy. And so, in a sense, everything turns upon the assumption that it is overly-pessimistic or simply mistaken about our likely future. Yet deliberation about the politics of space settlements might also be moot for the very different reason that the political structure of such settlements (whatever their size) is bound to be a system of permanent hierarchy and command modelled upon the military, or under the control of 'the company,' or subject to some other authoritarian set-up such as colonial governorship, rather like Hong Kong under the British.

This need not be an 'iron heel' option, complete with armed guards at intersections and tanks upon the lawn. (Hong Kong under British rule did not operate in that way, but it certainly was not a democracy.) Rather, the social norms, policies and practices in place might, *up to a point*, remain liberal but they would not be subject to regular democratic control. This is a familiar option which, in science fiction, is guided to some extent by dramatic necessities, by the need to set up heroes who have enough freedom to be independently-minded, but who also have something authoritarian to rebel against. The option is also, up to a point, driven by a sense of realpolitik in a world where space activities continue to be entangled with military finance as well as state policy, albeit less conspicuously so than in former times and somewhat towards the soft end of military project funding, for example, through the Defense Advanced Projects Agency. The 100 Year Starship project is a case in point. It is backed by DARPA funds. The same is true of some recent research, of a rather more ethically-dubious sort, into suspended animation. (The ethical dubiousness in question stems from the use of animals and from the potential applications of suspended animation for purposes other than interstellar travel.) Should a ready-made structure of authority be needed, or should an ambitiously democratic setup fail under extreme, unearthly conditions, there will always be a known power structure waiting in the wings, ready to take over. Indeed, this is an option which any attempt to colonise another world might have to plan for, with well laid-out criteria for when and how to shift from civilian to military control. It is difficult to imagine the U.S. or China or India failing to devise such protocols as part of any attempt to establish a stable settlement on any scale which truly merited the name.

Cockell (2013) has even suggested that a tendency towards authoritarian control, by either the state or by private financial monopolies, might well be built into the fabric of extraterrestrial societies. Control the oxygen supply in a space settlement and you will have instant control over others, an instant means to enforce their compliance. The extreme vulnerabilities of space, the fact that it can kill you in so many different ways, may generate authoritarian pressures for the sake of sheer survival. There are, however, at least two worrying aspects to such a prospect. The first is the obvious justification problem which it generates. Why, if this is the likely outcome, would anyone want to establish a permanent human settlement on another world?

Here, we might appeal to progress in the future complete with terraforming, planetary engineering and other generations who could enjoy a better life. Or, if skeptical about the latter as a somewhat rosy prospect, we might rely upon the inhabitants of any authoritarian settlement enjoying *enough* freedoms to routinely benefit from the reasonable opportunity of an approximation to a good life. The bottom line here is that this is all that any of us ever have and it might still be possible just so long as social norms remain, up to a point, liberal while politics operates in an authoritarian manner. But here we might wonder about just how broadly liberal any authoritarian system could actually afford to be. After all, the whole point about democracy is not so much the fact that it involves a procedure of majority voting. (We would not regard a political system as functionally democratic if 51 % of the population were allowed to prey upon the other 49 %.) Rather, democracy is not simply procedural but expressive. Democratic practice is, at least in part, a political expression of commitment to liberal norms such as liberty, equality and respect for others. An authoritarian system and liberal social norms would thus be in permanent tension with one another.

And this is where a second worry kicks in. Even if settlement authoritarianism were an acceptable or historically justifiable option, it might not be a stable option. It might be incapable of delivering the security that it promises. On the one hand, authoritarian political organisation might well strengthen a tendency (already conspicuous in Western liberal democracies) towards the sacrificing of liberal social freedoms in the interests of safety and security. On the other hand, even without any such tendency, and precisely because of the tension between undemocratic political systems and liberal social norms, authoritarianism is likely to generate its own counter-culture. (Bakhtin 2009 is the *locus classicus* of the claim that hierarchy of any sort operates in just this manner.)

And while, here on Earth, opposition to authoritarian control can take a long time to feed through into political upheaval, in the intensely vulnerable conditions of space any extensive and deep popular disaffection could prove lethal. Especially so, when mixed with the psychological pressures of prolonged confinement. Terrestrial experiments in enclosed living, even when they have not been disrupted by illicit vodka smuggling, suggest that extreme pressures may ensue and system collapse is never too far away. Prisons are like this too. The Robinson (2009) scenario of an absolute political meltdown with libertarian colonists confronting an uncompromising set of authorities might not be an utterly unrealistic prospect.

Given this, it seems that authoritarianism need not be trumps, even on pragmatic grounds. If it can be made to work, political legitimacy may well be the best policy and that would almost certainly mean some manner of democratic setup or, more precisely, a mixed system with a strong democratic (legitimacy-conferring) component. We do not have more than that on Earth. An element of Authoritarian political control might, therefore, remain part of the mix, but it could not overstep its proper bounds without damaging the overall prospects for social cohesion and settlement survival. Given this, an attempt at deliberation about possible democratic structures in space does not seem to be entirely redundant.

