

POLICY BRIDGE

Scapegoats, silver bullets, and other pitfalls in the path to sustainability

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This paper draws from *The Lathe of Heaven* by Ursula Le Guin to highlight some of the most likely pitfalls on the political road to a sustainable planet. Through the literary device of dreams that can change the world, Le Guin explores how the individual's egoistic desire to save humanity can be twisted by the limitations of our psyche and our society, turning an already uncomfortable future Earth into a devastated planet. It is a stinging critique of answers handed down from above, and a call to action for those of us who just get by here below. Her story warns of the ancient "road to hell", paved and trodden by would be saviors with the best intentions but also points to the license that public apathy provides to the powerful when the costs of environmental harm are borne by the powerless. These disconnects, combined with cycles of rationalization, silver bullet mentalities, and the tendency to scapegoat others for negative side effects, can all derail sustainability transitions. *Lathe* provides an allegorical assessment of this process, but much more study is needed to fully understand and regulate the resulting governance treadmill.

Keywords: power disconnect; cycles of rationalization; governance treadmill

Introduction

Transitioning to a more sustainable world requires changes in technologies, economies, and societies. While a few of these changes may occur spontaneously, most experts agree that some level of policy intervention is necessary (Loorbach 2010; Frantzeskaki, Loorbach, and Meadowcroft 2012). Even in advanced democracies, policy making tends to be reactive, rather than proactive. That is, governments respond to the complaints of powerful constituencies, rather than working to prevent problems before they occur (Baumgartner and Jones 2009; Sabatier and Brasher 1993; Kingdon 2011; Webster 2015a; de Gooyert et al. 2016). Thus, we can expect more attention—and more action—on an environmental problem when related costs are felt by powerful interest groups or, in democracies, by a majority of the public. Although this responsiveness is problematic in itself, delaying policy making and increasing the risk of major environmental catastrophes, the political will created by environmental stresses can also be co-opted or channeled into unhelpful responses (Hendriks 2009). These pitfalls in the path to sustainability are dangerous and need to be avoided for a successful transition.

In this paper, I use *The Lathe of Heaven* by Ursula Le Guin (1976; reprint of 1971 edition) to explore a range of factors that prevent effective environmental governance and hinder the transition to sustainability, which

requires political as well as socio-technological evolution (Frantzeskaki, Loorbach, and Meadowcroft 2012; Voß and Bornemann 2011). Le Guin is one of the few authors of science fiction who writes about transition itself, rather than building up a fictional future and leaving the source of transition to the imagination of the reader. Several of her books (e.g. *The Phoenix*, *The Eye of the Heron*) center on political transition via revolution but in *Lathe* she grapples with social and psychological aspects of transitions to a more peaceful and sustainable planet. Although politics are peripheral in this book, it remains an apt allegory for modern sustainability transitions.

Lathe features many of the deep social problems that we still fear—and even experience—today. Overpopulation, food shortages, global warming, polluted air and water, and war in the Middle East are just a few examples of the elements that give her dystopia an enduring depth. However, her story warns of a deeper concern, the ancient "road to hell", paved and trodden by would be saviors with the best intentions. Each of the three main characters in the book, George Orr, William Haber, and Heather Lelache, represents a different category of political actor and the interactions between them parallel processes in modern environmental politics. Orr embodies the apathetic public, Haber epitomizes the well-intentioned but disconnected policy maker, and Lelache symbolizes the marginalized peoples who have little power but are heavily impacted both by environmental problems and by ill-conceived solutions. The construct of "effective dreams" provides both the dramatic tension and the power to transform the world—always at a cost.

This essay draws on *Lathe* to highlight two major political factors that hinder sustainability transitions. First, the *power disconnect*, which occurs whenever those who experience environmental harm are politically marginalized. This is similar to the fractured politics of transition depicted by Hendriks (2016) but includes minority and disenfranchised groups as well as the public. Second, *cycles of rationalization* widen power disconnects by allowing decision makers to take credit for positive policy outcomes while blaming others for negative impacts. The public may eventually be roused from its apathy to fight for the rights of the marginalized (as per the storyline in *Lathe*) but large portions of the public may also participate in cycles of rationalization, blaming the marginalized, political leaders, or others for problems that are caused by the whole of society.

As shown allegorically in *Lathe*, there are three related “minor” pitfalls that also plague disconnected systems and foster cycles of rationalization. First, decision makers tend to favor *silver bullets* or relatively simplistic solutions that are politically expedient. By their nature, these simple solutions do not solve problems, but instead postpone effective response. One way to dampen problem signals via silver bullets is to shift costs from elites to marginalized populations, creating negative *side effects*. There can be unintended consequences associated with any type of environmental regulation, but this second pitfall is most common in highly disconnected systems. Third, when ongoing problems and negative side-effects become too pressing to ignore, decision makers (and the public) can deny responsibility by blaming *scapegoats*. More than any other pitfall, attributing the costs of governance failures to scapegoats facilitates cycles of rationalization.

Because governance is reactive rather than proactive, these five factors tend to delay effective response to environmental governance and perpetuate grave injustices. As Webster (2015a) points out, when power disconnects are wide, governance tends to go through multiple cycles of ineffective response because full problem signals are not reaching decision makers. This effect is further amplified by cycles of rationalization, which reinforce the use of silver bullets by placing the blame for negative side effects on scapegoats. As long as the environmental problem is escalating, a system that is stuck in an ineffective cycle will eventually be driven to some crisis point, when it will either collapse or be forced to transition into a more effective cycle. In *Lathe*, this point occurs at the turning point near the end of the book, but real systems usually cycle back and forth between effective and ineffective cycles in a process called the *governance treadmill*.

This paper starts by parsing out the political allegory in *Lathe* as it relates to the major pitfalls described above: power disconnects and cycles of rationalization. Minor pitfalls are covered under the later because, while each causes problems in its own right, the feedback between silver bullets, side effects, and scapegoats is an important component in cycles of rationalization. The next section describes the governance treadmill and shows how it is depicted in *Lathe*. The third section delves into historical and modern events to demonstrate how the five pitfalls

together affect the governance treadmill, both within Le Guin’s allegory and in the real world. The paper concludes with the need for further exploration of the governance treadmill and explicit inclusion of the five pitfalls in an interdisciplinary research program to study political-socio-technological transitions.

