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Resistance is Futile

Questions of Crime and Dissent Aboard an Intergenerational Starship

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Abstract

Travel to, and settlement upon, Earth-like planets many light years away is a common trope within the genre of science fiction. It is also the subject of serious planning and speculation by both spacecraft designers and the super-rich. But how would the stresses of one-way long-distance space travel affect the crew during their journey into the unknown? The unique, ultra-safety conscious environment on board the vessel would necessarily lend itself to strict rules of conduct, but if human behaviour on Earth is to be considered, some crew members may feel compelled to dissent against rules which are perceived to impact upon their individual and collective freedoms, no matter how well or ill-intentioned such rules may ultimately be. To what extent are such outcomes inevitable, and what pre-emptive steps can be taken to manage such eventualities using tools and legislative techniques already employed on Earth?

Keywords: Space, Space Law, Space Criminology, Dissent, Resistance, Interstellar Travel

1. Introduction

A staple premise of science fiction, interstellar travel involves travel between two or more star systems. Current technological restraints do not technically render such ventures impossible, but they do impose severe limitations. For example, the furthest human-made object from Earth, the Voyager 1 probe, which has been travelling away from Earth since 1977, would take 77,000 years at its current speed to reach our nearest star, Proxima Centauri (Jones, 2025), a mere 4.25 light years away. Ion engines, powered by nuclear energy could, on the other hand, potentially reach this destination in only(!) a few hundred years (Jones, 2025). Whilst space law is currently a thriving phenomenon both domestically and internationally, it perhaps comes as no surprise to learn that there is, as of yet, no legislation regarding questions of interstellar travel. Indeed, the first iteration of guidance documents published alongside the United Kingdom's 2018 *Space Industry Act* stated, maybe a little facetiously, that,

No additional legislation has been drafted regarding Point A to Point B sub-orbital spaceflight operations and orbital and interstellar spaceflight operations with human occupants. It is not currently intended to license these activities. These are technically complex and difficult to regulate activities, and by their very nature will require global collaboration on common standards to a much higher threshold than is achievable with current technologies (United Kingdom Department for Transport, 2018: 10).

The desire for interstellar exploration, however, has been present since at least 1918 and very likely before. This can be illustrated with reference to Robert Goddard's book, *The Ultimate Migration* from that year. Designs for 'Generation Ships', whereby a crew would procreate during a voyage lasting many centuries en route to a destination star system with a view to it being explored and / or settled upon by their descendants have also been the subject of a recent competition (Batty, 2025). Should such a craft be developed, the premise of this article being that it could, the moral, philosophical, criminological and legal challenges would be myriad. Levy (2016) has questioned the ethics of Generation Ships, given that those born into what would constitute a novel and experimental environment would have their life opportunities severely restricted. This, along with other tensions on board such a craft, inevitably paves the way for dissent and resistance which to varying degrees will be safeguarded by the human right to freedom of expression. Given the dramatic stakes in the midst of the unforgiving backdrop of outer space, how can such rights be protected in the unique setting of an interstellar starship? This conundrum will now be explored using a scenario.

2. Scenario

The year is 2126. A project to build a starship, funded by a global conglomerate of trillionaires, has just reached completion. The starship, holding a Lagrangian orbit between the Earth and the Moon post-construction, contains 50 berths for those daring enough to take a one-way trip to Proxima Centauri B, an Earth-like planet just over 4 years away at the speed of light. Despite technological advances within society, the light-barrier has not yet been broken. Even travelling at the maximum speed capable of being attained by the vessel, with its combined nuclear and laser propulsion system, the ship will take over 30 years to reach its destination.

Daily life on the ship will be supported through artificial gravity generated by centrifugal arrays jutting from the fuselage alongside the engine nacelles. Food will be grown and harvested using botanical and agricultural techniques developed during the explorations and attempted colonisations of Mars in the late 21st century. The starship has a finite number of adapted living quarters for those on board in addition to some redundancies to accommodate future generations. It also has essential amenities such as gyms, entertainment suites, libraries and educational facilities.

In addition to the technical and engineering staff essential for the running of the ship, the crew has been selected according to the necessary spectrum of skills and attributes necessary for the successful establishment of a human outpost on an alien world. In addition to the architects, physicians, lawyers, psychologists, engineers, philosophers and educators, there are a few self-selected and self-funded crew members who have paid a substantial sum of money for a place on board.

As Milligan (2016: 11) wrote, the crew should be regarded for the purposes of this article as ‘...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’.