2.2 Social Hope and Unconstrained Democracy

Let us then allow that, with matters approached pragmatically, the optimal form of political organization for a space settlement might not be inherited from some authoritarian practice or institution. Rather, it might involve a variant or component of democracy, adapted in novel ways to unprecedented circumstances. Yet, at this point, we are again in danger of running out of realistic discourse. It might, again, be extremely difficult for us to anticipate such novelty without lapsing into utopian speculation or at least idealization of a sort which is a distance removed from actual political practice. The opening dilemma, the choice between evasion and fantasy, seems to resurface. And here, on the side of fantasy, we have no shortage of Utopias to choose from. We may, for example, like our utopia with a sprinkling of anarchism, like that of Ursula Le Guin's home world, an unyielding society of equally unyielding pioneers. Or we may prefer the more communist-inclined utopia of Tsoilkovsky and of perfectionist Russian philosophy. Matters then become simultaneously a matter of guesswork and the projection of current commitments into the future.

Yet it is important to bear in mind that a rejection of Utopianism, even in the context of space, need not require us to exclude all goals or idealization. We might still work within the confines of the influential vision-preserving distinction drawn by John Rawls between *ideal* and *nonideal theory*. Rawlsian ideal theory describes a 'realistic utopia,' i.e. not a true utopia at all but rather a best possible political arrangement consistent with our human character and interpersonal dynamics and consistent too with the material possibilities of the world we live in (Rawls 1999b, p. 126). Contrastingly, *nonideal theory* deals with more easily attained arrangements but under an important constraint. Such pragmatically-conceived arrangements must not conflict with the pursuit of the ideal. They must keep the possibility of, and perhaps even a move towards, a best-realizable society, in play.

This approach allows for an element of idealization, of a sort which is likely to be integral to any theorizing of the politics of space settlements, yet it is compatible with a form of political realism rather than fantasy. It also combines the advantages of pragmatism with an acknowledgment of the importance of what is sometimes called 'social hope' i.e. hope of the sort which is integral to *any* well-functioning

political society. Such hope sustains our sense of the worthwhile. It motivates agents to stand out against the worst of abuses and underpins their willingness to compromise with one another in the belief that additional gains may be made further down the line. As such it is a key part of a political culture. And it is the latter, rather than laws alone, which ultimately sustain democratic institutions.

Yet how we articulate the concept of social hope can vary greatly even if it is done in the context of pragmatic political commitment. Vaclav Havel, one of the key figures of the Eastern European revolutions of 1989, suggested that it was nothing to do with optimism. Rather, hope was all about the belief that, somehow, our actions make sense, that somehow (often in spite of evidence to the contrary) they are justified and/or rational (Havel 1986). For individual dissidents faced to with the task of making tough sacrifices during the long years of Russian dominance, a belief in such justification may have mattered more than faith in a better future to come. Richard Rorty, ever the anti-utopian pragmatist, was a little more forward looking in his articulation of social hope, suggesting that it involves a belief in, and desire for, a future that will be, *in unspecified ways*, better than the past (Rorty 1999). But such formulations may appear rather too modest, too in danger of slipping from a reasonable pragmatism into a standpoint from which the entire exercise of establishing a space settlement may seem too aspirational. They sever the very idea of such hope from any Rawlsian notion of a guiding vision.

This ideal-free hope, although born out of a pragmatic liberal tradition is, of course, familiar from political traditions of another sort. It has been associated (fairly or unfairly) with postmodernism, with the rejection of 'grand narratives,' with laissez-faire neo-liberalism, and with the idea of the open society which is not in pursuit of any special end goal (such as communism, the dictatorship of the proletariat, the truly Christian polity or the realization of Sharia Law) to which individuals might be sacrificed. Along these lines, it may seem best to let matters play out however they will, without either ideal theory or any preconceived political goal for space settlements and to trust instead to the moment-to-moment practical reason of the populus at large. Space may even seem like an opportunity for a more thoroughgoing democracy, an open-ended 'free for all' of popular discussion without any agreed destination and with few or no constraining ground rules for the process of deliberation. Although, formulated thus, an aspiration of this sort looks like it involves a special kind of idealization and perhaps a grand narrative in disguise. (Social hope of a more robust sort may then seem easy enough to send into exile. Keeping it there may be rather harder.)

There is a familiar impulse towards such an idea of unconstrained democracy in neo-liberal thought when the latter is at its most populist, in the idea that we need to cut through the red tape of procedure, and more especially through the constraints imposed by rights legislation, by some overgrown mass of rules and regulations which prevent the sensible will of the majority from being realized at the expense of some or other minority or the disenfranchised poor. (The Tea Party in the U.S., UKIP in the UK and the Abbott government in Australia are recent examples although their attacks upon rights legislation have been taken up by other and more mainstream political forces.) The model of freedom which is on offer in such a