Political pitfalls in *Lathe*

Written in 1971, Le Guin’s *Lathe* depicts a dystopian future in the best tradition of the genre. However, the genius of the book lies in the plot device of “effective dreams”, which allow the protagonist, George Orr, to change the world—past, present, and future—with little to no effort. When Orr is placed in psychiatric care, his councilor, William Haber, appropriates this power by using a device to control Orr’s dreams. This sets the stage for conflict between characters with very different personalities. Where Orr is connected, humble, and passive, Haber is distanced, arrogant, and aggressive. Orr fears the power in his dreams but Haber embraces it as a means to improve the imperfect world in which they both live. One would do nothing, the other everything. The imbalance between them is the difference between a Malthusian nightmare, which is caused by insufficient collective action, and an Orwellian nightmare, which results from the arrogant use of power by a disconnected individual or group.¹ However, it is the character of Lelache who truly represents the dispossessed and who, with many unnamed actors, pays the highest price for Haber’s hubris and Orr’s inaction.

Power disconnects

This section describes how *power disconnects* are represented in *Lathe*. According to Webster (2015a), a power disconnect occurs when the people who feel the costs of environmental harm are unable to change environmental policy. When power disconnects are wide, political will tends to be low and policy responses favor the status quo, even if environmental damage is quite high. When disconnects are narrow, political will to solve environmental problems is high, and policies are more likely to be effective at reducing environmental harms, though costs may still be transferred to marginalized populations who might otherwise be more insulated from environmental damage (e.g. construction of a levee that protects a wealthy district while diverting floodwater closer to a poor community). This depiction of politics is somewhat different from the literature on sustainability transitions, which tends to focus on general representation/deliberation (Hendriks 2016; Ercan and Hendriks 2013) or on preventing consolidation of power by local elites (Voß and Bornemann 2011). Moreover, this perspective highlights the role of the dynamic incentives associated with environmental impacts as well as more static incentive structures such as economic advancement or a quest for political power. Such incentives are largely ignored in the transitions literature, which tends to be constructivist (governance is socially constructed), even though Giddens’ (1979) work on structuration, which recognizes the feedbacks between governance structures and human actions, is often cited.²

Each of the three main characters in *Lathe* represents an ideal type in their own right, but the conflict between them is essentially a story of power disconnects. On the one hand, the character George Orr has no ambition beyond leading a normal life. Pallid and thin, he is the epitome of average, content with his place in the world, even though, “undernourishment, overcrowding, and pervading foulness of the environment were the norm” (p. 31). Indeed, his effective dreams seem to be his only extraordinary aspect. These dreams do not change the future per se, but rather shift the world to a different “continuum” in which the past has changed to make a new present possible. Only Orr and those who are with him at the moment of change remember what previous version of the world existed before each effective dream. Until assigned to Haber for his “Voluntary Therapeutic Treatment (VTT)”, Orr only had effective dreams under conditions of severe stress. In these cases, the stressor was usually removed via the dream and, with so many stressors in his life, Orr was deeply anxious about the activities of his dreaming mind.

In spite of the squalor of the Malthusian dystopia he lives in, Orr would be happy to work, love, have a family, and lead a “simple” life. Heidegger and other philosophers refer to this as getting caught up in the “everyday” (Seckinelgin 2006; Heidegger 2010 [1953]). This political apathy allows interest groups to develop policy monopolies, controlling public resources and usurping political power (R. Hardin 1995). At the beginning of the book, the effects of this dynamic are reflected in the invasive nature of the government, which uses many methods to control the population in the face of severe shortages of food, housing, and other necessities. Rationing is required for almost everything, including recreational drugs, which are provided in limited amounts for free via tightly monitored “pharm cards”. There are also pseudo-cigarettes labeled “tranks”, “derricks”, and “transcaps” that are designed to keep people content with what little they have. At the extreme, there is even a story about a government program that experimented with induced agoraphobia to ensure that people would be happy in the crowded conditions of the city.

This focus on placating and controlling the population—keeping them happy even though their everyday is impoverished—is a major concern of the government because when that everyday life is threatened, the public can be mobilized to bring about political change (R. Hardin 1982; Jones and Baumgartner 2004; Hirschman 1993). In the story, we never see the public itself rise up but this dynamic is reflected in the behavior of Orr’s character. He is generally passive throughout most of the book. After the first round of changes instigated by Haber, Orr starts to avoid his “therapy” sessions and even goes so far as to engage a civil rights attorney (Lelache) to get away from Haber. Lelache is not able to stop the treatments, but she and Orr fall in love, which enriches Orr’s everyday considerably. With no legal recourse, Orr’s treatments continue, as do the negative effects of the dreams that Haber controls. Orr does not really fight back against Haber again until his everyday life is destroyed by the loss of the Lelache. She represents his chance at a normal life

and, while he tolerates some erosion of her personality, he rebels when she is taken away.

Haber himself is a personification of the special interest groups and political elites who take advantage of the apathy of latent interest groups (those caught up in the everyday; R. Hardin 1982). Large and imposing, with red hair and beard, Haber is a dream specialist who believes deeply in the power of dreams. With the confident geniality of a therapist, he is the embodiment of well-meaning hubris. Everything in his “plastic-coated” office has the veneer of power and success but is fundamentally cheap and flimsy. At first, Haber takes Orr for an average patient, who has a fear of bad dreams due to repressed sexuality or dissatisfaction with life. His interest is piqued as Orr explains the nature of his effective dreaming and, although Haber does not believe Orr, he patronizingly accepts them as an aspect of Orr’s reality. Not a bad man or a necessarily bad therapist, Haber really believes that he will be able to “fix” Orr using a machine he has invented called “the Augmentor”. It feeds brain wave patterns to a subject in order to induce particular states. In this story, Haber uses it to get Orr to dream effectively upon hypnotic suggestion. Already we see that the doctor has no fear about controlling other people’s minds—in fact, he seems to enjoy it.