After a two-week orientation period, the ship’s central thrusters ignite, and within a month, the ship is up to its top speed. Planet Earth is soon over a trillion miles away. Although the ship is registered on Earth under the terms of the Uniform International Code on Space Law of 2095, factors such as communications latency and a degree of time dilation make it difficult for those on Earth to assert jurisdiction. Throughout the voyage, the crew is expected to follow orders and instructions from those in command. Although artificial intelligence is responsible for running a great number of the starship’s functions, each crew member is regarded as an essential part of the chain and the prospects of survival hinge on them functioning as an interdependent unit. The environment beyond the ship is harsh and merciless.

Over the course of the next 30 or more years, disputes amongst crew members arise. Opinions and views differ on various matters, some of them operational, some of them political and cultural. As time goes by, children are born to crew members and become citizens of the community themselves. Arriving in a place very different to that from which their parents departed, on attaining adolescence and young adulthood, the ‘star children’ and indeed, some of their parents, begin to feel disillusioned. The working conditions become progressively harsher, the starship starts to feel overcrowded, and the entertainment and enrichment facilities come to be regarded as turgid and uninspiring.

Dissatisfaction swells amongst the crew. Under the autocratic command structure, they find themselves adrift. Unheard, underappreciated and bored, a growing resistance movement begins to foment. Any sign of subversion is dealt with brutally by the increasingly dictatorial regime in command of the starship. Dissent and resistance, as the regime sees it, must be quashed without mercy to ensure the safety of the ship and its crew. This attitude infuriates the disaffected, leading to yet more dissent. This is in turn, uncompromisingly quelled, with ‘air-lock’ justice being reserved for the most serious offenders. The regime instigates ever-tightening rules and regulations aboard the ship to keep the populace in check. Can such outcomes be avoided?

3. The inherent tensions within the starship society

From the outset, a voyage such as this one could be regarded as a golden opportunity to start a ‘societal clean slate’, one that avoids racial disharmony and discrimination. Although the likelihood is that people will bring to space the same socially constructed prejudices and biases they held on Earth, particularly as existing structural bias is already evident in the demographic of space users today, with private space users consisting invariably of the super-rich (Lampkin & White, 2023). The crew would be a very diverse and multi-skilled one. It would also be hoped that those chosen for the voyage would be physically and psychologically equipped to deal with life in space. Moreover, it would further be desirable for consideration to have been given to how such individuals may cope with the nature of the mission. The fact that the voyage is ‘one way’ would likely result in fundamental changes of their view of themselves within the Universe itself (Lampkin & White 2023). As above, this too could be one of the stress factors leading to increased levels of dissent within the crew. As has been noted by Lampkin & White (2023), the vastness of the universe may throw life on board the starship into sharp contrast, with the constructs of command

and disciplinary mechanisms employed adopting a guise of pettiness for those lost in the wanderlust or otherwise experiencing different levels of consciousness. Such an eventuality is not to be taken lightly. Astronaut Edgar Mitchell said after his visit to the Moon, that he had a 'savikalpa samādhi' experience that profoundly changed his outlook on life (Truman, 2007). Other astronauts have also reported significant shifts in perspective from the experience of going to space (Garan, 2021).

Such conflict may be amplified by the crew's ever-increasing spatial and temporal dislocation. The notion of the crew being bound by a social contract with those on Earth would seem not to apply in the sense that it would for astronauts orbiting the Earth on the International Space Station by virtue of distance. The 'social contract' therefore, would seem to operate between the crew itself as relations between them and the Earth would ultimately be severed. Without an external arbiter to settle disputes, conflict may take on a more interpersonal nature within such a closed community. In terms of understanding such matters, a positivist criminological approach (Mugari, 2021) may be more useful given that the geographical and spatial dislocation from Earth will necessitate an increased reliance on internal rules. In the specific context of our starship, sociological positivism stresses the overriding importance of an individual's environment on their propensity to commit crimes (Mugari, 2021). As will be seen, this factor is of crucial importance with regards dissent and resistance aboard the starship. Societal flux during the lifetime of the voyage will doubtlessly bring with it new perspectives and indeed new societal attitudes of a yet unknown nature. What may have been regarded as a sensible and flexible set of rules at the beginning of the voyage may begin to feel overly restrictive and contrary to human dignity by the next generation.