Haber is all about control, of himself and of others. When first confronted with evidence of the effectiveness of Orr’s dreams, the doctor’s biggest fear is losing control of himself in front of his patient. He cannot even comprehend Orr’s anxiety about his ability to change the world and quickly begins to suggest (hypnotically) that Orr dream up solutions—both to their own individual complaints and to the broader difficulties face by the city and the planet. The problems that Haber takes on through Orr’s dreams are well-known: overpopulation, pollution, resource scarcity, injustice, and conflict. However, with each new effective dream Haber’s own position improves while negative side effects leave many people much worse off. Thus, although Haber is not satisfied with the everyday like Orr, he is willing to accept costs imposed on the rest of society as long as his desire for power and prestige is fulfilled. Of course, Haber does not think of it in this way, but rather engages in a cycle of rationalization as described in the next section.

As mentioned above, the third character, Heather Lelache, is a civil rights attorney brought in by Orr in his initial attempts to avoid VTT with Haber. Orr and Lelache eventually fall in love, but she is not able to help him end Haber’s abuse of his effective dreams. Although she does not appear as frequently as either Orr or Haber, her role exposes one of the most important aspects of Haber’s brave new world.³ Originally a brassy, confident, and somewhat angry woman, Lelache is literally obliterated when Haber suggests that Orr should dream up a solution to the problem of racism. To Haber’s delight, race disappears as all of humanity has always been one color, grey. The child of a white mother and a black father, Lelache cannot exist as herself in this world. It is Orr’s desperation to bring Lelache back into his life that starts him dreaming without Haber. With a little help from his friends, Orr dreams up a grey version of Lelache. Without the complications of

race she is a softer and more timid woman, bland, like the still plentiful but uninteresting food that is available on this version of the planet.

The implications of this segment of the story are profound. If Orr represents the public and Haber represents political elites, Lelache represents those marginalized populations who have little or no political power yet experience the highest costs of environmental problems or sustainability transitions. For instance, women bear the largest environmental burden in some countries, but are often socially and politically marginalized and so cannot protect their own interests (Young 2012; Collier, Conway, and Venables 2008; Hultman and Bozmoski 2006). Indigenous peoples in the Arctic or other areas that are vulnerable to climate change tend to have little say in environmental policies at domestic or international levels. Poor people from developing countries also experience heavy costs from climate change but have little ability to change the positions of their governments (e.g. China). At the international level, developing country governments that favor mitigation (e.g. the Maldives) or assistance with adaptation (e.g. the G-70) have little power to either reduce greenhouse gasses directly or to negotiate faster mitigation or adaptation policies (IPCC 2014; Harrison and Sundstrom 2007; Rq, Dqg, and Victor 2016). These are the silent masses who were not named characters in *Lathe*, but who, like Lelache, simply disappeared as Haber tried time and again to create his ideal world.

The dynamics of policy monopolies, public apathy, and related power disconnects can be a major road block to sustainability transitions. Like Haber, political elites tend to be isolated from the negative impacts of their decisions and may even receive personal benefits in the form of increased prestige, etc. (Ercan and Hendriks 2013; Hendriks 2009). Like Orr, the general public tends to be buried in the everyday and unwilling to engage in political activities until direct threats or harms are felt at home. Yet, both Orr and Haber were insulated from significant harm until the very end of the book, much as the (voting) middle class and political elites tend to be more insulated from environmental problems than the poor in developed and developing countries (IPCC 2014). Lelache represents these marginalized peoples not just in her lack of power to prevent the changes wrought by Haber, but also because she had to rely on Orr to bring her back into the world. Similarly, when power disconnects are wide, marginalized peoples often are first harmed by environmental degradation and then may be forced to bear the costs of mitigation or adaptation as well if their interests are not protected by legal requirements, grassroots movements, or powerful non-governmental organizations.

Cycles of rationalization

Even when disconnects are narrow and there is strong political will, regulatory momentum can be diverted into policy responses that are either ineffective or unjust (or both). Furthermore, these measures can then feed into cycles of rationalization that cause power disconnects to widen, amplifying their negative impacts. The story arc in *Lathe* illustrates three elements of the cycle

of rationalization that can also stand as separate barriers to sustainability transition: silver bullets, side effects, and scapegoats. Silver bullets are policy options that are applied as panaceas—measures that are expected to work regardless of context or application. Side effects can range from displacing environmental harm geographically to shifting the economic costs of a problem to different actors. Scapegoats are factors (or people) that do not actually cause a problem but which are blamed for it. Each of these minor pitfalls can be a problem in its own right, but it is the feedbacks between them that can lead to cascades of destabilizing change. That is, silver bullets usually create negative side effects, which then force decision-makers to rationalize their decisions ex-post using different types of scapegoats. This ensures that those with power retain it and that they fail to learn useful lessons from their mistakes.

The positive feedback associated with cycles of rationalization is clear in *Lathe*. To begin with, it is difficult to imagine a panacea that would be easier or more powerful than the “effective dreams” of George Orr. All Haber had to do to use these dreams was to hook Orr up to the Augmenter, hypnotize him (Orr was highly susceptible to hypnosis), and suggest a new problem to solve. Orr’s dreaming mind did the rest. Real-world panaceas are not usually so simple, but they do tend to oversimplify, and can include everything from basic command-and-control regulations to “thin” or incomplete applications of otherwise complex, reflexive approaches such as transition management, adaptive management, or co-management (Avelino 2009; Meadowcroft 2011; Frantzeskaki, Lorbach, and Meadowcroft 2012; Cox et al. 2016).

Every time Haber attempts to use Orr’s ability as a silver bullet for the world’s problems, there is a trade-off in the form of negative side effects. As noted above, in Haber’s first attempt to save the planet he gave Orr vague instructions to solve the “population problem” while he was dreaming. The positive effects of the dream were clear. Orr returned home through a much less crowded city to a three-bedroom apartment with its own bathroom and a fridge stocked with more food than he could have imagined before. His body had changed, too, filling out a bit because of the greater availability of food over his longer lifetime. He also enjoyed the feel of a real cotton shirt, which had been an extraordinary luxury just that morning. However, the cost of all this was an epidemic of cancer that had plagued the world years before, an example of how Orr’s dreams change the past to affect the present.

After that fateful session, Orr was wracked with guilt. To him, the benefits of a small population were not worth the cost in lives, but Haber accepted the tradeoffs, even though he also lost several close family members during the “Plague Years”. Again, this is partly because he was psychologically disconnected from others, but two additional factors are also important. First, Haber benefited more from the change than Orr, moving up in status and prestige, as well as improved health, comforts, etc. Indeed, he is transformed from an obscure crank on the fringe of science to a respected researcher on the cutting edge of the well-established field of dream science. Second, Haber

attributes the benefits of a lower population to his own action (suggesting the dream to Orr), but blames the negative side effects on Orr's inability to interpret his instructions correctly. By establishing Orr as the scapegoat, Haber sets up a positive feedback loop in which any benefits from his suggested changes to the world reinforce his identity as benevolent savior—and his entitlement to personal benefits from said changes—while any costs are laid at the feet of the weak and imperfect Orr.