Future generations aboard the starship aside, a natural state of tension will no doubt be present on any such voyage from the outset. Durkheim (1952) proposed that human beings have potentially insatiable appetites which can be either aggravated or diminished as a result of the environments they are born into. Well-ordered societies tend to regulate such matters effectively which leads to lower levels of crime. However, he also indicated that this is also more prevalent in communities that undertake similar essential tasks together, bound by a set of common beliefs and values. Where tasks are highly individualised, as is the case with modern urban societies, such circumstances tend to engender a spirit of individualism and competitiveness which could make criminal activity more likely (Lanier, 2014). The environment on board our starship is likely to comprise elements of both. On the one hand, the community will be bound by the need to undertake essential tasks and may, to an extent, be bound by a set of common values. On the other, given that the operation of a spacecraft of this nature (the use of AI driven solutions notwithstanding) would require a diverse range of abilities and skillsets, we could see a shift towards a more 'individualised' system, indeed, the environment is almost 'individualistic by design'. As Lanier (2013) points out, such a scenario could lead to the diminishment of collective moral authority as greed and novelty-seeking is awakened. It is possible that such theories are more relevant to a traditional capitalist marketplace framework driven by competition and the thirst for self-advancement, as opposed to a starship society. But if the community is ordered along rigid divisions of labour with little or no potential for cross-qualification as regards occupational disciplines, perhaps such a trap could be avoided. However, such a construct could itself also lead to resistance should it be ultimately perceived as representing severe limitations on individual liberty and self-advancement. It is clear to see how a state of Durkheimian 'anomie' could be fostered aboard our starship. Whilst an Earth-based civilisation may factor a degree of transgression into their plans for the management of society through relatively well resourced and functioning criminal justice systems, a space-faring community such as ours would lack such a luxury. In such a happenstance, it is not difficult to imagine the difficulties presented by the potentially grave danger posed to the crew from escalating levels of dissent coupled with the absence of effective organs of justice or enforcement.

Dissent and resistance aboard our starship from at least some quarters of its population, then, appears inevitable. Firstly, in the absence of any dramatic paradigm shift akin to the events

portrayed in *Star Trek: First Contact*, the crew themselves are likely to bring with them a host of cultural, political and personal biases. Secondly, the general dislocation from Earth and its legal and judicial institutions will necessitate an agreed legal framework aboard the starship. The contents of such an instrument will, of course, find favour from some and derision from others from the outset. Thirdly, societal flux during the voyage will naturally lead to changing views, opinions and outlooks amongst the crew. This may become more pronounced when new generations born throughout the course of the voyage begin to develop their own views and opinions about life on board and the nature of the mission itself. Moreover, the shifts in perspective brought about by interstellar travel alone may be enough to inspire introspection and debate on the nature of reality which could bring with it a host of questions regarding the basis for authority aboard the starship. Fourthly, the very nature of working life on board the starship from the very beginning of the voyage could, per Durkheim's view, in and of itself lead to higher rates of crime. Any or all of these factors could prove a catalyst for organised resistance or at the very least agitation for change.

4. Crime, punishment and starship law

Space criminology is a field in its relative infancy. In many ways it is both a blessing and a curse to be writing at such a time. The seminal work of Lampkin & White (2023) as regards this exciting field is instructive. The authors therein boldly set out to establish what they term the 'key dimensions of space criminology'. Namely, these are the definitions of a crime within this context, the focus of analysis – be that crime to ecosystems, other people or actions that may not yet constitute crimes within the legal state of the art, the causes of such crime in the space environment, the nature of the offender, the victim and the ecosystem / particular community and, broadly speaking, how such matters should be dealt with through measures of crime prevention and restorative justice. Lampkin (2024: 175) has also defined a space crime as, amongst other things, 'Any unwanted action or behaviour that results in harm to people, property, non-human species or landscapes / ecologies', and has also gone on to outline levels of space crime. On his analysis, the kind of criminal activity that could arise in the context of resistance could be 'Micro' - Public order crimes in space: riot; affray; causing harassment, alarm or distress; criminal damage and destruction of property; vandalism; graffiti; arson; littering' or 'Macro' – 'Acts of terror'. As Eski (2025: 19) has written, 'space criminology could proactively study space crime'. In a criminological sense, this article seeks to explain how certain actions which could be regarded as criminal may come into being aboard a distant starship and how they could be avoided.