Indeed, having “solved” one problem, Haber is even more determined to use Orr's dreams to “solve” others. A second side effect of the population dream was an escalation of the war in the Middle East, which was a festering sore before the population dream but was verging on full-scale world war after. Even Brazil was choosing sides in the conflict. Seeing this as a problem caused by Orr's failures rather than his own “success”, Haber tried to right the new wrong using the same old method; he suggested that Orr should dream of world peace. This, too caused negative side-effects but also allowed Haber to move up in the world, as he was consulted by government ministers in addition to his higher standing in academia.

All of these changes simply fed Haber's ambition and hubris as the cycle continued. While some things, like geography and the greenhouse effect were outside of Orr's purview, changes kept piling up as Haber tried one “improvement” after another. Portland became the home of the World Planning Center (WPC) of the supranational Federation of Peoples; a planetary government that had existed since the Plague years. As the capital of the planet, Portland was populated with majestic skyscrapers and government buildings. People from all over the world congregated in the city. In his increasingly “perfect” world, Haber was in charge of the Human Utility: Research and Development Center of the WPC. Otherwise known as HURAD, the center resided in the grandest government building, where the words “The Greatest Good for the Greatest Number” are inscribed boldly in the portico.

There were some benefits to the public at large, too, including large swaths of remaining wilderness, increased biodiversity, clearer air, and less difficult living conditions. However, the costs were also high. As described above, to end racism, Orr's dreams made everyone gray, obliterating multi-ethnic people like Lelache and causing cultural impoverishment. It is also interesting to note that famine continued in less-privileged countries and that the food available for people like Orr and Haber was bland and unappealing, in part because of the lack of diversity but also because of “sustainable” methods used in its production. The end to the war in the Middle East was only brought about by an invasion of rather confused aliens and world peace came at the cost of civilization; after one of Orr's dreams, TV and other forms of entertainment disappeared to be replaced by a modern-day coliseum, in which spectators sated their blood lust watching sports teams kill each other, rather than going to war. Personal liberty was another victim of Haber's interventions. Togetherness and civic responsibility became the zeitgeist of the times, and genetic purity the mantra. Certified citizens carried

hypoderm guns with which to euthanize criminals on the street. Diseases like cancer became a crime.

With each new set of tradeoffs, the relationship between Orr and Haber becomes more strained. As Orr regains his equilibrium by reconnecting with other human beings, Haber's “progress” only feeds his insatiable desire for power. Orr's own empowerment comes a bit too late; he finally refuses to be used by Haber only after the doctor has enough data to use “the Augmenter” to induce effective dreams in ordinary individuals. This allows Haber to eliminate Orr as the instrument—which he does easily by “suggesting” that Orr dream that he doesn't have effective dreams—and thereby end all of the imperfections supposedly generated by Orr's resistance to Haber's plans. By doing so, Haber removes the scapegoat, Orr, but of course does nothing to solve the underlying problem.

As in so many allegories, it is Haber himself who, in this constant drive for improvement, destroys his own creation. Haber's effective dreams are so disconnected that they threaten the very fabric of the world. Without the power to dream any longer, Orr must save the world the old fashioned way, by ending Haber's dream. In this he serves as an iconic hero, struggling alone against the maelstrom to turn off the Augmenter, rendering the mad scientist ineffective. Nevertheless, when Orr emerges, he rejoins the rest of society in the struggle to rebuild their lives together, as a community and a polity. This is the lesson he has learned: it is important to help others but only as a member of the group, not as a god-like, well-intentioned tyrant.⁴

Of course, not all decision-makers are as disconnected as Haber, though power does often lead to Haberial behavior on the part of political elites. There are many bureaucrats, managers, and politicians who don't let power “go to their heads”, often by maintaining strong connections to the people who and most affected by their decisions (Prendergast 2016; Oberfield 2014). On the other hand, the cycles of rationalization described above do occur frequently and their foundations are well-supported in the literature. Psychological studies show that power can create disconnects. For instance, when average individuals are given power over others they tend to dehumanize those they control, even if there are no derogatory interactions between the groups (Gwinn, Judd, and Park 2013; Zimbardo et al. 1973; Inesi, Gruenfeld, and Galinsky 2012). Furthermore, both high- and low-power individuals tend to remember goal-facilitating information, but high-power individuals tend to forget goal-constraining information much more than low-power individuals (Whitson et al. 2012). It is difficult to tell whether or not there is some element of self-selection here. That is, do individuals gain power because they are able to ignore constraining information or do they start ignoring constraining information when they gain power? Most likely there is a feedback that magnifies pre-existing tendencies as individuals gain power and feel the need to rationalize its use (Oberfield 2012).

Ironically, leaders may create the above psychological disconnects in part because they are so often blamed when collective decisions produce negative side effects (Duch,

Przepiorka, and Stevenson 2015). This, dynamic, too, is shown in *Lathe*. It is easy to place all the responsibility for the horrors described in the story at Haber's feet, but Orr allowed his effective dreams to be used. Indeed, his ability to scapegoat both Haber and the ATT system as a whole contributed to his apathy. Similarly, powerful latent interest groups can more easily ignore harm to marginalized populations when they can scapegoat political leaders or blame the political system for their inaction. Of course, the need for collective action is a hurdle that cannot be ignored—no individual can wield the power of the majority alone—but the psychology of apathy and the everyday goes much deeper. Powerful elites are only likely to stand up for marginalized populations when they feel some connection to them. In *Lathe*, Orr decides to take action because he gets to know and love Lelache before she is wrenched away from him by Haber's well-intentioned use of his dreams. In the real world, marginalized populations are usually the focus of prejudice and bias, rather than love or acceptance, making it easy to target them as scapegoats (Kay et al. 2009). In other words, cycles of rationalization build up antipathies toward scapegoats—whether politicians or marginalized populations—that make it much less likely that the public or powerful elites will step up to demand change. Thus, while the powerful do sometimes stand up for the marginalized—as Orr took action to regain Lelache—it is more likely that they will remain apathetic, either because they do not recognize their own influence (blame is on policy makers/governance institutions) or because they believe the scapegoat narrative (blame is on marginalized populations, environmental factors, etc.), or both.

The governance treadmill

With this plot, Le Guin was clearly drawing parallels to well-known instances of despotism and dictatorship, but there are also more subtle comparisons to be made. The tension between Orr and Haber is predicated on a rather fantastic metaphor—effective dreaming—but parallels real world power struggles. From Aristotle to Machiavelli to Marx to Putnam and well beyond, political philosophers have taken sides on the appropriate balance between individual and collective action.⁵ Throughout, the voice of marginalized peoples—the Lelaches of the world—are seldom heard. This section describes the treadmill and then briefly explains how it fits with several literatures. The next section will show how the pitfalls identified in *Lathe* can cause the treadmill to be “stuck” in an ineffective cycle, prolonging environmental harm and increasing the likelihood of environmental crisis.

As described in the previous section, Le Guin's book is classic because it captures three fundamental ideal-types in political systems: the public (Orr), decision makers (Haber), and marginalized groups (Lelache/everyone else in the book). In the story, Haber's hubris, Orr's inaction, and Lelache's powerlessness result in escalating cycles of social and environmental harm, culminating in near-catastrophe which finally precipitates fundamental change that could shift the system into restorative rather than destructive cycles. Similar cycles of success and

failure are observed in the real world, as decision makers and political entrepreneurs respond to changing signals from different constituencies. While in the book only one full transition is observed (with the end of Haber's use of effective dreams), real systems tend to move back and forth between ineffective (destructive) cycles and effective (restorative) cycles, though collapse is also possible.

We can refer to this set of cycles within cycles as the *governance treadmill*. This is an extension of the management treadmill concept described by Webster (2015a; 2015b). The term governance is used to indicate that response can occur through multiple pathways, including informal rules and norms as well as formal regulations or management measures. As shown in **Figure 1**, the treadmill starts with an environmental problem, which sends signals to political actors, who put pressure on decision makers (increasing political concern), who respond by either maintaining the status quo or by instituting new rules or regulations in order to “solve” the problem. Of course, “solutions” are not always perfect—ineffective silver bullets are often applied—so the problem may continue to increase or side effects may crop up, keeping the system on the ineffective side of the treadmill. However, in some cases, governance response reduces the core problem, which in turn dampens signals and leads to a decline in political concern. The latter can be referred to as a *crisis rebound effect* (CRE) and may lead to a return to less effective governance and a renewal of the cycle.

Most social-ecological systems move back and forth between effective and ineffective cycles multiple times. Sometimes return to the ineffective cycle is due to the CRE, but exogenous factors such as an increase in demand or the introduction of new technologies can also cause a return to the ineffective side. Then, of course, problem signals would resume and pressure for improved governance would eventually increase again. This oscillation between effective and ineffective management cycles is the governance treadmill. While progress is made in many cases, it is rarely as rapid or as permanent as would be expected under a proactive regime. This is partly due to factors that delay response (see more below), and partly due to factors that undermine effective management, “resetting” the treadmill to its ineffective state. In a few cases, the treadmill might “stop”, usually when economic conditions become unfavorable (e.g. decline in demand, increase in costs of production) or when new technologies effectively negate the underlying problem (e.g. provision of substitutes, pollution control tech, etc.).

While the causes of switching differ from case to case, the pattern of the treadmill is dominant in most issue areas. For instance, Webster (2015a) shows that, in fisheries, economic crisis tends to force management to a more effective cycle but that regulations revert when prices rise or the threat of new entrants is eliminated. For most wildlife trade, education in the US, Europe, and Japan reduced demand in the 1980s/1990s, making it easier to regulate trafficking, but increases in demand from China and other transition economies caused a return to ineffectiveness in the 2000s. For large scale processes like climate change, the treadmill occurs at multiple

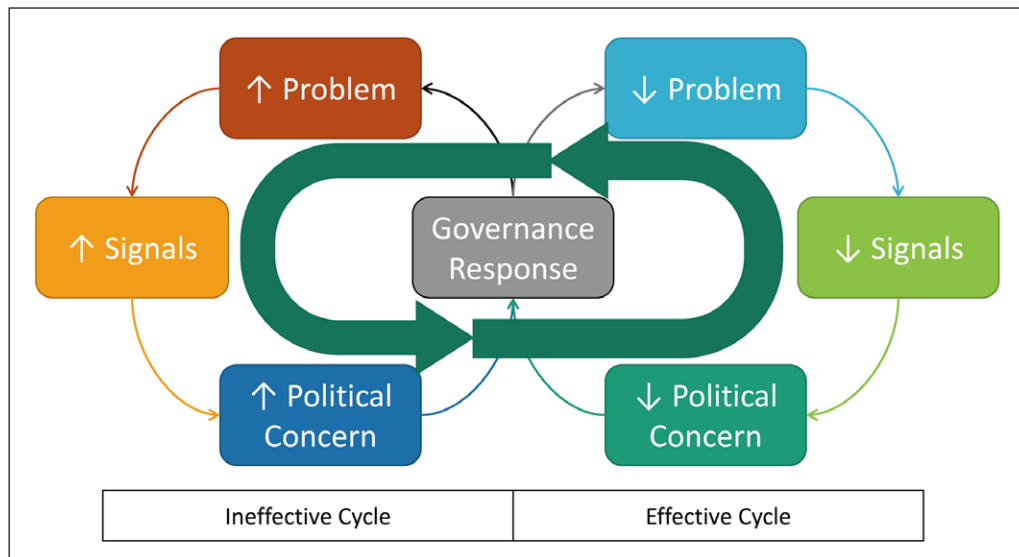


Figure 1: The Governance Treadmill. The right-hand side shows an ineffective cycle, in which environmental problems send out socio-economic signals that lead to increasing political concern. As long as governance is ineffective this cycle will continue as the problem increases, signals become stronger, and political concern grows. However, once concern is high enough given available governance options, it is possible to switch to an effective cycle, where the problem decreases, signals weaken, and political concern declines in a process called the crisis rebound effect (CRE). The CRE, along with exogenous factors, can then cause a switch back to the ineffective cycle, starting another rotation of the treadmill, which oscillates between more and less effective environmental governance. Disconnects that block problem signals can delay switching from ineffective to effective cycles while strong institutions can prolong periods of effective governance (not shown). DOI: <https://doi.org/10.1525/elementa.212.f1>

levels of analysis. Globally, we are still building up political will to implement an effective response, though the 2015 Paris Agreement may be a step in the right direction. Nationally, climate policy often depends on unrelated political trends, such as the back and forth created by public vacillation between democratic and republican candidates in the US.⁶ At the local level, cities and communities learn through exposure to climate-related extreme events but may also act based on shared environmental norms, though both are subject to economic conditions and related budget constraints (Zahran et al. 2006; Brooks et al. 2014; Brody et al. 2008).