The extent to which transgressions would be policed on board the starship is an uncertain one. On one hand, an analogy could be drawn with human activities in the Antarctic. Heightened cooperation is needed owing to the extreme environment. One study has shown however, that social control as opposed to control by the police or other authorities is the norm in such environments, with a degree of tolerance lent to 'folk crime' in light of the extreme environment and need for cohesion in the interests of survival (Kaiser & White, 2022). It is likely that such 'folk crime' would be present in the face of a long-duration space mission such as ours, possibly manifesting itself in anti-social behaviour and (if accessible) drug abuse. It has been stressed that this underscores the need for a sufficiently stimulating environment with 'entertainment diversions' to afford coping mechanisms to the crew (Lampkin & White, 2023). Whilst a 'blind-eye' may be turned to relatively minor transgressions in the Antarctic, the extent to which this would be mirrored in a deep-space operation is questionable. Whilst the Antarctic is certainly not without its dangers, it is thought that deep space patently makes for a more hostile environment. The Antarctic has a breathable atmosphere along with supply chains providing for sustenance. Moreover, as remote as the Antarctic is, it is within relatively easy reach of other countries and agencies on the planet. Contrast this with our starship scenario where the atmosphere beyond could kill instantly, food must be produced internally with no possibility of re-supply should the crops be blighted, and there is no possibility of rescue or intervention from those on Earth. A minor transgression in the Antarctic, therefore, could be regarded as a major one in deep space.

The policing or punishment of transgressions of any kind will have to be based upon legal authority. As noted, the starship will necessarily require a Crew Charter to govern life on board. Lampkin & White (2023) suggest that pre-existing laws from a nation state on Earth could be synthesised with the laws of other states, perhaps by way of a comparative exercise, to establish such rules as may be best suited to such an environment. However, they also point out that such a process would be complicated by inevitable disagreements. As our crew is made up of a variety of individuals of varying skillsets, cultural and ethnic backgrounds and, it is to be assumed, diverging political and religious viewpoints, it is unlikely that our starship will prove exceptional in this regard. Whilst the law-making process on Earth, at least within societies which follow some semblance of a democratic or parliamentary system, is informed by open debate within the legislature, Lampkin & White (2023) illustrate that the creation of laws tailored to the peculiarities of spaceflight would be particularly difficult for various reasons. Obstacles would include the applicability of relevant laws and procedures, jurisdictional matters and how sentencing and rehabilitation would be administered within this unique environment. Lampkin & White (2023) further show that whilst 'natural' law could be taken as the basis for such an underlying legal framework there would be the potential for significant difficulties owing to cultural relativism. Indeed, a 'legal positivist' approach could be eschewed in some quarters given that this is largely a western conception. Lampkin & White (2023) also warn against the uses of AI for solving legal problems in such a context owing to the potential to cause gross injustice. Any such charter will need to be broadly agreed, and a degree of flexibility would need to be incorporated so that amendments could be made over the life of the voyage.

It is important to note that both investigations and punishments would be challenging on board our starship. Lampkin & White (2023) query that should there be any practical difficulties with investigations owing to the absence of specialist personnel or other circumstances, an approach may have to be taken that is in the best interests of the community. In our context, some of these problems could be rendered moot by the nature of the voyage, its subtext being a complete severance from the planet Earth to begin a new civilisation elsewhere. On the basis of existing Space Law, however, at least one country on Earth would retain legal jurisdiction over such an operation (see Article VIII of The Outer Space Treaty 1967). The actual authority of Earth based governments and law enforcement authorities over any such disputes would be rendered largely academic in the absence of any practical way to exercise such authority. The associated communications latency (time lag) and added possibility of time dilation associated with the vast distances involved in our case would render any such investigations and the enforcement of laws from Earth largely unworkable (Simmonds, 2023; 2024). As the saying goes, *justice delayed is justice denied*.

An additional possibility is that the starship itself could attempt to become legally recognised as a state despite being separate from the Earth itself. It could potentially satisfy Article 1 of the Montevideo Convention, for it has, or at least, *could* have: '(a) a permanent population; (b) a defined territory; (c) government; and (d) capacity to enter into relations with the other states.' Whether our starship finds statehood or not, however, does not relieve any of the practical difficulties previously referred to. The starship will always be dependent upon its own laws to a certain degree, particularly in the more advanced stages of its voyage.

Such attempts at drafting a legal code for space settlements which protects human rights has been attempted previously. At the 71st Astronautical Congress, a presentation was given on a Human Rights Framework for Outer Space Settlements by Jonathan Lima (2020). Such an instrument was justified based on, *inter alia*, the concept of universality. If human rights are universal, they also transcend space and time and there can be no constraint of these as such. The instrument also sought to uphold commonly accepted paradigms such as the right to be heard and to exercise one's rights and hold decision makers accountable for their actions and also included the creation of a criminal justice system to administer such processes. Emphasis was placed upon the continuing nature of human protections across space and time, even where such cultural differences emerge from distant space settlements and the Earth itself by means of the

same universality and also the maintenance of a common human identity “to which human rights represents the cumulation of generations of moral codes, religious beliefs, and legal frameworks” (Lima, 2020: 7). The aim of this instrument was premised upon the maintenance of human-to-human connection of space settlements with governments on Earth. As discussed from the outset, our crew may one day regard themselves as a separate species from those on Earth by virtue of the spatial and temporal dislocation and shifts in perception of their own place in the cosmos. This is particularly true of a longer-term perspective whereby our crew may reach their intended destination and form permanent settlements on an orbiting planet. Over subsequent millennia the descendants of our crew may evolve in new and unexpected ways. To what extent would human rights cover these descendants? The question of self-determination in such a context also arises. To what extent is there a right to self-determination if the determination is that the community no longer considers itself a community of human beings, at least not in the Earthly sense? Like some of the other paradoxes already raised, this question is beyond the scope of this paper.

On the matter of speculative legislation, it is also worth noting that a draft Universal Space Criminal Justice Act has been composed by Eski (2023) which seeks to set out protections for due process and related rights whilst also defining certain categories of criminal activity. Whilst described by the author as a ‘tongue in cheek’ contribution to the literature, Eski nonetheless intended the work to inspire discussion and debate around such matters. Like the work of Lima (2020), the draft instrument proves instructive in setting out the kind of sensible framework that would inevitably need to be promulgated. A similar instrument would have to be adopted by the crew of our starship but, as will be shown, careful consideration would have to be given in respect of balancing freedom of expression with the overall safety of the mission which would, in most cases, be the overriding priority enforced by the threat of criminal sanctions (Newman, 2017).

Our starship is slipping further beyond the surly bounds of Earth with each passing minute. Tensions, both generational and inter-generational, are simmering. All participants to the voyage are bound by the Crew Charter which simultaneously purports to protect and uphold human rights whilst at the same time setting boundaries for permissible conduct and proscribing penalties for transgression. Certain disaffected crew members wish to stage protests to highlight their concerns. Their working conditions have been getting progressively worse; there is evidence of corruption and nepotism amongst the upper echelons of the command structure and there are even valid health and safety concerns as to the operation of the ship itself. They feel constrained by the terms of the present Charter which, having been shaped around a ‘top-down’ command structure in keeping with the regulations of analogous ventures (military, emergency services, certain sea-faring activities), allows little room for negotiation and seeks to consolidate the status quo. They would like to show their discord through an action that will make those in command sit up and take notice of their plight, but short of disrupting the day-to-day activities of the ship, there is little they can do. As also set out in Eski’s draft Universal Space Criminal Justice Act under Article 3.4, interference of the ship itself is a criminal offence under the charter, attracting severe penalties and would meet the definitions of a ‘space crime’ as set out elsewhere (Lampkin, 2024).

5. Resistance and dissent

Milligan (2016) argues that ‘dissent’ will always be with us in one form or another and, further, that it would be impossible to eradicate in all its forms. He further argues that efforts to suppress it could be counterproductive. It would likewise be undesirable. Cockell (2016: 21) has described dissent as ‘essential in any society where people are not to be cajoled into submissive conformity by dictatorial rulers’. It is likewise important to note that the forms that dissent can take, at least on Earth, are many and varied. Even the more loaded term of ‘disobedience’ has a wide spectrum, ranging from peaceful ‘sit-ins’ through to ‘tree-spiking’ (Cockell, 2016: 22). The very environment in which our crew operates, is almost by design, one that sets itself very squarely against the manifestations of dissent. As Cockell (2016: 1) has noted, space can legitimately be regarded as an ‘instantaneously lethal environment’ in which certain actions of dissent could be very impractical, and in some cases, unsafe, to stage. Because of the inherently safety-critical nature

of day-to-day life in space, those living and working there could naturally find themselves becoming conservative owing to the danger that political, and other change, could pose to their very existence. Cockell notes that such a mindset may also induce the commanding authorities to quash any such dissent as a matter of operational necessity to safeguard the structural integrity of the ship, the settlement, the mission and its organisation. A society without dissent would also be undesirable. Cockell (2016: 1) also states that it must occur 'if extraterrestrial settlements are not to degenerate into places occupied by slaves doing the bidding of private or state enterprises'. Likewise, Milligan (2016: 7) states that 'scope for dissent is basic to the freedom of any future generation' whilst qualifying that it would be foolish to allow dissent in all its forms.