The cycles of the treadmill are not new, though they are rarely explained in just this way. In political science, Russell Hardin (1982; 1995) uses game theory to describe cycles of domination by “elites” that are punctuated by the activation of “latent interest groups”, specifically public majorities or grassroots movements. Baumgartner and Jones (2009; Jones and Baumgartner 2012) show that punctuated equilibrium occurs due to the responsive nature of governance and related cycles of public attention. Similar cycles are also observed in theories of organizational change, particularly those associated with March and Simon (1993). Interestingly, in a recent interview, Bengt Holmstrom, who won the Nobel Prize in Economics for his work on incentives and institutions, described similar cycles of trial and response in both corporate governance and government policy (Inskeep 2016). Predicated on the complex cycles associated with ecological function, the literature on social ecological systems or coupled human and natural systems usually presumes similar cyclical patterns of interaction between environment and

society, though these are not always explicitly laid out as shown in the treadmill (Holling 2001; Walker et al. 2004; Ostrom 2007; Liu et al. 2007).

On the sustainability transitions side, early work focused on multi-level analysis is also based in complex systems thinking, with considerable focus on the co-evolution of technology and society. However, this perspective was decidedly apolitical (Geels 2002; Geels 2012). Transition management built on multi-level analysis by providing a policy toolkit designed to facilitate socio-technical transition via the creation of new technological “niches” (Loorbach 2010; Kern and Smith 2008). While stakeholder engagement is a major tool in the TM kit, it has been widely criticized for omitting politics both in theory (Meadowcroft 2011) and in practice (Avelino 2009; Hendriks 2009). A number of authors have worked to bridge this gap, either through institutional design (Hendriks 2016), inclusion of interest group politics (Frantzeskaki, Loorbach, and Meadowcroft 2012), embedding policy making in transition management (Voß 2014), or focusing on a “post-foundational” notion of democracy that goes beyond the voting public to consider representation of stakeholders as minority interest groups that might otherwise be ignored (Jhagroe and Loorbach 2015). Approaches that bring politics into transition management include cycles of signals and response with political ramifications, though the focus largely remains on bureaucratic response to calls for better energy efficiency, and so they do not really capture the full scope of the governance treadmill, or the effects of pitfalls like power disconnects or cycles of rationalization.

Pitfalls on the treadmill

The pitfalls described in *Lathe* cause governance to stay on the ineffective side of the treadmill until the problem becomes so severe that crisis triggers strong action. If there are power disconnects, then problems are only affecting marginalized populations, which means that it takes much longer for political concern to build up and for the system to switch to the more effective cycle. The situation must become either very dire or must spread to larger segments of the population before action is taken. Furthermore, even when powerful groups are affected, the response may be to insulate the privileged by passing costs along to weaker (politically marginalized) or broader (the public) shoulders. This in itself creates disconnects and is essentially what Haber chose to do every time he used Orr's effective dreams. Rationalizing the choice to ignore negative side effects and force costs onto other groups further widens disconnects by creating psychological barriers to empathy with the suffering of others. When scapegoats are used as part of the process of rationalization, misattribution ensures that responses target the wrong problem and so are necessarily ineffective. This is what happens when Haber blames Orr for negative side effects, rather than realizing that the method of effective dreaming by a disconnected individual is inherently flawed.

Patterns that parallel the prolonged, ineffective cycles described in *Lathe* are common in the real world, where disconnects and cycles of rationalization play a major role in preventing effective governance of the environment, the economy, and society. From ancient times, conflict over resources and political power caused one group of humans to rationalize the mistreatment of other groups of humans, building up social structures that perpetuate hierarchical power structures. Take the eradication and subjugation of indigenous peoples under colonialism. We tend to think of this as an artifact of the time; a result of pervasive racism and cruelty, which was certainly a part of the structural context. However, there were those in Spain and elsewhere who made moral arguments against the killing, enslaving, and displacement of indigenous peoples. In fact, there was an entire discourse on the topic during the period, so elites had the opportunity to think past their inherited prejudices and choose a less harmful course. Nevertheless, the racist, theocratic storyline won because it provided decision makers with the best rationale for their choice to benefit from the suffering of others (Fitzmaurice 2014). This in turn perpetuated systemic injustice and related environmental degradation by keeping the treadmill in an ineffective cycle. Moreover, the effects were lasting, as many of the widest disconnects still in existence today were created during this period.

With industrialization in Europe and North America, new disconnects were created, sending the treadmill down an even more destructive path. Elites began rationalizing the unequal effects of pollution on human health and ecosystem function as well as the appropriation of resources. They found ways to justify the enclosure of public land, displacement of peasants to the sweat shops of the cities, and the pollution and squalor that met them there (Buck 2010). Jobs, progress, and the wealth of

nations were frequent rationale for the continuation of these negative side effects—or what economists would call externalities. Interestingly, when pollution affected elites, they chose either to move away from pollution sources (and often out of inner cities) or to advocate for laws to reduce the pollution problem. Early environmental laws addressed pollution by moving the source industries away from wealthier neighborhoods and into poorer areas. However, as workers grew in numbers and in resources, their political power increased. Local-scale regulations to reduce pollution through factory controls (rather than relocation) were passed in many cities of Europe, the US, and other industrialized countries, switching the system to a more effective cycle for a period of time, though the treadmill continues to oscillate to this day (Bullard 2005; Taylor 2014; Thorsheim 2006; Wilkening 2004; Cable and Benson 1993).