Although it is highly likely that the majority of our crew are likely to accept severe restrictions on their civil liberties and freedoms as part of the price that must be paid for entry onto the starship (and therefore being part of such a monumental and significant step in the history of the human race) and indeed, accept a certain degree of authoritarianism as regards the continuing and efficient operation of the ships vital life-support functions, incidences of refusing to cooperate or disobeying orders in such an environment could potentially cost the lives of the entire crew. Milligan (2016) has warned against such a tacit and unqualified acceptance of suffering in the present so that those of future generations can benefit. To illustrate this, he quotes Alexander Herzen, speaking in the 19th Century: 'Do you truly wish to condemn all human beings alive today to the sad role of caryatids supporting a floor for others someday to dance on... or of wretched galley slaves, up to their knees in mud, dragging a barge filled with some mysterious treasure and with the words "progress in the future" inscribed on its bows?' Milligan (2016: 18)

Milligan (2016) goes on to discuss Ghandian 'civil disobedience' as a form of dissent which avoids violence whilst also remaining impassive. What may be regarded as 'non-violent' civil disobedience on Earth could be viewed very differently in the context of our space crew as Milligan points out. The problem of communications latency is also one of the factors Milligan highlights as rendering the need for autonomous decision-making a necessity in the context of deep space settlements. An 'in situ' regime could, in step with analogous ventures, could lead to the establishment of a 'military-derived command structure' on such missions. Drawing parallels with our starship scenario, Milligan has written that: 'the more distant the colony is from Earth, the stronger the pressure towards local autonomy is likely to be' and, further, that such autonomy is 'consistent with the local dominance of authoritarian and military-style command structures rather than anything resembling a democracy'. Milligan (2016: 9)

Whilst a peaceful 'sit-in' or vigil could be regarded as being at the more amiable end of the spectrum of resistance, at the far reaches of its opposite end is 'terrorism'. Taking a legal positivist approach, it could be argued that anything the authorities in command of the space mission deem to be 'terrorism' is by that measure at least, 'terrorism'. Adopting Agnew's (2010: 132) broader definition however, terrorism could be defined as 'the commission of criminal acts, usually violent, that target civilians or violate conventions of war when targeting military personnel; and that are committed at least partly for social, political, or religious ends'. This may offer some flexibility as regards the semantics, but given the need for strict adherence to safety protocols as a result of the extreme environment presented by any form of space travel, it is likely that a large number of acts (or omissions) on board could be regarded as 'criminal' that wouldn't otherwise be so on Earth.

For example, it is likely that any form of industrial action could disrupt mission critical operations on the ship (Bhatt, 2016). Industrial action itself could be regarded as a criminal offence for some sections of the workforce, particularly those with responsibilities for crucial life-support systems (Bhatt, 2016). Moreover, in the interests of sustainability for the ship's crew, birth and population control measures could even be invoked with the attachment of severe penalties (Milligan 2016), and such measures could be aimed at either increasing or decreasing the resident local populace. It goes without saying that such a measure would also be a controversial one on the part of the commanding authorities which would likely arouse at the very least some semblance of 'dissent'.

Agnew's (2010) general strain theory of terrorism posits that that terrorism is 'most likely when people experience 'collective strains' that are: (a) high in magnitude, with civilians affected; (b) unjust; and (c) inflicted by significantly more powerful others, including 'complicit' civilians, with whom members of the strained collectivity have weak ties' (Agnew, 2010: 148). He further states that these collective strains 'increase the likelihood of terrorism for several reasons, but they do not lead to terrorism in all cases' (Agnew, 2010: 132). Further, Agnew (2010: 135) describes 'strains' as 'events or conditions that are disliked by individuals' involving 'negative or aversive treatment by others' and also to include 'the inability to achieve goals'. Moreover, he states that strains that are most likely to lead to an increase in crime are 'high in magnitude, seen as unjust, associated with low social control, and create some pressure or incentive for criminal coping' (Agnew, 2010: 135). Most pertinently to our situation, he also gives examples of 'harsh discipline', 'work in the secondary labour market' and 'discrimination based on ascribed characteristics' as examples of strains. According to Agnew (2010: 136), 'collective strains' are those most likely to result in terrorism, which he defines as 'strains experienced by the members of an identifiable group or collectivity, most often a race/ethnic, religious, class, political, and/or territorial group'. Importantly, he considers that these strains are 'high in magnitude' with 'civilian victims', 'unjust' and 'caused by significantly more powerful others, including complicit civilians, with whom members of the strained collectivity have weak ties' and, further, that such 'strains' are 'high in magnitude to the extent that they... involve acts which cause a high degree of harm such as death, serious physical and sexual assault, dispossession, loss of livelihood and major threats to core identities, values and goals' (Agnew, 2010: 136).