In the last century, environmental degradation increased rapidly with industrialization and economic growth in other parts of the world. Local elites in emerging economies again rationalized the negative effects of industrialization as necessary evils associated with progress. In China, the communist-capitalist elites learned from the experience of Britain, arguing that “sheep ate people” during the enclosures that forced peasants to make way for wool production during the Industrial Revolution and that the same type of sacrifice is a pivotal part of this stage in their own development (Zhao 2004). Growing environmental crisis is now sparking environmental concern in China and other emergent economies, contributing to improved response both at the domestic and international levels (Wang 2015; Huan 2014; Cunningham 2015; Phillips 2016). Of course, these successes are not universal and they come with their own side effects, including the displacement of polluting activities to politically marginalized areas (Wu et al. 2016; Cai, Chen, and Gong 2016).

At the same time, it is important to remember that China is making products for consumers in the US, Europe, Japan and other developed countries as well as for domestic consumption, so rationalization is also occurring at the international level. Both consumers and regulators turn a blind eye to problems in the developing world, with a few exceptional cases of outrage like the Nike sweatshops crisis of the 1990s or recent allegations regarding Apple's abuse of workers in China (Newell 2005; Carmin et al. 2011; Frost and Burnett 2007; Dauvergne 2005). Periodic press coverage of similar events has generated considerable pressure to “green” business via corporate social responsibility, with greater or lesser success, depending on the corporation, but political responses were minimal (Pogutz 2008; Gallagher and Weinthal 2012).

The green business movement is similar to Orr's awakening and his attempts to protect *Lelache*, both in intent and in insufficiency. The number of businesses producing sustainability reports, working to create products that are less harmful to the environment, and even seeking to be “restorative” via ecological innovation has skyrocketed over the last two decades, in part due to consumer demand for greener, and healthier products (Makower 2016). This is a good thing. However, many are skeptical

about the efficacy of this economic process, both due to the prevalence of “greenwashing” and due to the difficulties of changing consumer behavior and purchasing patterns (Clarke and Boersma 2015; Dauvergne 2016; Van Den Bergh, Truffer, and Kallis 2011). That is, consumers need to buy less, as well as buying green, but this is a much more difficult cultural change. Another concern is the potential for “green” consumerism provide rationalization for apathy: buying “green” products substitutes for more onerous political actions or changes in individual-level behavior (Lewis 2008; Schudson 2007). This is a form of *moral license*, where doing something “good” gives an individual the ability to rationalize subsequent “bad” behavior (Cascio and Plant 2015).

Academia has its fair share of Haberesque rationalizations as well. Perhaps most well-known is the “tragedy of the commons”, propounded by Hardin (1968) as an allegory for what he saw as the problem of overpopulation, which he blamed directly on the poor. This focus on population as a major environmental problem takes the spotlight off affluence, which allows a single person in a developed country to consume, and waste, much more than the average person in a developing country (Sachs 2015). In other words, poor people make easy scapegoats for our environmental problems (Dauvergne 2016).

Even if we discount Hardin’s prejudice, the tragedy of the commons essentially blames environmental degradation on local resource-users, ignoring the ample evidence that the worst levels of overexploitation and pollution occur when powerful outsiders come in to exploit local conditions (Buck 2010; Berkes et al. 2006). Indeed, Elinor Ostrom won a Nobel Prize in economics for showing that connected communities that experience signals directly from environmental problems are usually good at managing the commons by setting their own rules of access—as long as they are protected from outside interference by disconnected groups (Ostrom 1990). Consumers, too, are absolved from blame by this storyline, even though their demand for products creates the incentives to overexploit and to lobby for regulations that allow for overexploitation (Webster 2015a; Dauvergne 2008). Nevertheless, the tragedy of the commons is the storyline we prefer because it pardons both decision makers and the public, placing responsibility squarely on the shoulders of (partially responsible) scapegoats.

The widest disconnects occur when large segments of the public engage in a cycle of rationalization at the same time as decision makers. Such movements frequently target marginalized populations as the “cause” of some perceived harm. It wasn’t just decision-makers who blamed slaves for their status in society; it was also slave owners and the vast majority of the public who benefited from the practice of slavery in the Americas (Fredrickson 1989; Patterson 1982; Morgan 2003). Similarly, it was not just the Nazi party who blamed the Jews and other “impure” races for Germany’s decline, it was also a large portion of the German population (Diner 2000; Crew 1994). History records many other examples of prolonged conflict due, at least in part, to group polarization, where cycles of

rationalization reinforce scapegoating on both sides (Sunstein 2009; Hoffmann 1986; Simon 1995).

Even with the increase in deliberative democracy in recent decades, the public can be persuaded to engage in cycles of rationalization centered on “identity politics”, which is ultimately the scapegoating of others (Dryzek 2005). In 2016, it was a majority of the British people who voted for the exit of Britain from the European Union, joining with some politicians in blaming the EU and immigrants for systemic economic difficulties (Henderson et al. 2016; Goodwin 2016). Similarly, in the 2016 US elections, populist candidates on the left (Sanders) and right (Trump) were supported by (some) people who cast all blame for the increasing inequality in the US on either corporations and corrupt politicians (left) or on immigrants, Muslims, and corrupt politicians (right). Indeed, Trump won the majority of votes in the Electoral College in part because of his scapegoating rhetoric (Muller 2016). While some of these scapegoats bear partial responsibility for current economic conditions (i.e., specific corporations and corrupt politicians), both explanations ignore years of public apathy, systemic flaws in the US government, and fundamental difficulties associated with representative democracy. This is not to say that all supporters of either candidate take such simplistic positions, just that much of their political popularity is due to relatively simplistic, “kick the bastards out” narratives.

A full analysis of the rationale for political backlash is beyond the scope of this paper, but one very important point needs to be made: empowerment of the marginalized often threatens the privileged. This can be seen in all of the broad cycles described above as well as in more specific cases. For instance, many on the far right in the US and in Europe are expressing fear of cultural loss and loss of economic opportunity due to influxes of migrants, increases in terror attacks, and anti-racism protests.⁷ People deal with this perceived loss of power and resulting lack of control in multiple ways, but an important compensating mechanism is the construction of spurious causal narratives, often including some type of scapegoat. Preference for simple explanation of complex issues (like climate change) has also been documented (Landau, Kay, and Whitson 2015; Meadows 2008; Brock and Carpenter 2007; Kay et al. 2009). At a smaller scale, participatory processes often fail to empower the marginalized because of resistance from those who are asked to relinquish influence or because the powerless are not really free to express their concerns when confronting the powerful (Avelino 2009). Though not reflected in *Lathe*, these aspects of the governance treadmill should not be ignored.