Should those in authority begin to enforce rules or practices of a Draconian nature which could impact adversely on any particular 'collectivity' aboard the ship, it is arguable that the definition of a 'strain' may be made out. With a new generation being born on the travelling starship, there could likewise be issues relating to 'identicide' should conflict arise between those 'star children' - although genetically human - and those originally born on Earth (Lampkin & White, 2023). As Milligan (2016: 10) has noted, "(t)he 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". Whilst the ethical point of whether human beings should indeed reproduce in space and thus bring new life into a world that is, by its very nature, completely alien, is certainly worthy of consideration, particularly in the context of whether this would in fact lead to 'strain'. In this sense, it is worth noting that, as Milligan (2016: 15) states, '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'.

Agnew (2010: 144) goes on to suggest that 'terrorism' in this sense could be mitigated through the provision of 'coping resources' such as the right to legal redress and an open forum for discussion for political matters. Indeed, he cites evidence that appears to illustrate that terrorism is much less likely to erupt in democracies for this reason.

Proposals have been made to address issues of resistance and dissent. For instance, Milligan (2016: 19) advocates for a system of 'consensus deliberation' to avoid the problems of dissent in future settlements, noting its Earthly effectiveness in respect of peace processes, in particular as regards Northern Ireland, with dissent being adopted and subsumed within this system as a constitutional 'check'. Cockell (2016: 28) suggests that a formal system for the registration of dissent could be established. Coping mechanisms such as a 'free press' and open debates may serve to reduce the likelihood of political causes being advanced by violence and architectural solutions such as a modular habitat design could also reduce its likelihood. He goes so far as to suggest that "a newsletter in which opinions and points are debated" could be one such manifestation of this (Cockell, 2016: 28). One must query how long it would take for such a publication to yield to censorship should any of the content be regarded as 'subversive'. Discussion forums could also come under political scrutiny. As on Earth, a fine utilitarian line will have to be straddled between freedom of expression and the greater good. For such a system to function, it

may be necessary that 'expression', likely to lead to the endangerment of the ship itself, be curtailed. However, as seen on Earth, the authorities can interpret such powers in ways that cause alarm. Recent examples include the arrest of a protestor for displaying an extract from the publication, *Private Eye* during a march to express solidarity with Palestinians (Spereall, 2025). It has also been noted that s.44 of the Terrorism Act 2004 in the UK was ultimately used against journalists and civilians in addition to protestors in spite of being enacted as a counter-terrorist measure (Hamilton, 2019). More recently, many were arrested for supporting the proscribed 'Palestine Action' organisation in the UK, resulting in 474 arrests on one day (BBC News, 2025), a move that was condemned by some as authoritarian in nature. Any such moves that impact upon the human right of freedom of expression in the context of dissent and resistance could in turn strengthen the resolve of those revolting.

Our starship is now in disarray. The majority of crew members are feeling more and more victimised as the autocratic regime seeks to silence any dissent by increasingly Draconian means. This in turn, is fuelling resentment, and martyrs are being made of those subject to the more severe penalties the commanding authority has imposed. The next step for the resistance movement is to begin a co-ordinated program of sabotage amongst some of the ships less vital functions. All parties understand, however, that such a measure will result in more of the same. It is only a matter of time before the integrity of the ship itself and the continuing survival of those aboard is irreversibly compromised. Could things have been handled any differently to avoid this unfortunate situation?

6. A legal solution to our troubled evolution

Freedom of expression has been, and remains, a contentious issue in recent times, with those on all sides of the political spectrum able to cite examples of where they perceive 'free speech' has been unjustly curtailed by the authorities. 'Freedom of expression' as an absolute is a complete fiction and it is not without its limitations. A classic example is that one is not permitted to scream 'Fire!' in a crowded theatre. The charter agreed by our space crew, therefore, would have to allow dissent within certain strictly defined rules, i.e. 'Freedom of expression is a fundamental right, save for where such expression appears likely to cause undue harm to the essential running of the starship or unnecessary harm or distress to other crew members', the latter part of the clause inserted to avoid, insofar as is possible, the stoking of division or fomenting of hatred or prejudice between fellow crew members. Of course, such a clause would be open to interpretation. What is 'essential running'? Would this include functions such as air conditioning or an action that impacts upon the recreational facilities? How is 'undue harm' to be defined? If 'harm or distress' is unnecessary, does this not imply that, on some occasions, 'harm and distress' is necessary? To provide an exhaustive list of every possible exception to these clauses would be an impossible task given the near infinite amount of permutations that could arise during the voyage, and nor, it is submitted, would such an approach necessarily be helpful. Some could take the approach of 'that which is not classified as illegal must, therefore, be legal' thus rendering such an exercise potentially harmful.