Conclusion

From this brief analysis, we can expect sustainability transitions to involve political as well as socio-technological steps forward and backward, as described by the governance treadmill. This results from the constant dance between singular action by elites, who often fall into the Haberman ideal type, and collective action by the public majority, which, once roused from apathy, may take an Orrian stance in defense of marginalized populations, as

represented by *Lelache* in the story. However, unlike *Lathe*, the majority may instead choose to scapegoat those who have little power to defend themselves, starting off new cycles of rationalization. It is these cycles that are most devastating and could completely derail the sustainability enterprise. Thus, understanding sustainability transitions also means exploring many variations of the governance treadmill.

Le Guin's story highlights two major pitfalls (power disconnects and cycles of rationalization) and three minor roadblocks (silver bullets, side effects, and scapegoats) that tend to keep the governance treadmill stuck in an ineffective cycle. First, power disconnects occur when the people making decisions are insulated from the costs imposed by environmental problems. As a disconnected person, Haber was able to accept high costs to others for great benefits to himself when he appropriated Orr's "effective dreams" to his own supposedly altruistic ends. At the same time, Orr's apathy allowed this abuse of his power and ultimately the near-destruction of the world. Second, these disconnects can be widened by cycles of rationalization, in which decision makers choose to accept credit for the positive consequences of the silver bullet solutions that they implement, while blaming negative side effects on scapegoats. Scapegoats are particularly important in cycles of rationalization and may even be the same marginalized groups who are most harmed by an environmental problem.

A number of these pitfalls are already reflected in the literature, but there are some important new insights. Injunctions to narrow disconnects by including those who are most affected in decision-making processes are numerous (Reed 2008; Berkes 2003; Hendriks 2016; Jhagroe and Loorbach 2015; Klein et al. 2011). Warnings to avoid silver bullets and panaceas abound as well (Young 2001; Ostrom 2007; Liu et al. 2007). There are also several frameworks and toolkits available to help communities, decision makers, and international regimes select and implement measures that get at the heart of environmental problems while minimizing negative side effects (Folke et al. 2005; Loorbach 2010). In addition, there is a growing literature on climate skepticism and the political psychology of rationalizing environmental degradation more broadly (Jacques 2009; Dunlap 2013; Dauvergne 2016).

However, cycles of rationalization are less well-understood, and the larger process of the management treadmill needs more study. Bridging the divides between these disparate literatures would be an important step forward, as would studies designed to explicitly delve into the political as well as social, economic, and technological aspects of transition (Frantzeskaki, Loorbach, and Meadowcroft 2012; Kern 2011). Given the important role played by the public in many environmental governance decisions it would also be useful to draw more from social psychology, particularly in relation to public (rather than stakeholder) response to large-sale environmental uncertainties (e.g. Whitson, Galinsky, and Kay 2015; Kay et al. 2009; Landau, Kay, and Whitson 2015). Several factors, including compensatory control mechanisms and group biases could generate considerable backlash against

environmental governance even as we experience more and more environmental harm. This would completely derail the governance treadmill and could lead to even greater global crisis.

At a different level, adding emotional appeal to the lessons provided by the literature could help to drive them home (Keller, Siegrist, and Gutscher 2006). *Lathe* provides vivid imagery of terrible environmental consequences of both too little collective action and too much imposition of a singular will on society. At the same time, this book also reflects deep truths about human response to large-scale problems. In the ideal-types of Haber, Orr, and *Lelache*, Le Guin gives us a new storyline; one in which the powerful are clearly to blame; either for their actions (Haber) or for their inaction (Orr). She shows us how power corrupts, but also how apathy and the acceptance of social constraints allows that corruption. Furthermore, in the narrative surrounding *Lelache* and Orr, she shows how connecting the public to marginalized peoples can be a countervailing force for change. In the end, *Lathe* describes a cyclical process of destruction, but also provides a hope for a more connected and a more sustainable world.

Notes

- ¹ See Galbreath (1980) for a literary discussion of concepts such as holism and the use of the occult as metaphor in Le Guin's works.
- ² In other words, Giddens says that social interaction creates institutions, norms, regulations, etc. but then these governance structures in turn shape human behavior, limiting the range of possible actions by assigning power to different actors, limiting the actions available, etc.
- ³ See Johnston (1999) for a more complete (and literary) comparison between Le Guin's *Lathe of Heaven* and Orwell's 1984.
- ⁴ Huntington (1975) asserts that Le Guin is really placing the private world above the public world, since all public actions "lead to failure". Aside from the omission of Orr's last public act, the salvation of Haber & the world, this ignores almost all of the interactions between Orr and the aliens which suggest that it is Orr's spiritual reconnection with the rest of the world that saves him.
- ⁵ Jameson (2009) actually posits that *Lathe of Heaven* reflects Le Guin's own Jeffersonian and Thoreauvian criticism of the growing welfare state in the US. In contrast Theall (1975) claims that Le Guin is using Marxian dialectic approaches in building, destroying, and rebuilding the various worlds of *Lathe*. Both are incorrect in that they ignore Le Guin's own references to Daoist political philosophy throughout the book. Huntington (1975) captures this briefly when he links Haber's failure to save the world to his failure to recognize himself as a "unification of opposites".
- ⁶ Small island developing states and other countries that are particularly vulnerable to climate change are often exceptions to this pattern. Yet even in countries like the Maldives, shifts from one ruling party to another can lead to large swings in climate policy.

⁷ While some conservative populists may believe that they are marginalized themselves, this is usually the result of a feeling of entitlement and nostalgia for a past when they were in positions of privilege, particularly due to racial and gendered governance structures, as much if not more than regional or sectoral economic conditions (Hochschild 2016; Cramer 2016). It is also important to note that media narratives tend to be misleading about the distribution of voters. Take the US presidential election; while it is true that the narrow margins in several states increased the importance of rural, white, lower-income voters, the bulk of support for Trump was still with middle and upper-class elites (Huang et al. 2016; Kusmin 2012). This is, ironically, another form of scapegoating that is perpetuated by the media and accepted by elites on both sides of the aisle because it plays into common stereotypes.

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