However, there is nothing to say that the approach taken to controlling the parameters of dissent and the window of acceptable dialogue should not be one comprised of both rules and standards. Rules and standards often work more effectively in different contexts. A 'No Smoking' sign at a petrol station is an example of a rule, whereas a law stating that dismissal from employment can only be done on 'reasonable grounds' is an example of a standard. Whilst smoking a cigarette inside a car at a petrol station will not always result in catastrophic harm it would clearly be unwise for a petrol station to erect a sign saying, 'reasonable smoking activities permitted'. Similarly, if instead of dismissal from employment were instead based on rules, it would be virtually impossible for the legislature to draw up a list of each and every occasion that would permit an employer to dismiss given the extensive range of working environments within society and differing job requirements.

As Kaplow (1992) has noted, standards are more expensive to operate than rules. Standards are often more open to interpretation and argument than rules thereby requiring the services of legal professionals and, with them, an informed judiciary. Rules are also much easier to learn than standards. Crucially, Kaplow (1992: 569) notes that:

Uninformed individuals act based on their best guess about how the law will apply to their contemplated conduct. Informed individuals act based on actual knowledge of the law. Thus, informed individuals might be deterred from conduct they would have undertaken if they had remained uninformed, which can occur when they learn that such conduct is illegal or subject to a higher sanction than they otherwise would have expected. Or, informed individuals might choose to undertake acts they would have been deterred from committing if they had remained uninformed. Both possibilities are of value to individuals.

There arises a strong argument, therefore, that at least some degree of legal education should be a requirement for our crew. This would be desirable for several reasons. Firstly, the more informed individuals know how the law operates, so it is less likely that they will be prone to knee-jerk reactions in the face of legislative measures which, on their face-value, appear repressive but may be necessary in the interests of the greater good. Secondly, the more educated the crew is on legal procedure, the more respect they may have for expressing dissent through legally established channels as their learning could engender more respect for such institutions. Thirdly, and perhaps more peripherally, a general knowledge of accepted legal rules would be valuable for the development of society as a whole and possibly avert a situation akin to 'mob rule' either during the voyage itself or during the infancy of a new society around a distant star.

Regarding rules and standards, freedom of expression – including dissent – may best be framed as a general standard supported by rules that specifically curtail that which is likely to cause significant disruption to life-critical infrastructure.

The above, of course, rests on the premise that all crew will willingly subscribe to such a system and defer to it. Clearly, such a system would not appeal to every single member of the crew as is the case in any given society on Earth, and there will always be dissenters. To curtail the likelihood of such dissent developing into what could be termed 'extremism', it would be vital to ensure that any law-making process engenders at least some degree of legitimacy amongst the local populace. A council could be established along a rough system of 'proportional representation' where all views within the space-faring society could be heard. Moreover, justice could be administered by lay juries ensuring that all crewmembers, at least in principle, can make legal decisions and thus feel as if they are an essential part of the legal and judicial process as opposed to being part of a 'top-down' oppressive hierarchy.

The problems of dissent within an inter-generational starship are likely to be myriad and it seems there will always be dissatisfaction amongst those on board. It may be that, overall, a simple utilitarian approach is agreed upon as part of the Charter, and all crew required to affirm their allegiance to the greater good and to only allow dissent within specific parameters. Of course, such a system is not a perfect one, and constitutional checks should operate to ensure that whoever is responsible for the mission itself, be that the captain or an elected official, cannot be in a position to abuse their powers. The imposition of 'term limits' on high offices and the requirement of true democratic mandates refreshed at regular elections may be of use. Alternatively, a system of 'direct democracy' where every major decision is subject to a vote by each member of an informed and educated crew might also work for the good of the greatest number whilst even stymieing dissent. Whilst this may lend itself to a 'tyranny of the majority', it may well be the most acceptable form of the inevitable tyranny that will prevail in some way shape or form for our crew.

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