

1. The history of social innovation

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INTRODUCTION

They are far from the usual suspects: an early modern trader of the Dutch Golden Age, an economics professor from the 1970s quantifying risk, a post-war Utopian hippy computer programmer working in the belly of the US Defense Department, a female clinic owner warning against venereal disease in the First World War, a prolific and eloquent 19th-century hiking and nature enthusiast, early 20th-century psychologists testing more than a million army recruits, and the modern inheritors and stewards of the Haida nation and its land. Yet we posit that all these individuals and their actions can contribute to our understanding of social innovation in a meaningful way, and that many of them were explicit and purposeful in trying to disrupt their circumstances and move their societies towards greater resilience. They were engaging in social innovation before anyone articulated terms to describe their projects and goals.

Conversations about social innovation frequently start in the present and look towards the future: what are we doing today to achieve the future we want to see tomorrow? This is partially why scholars and practitioners have agonized over social innovation's permanency and relevance. Is it just a new buzz term (Pol and Ville, 2009), popular with funders, governments and the private sector because of the word "innovation", intensely popular across many fields and disciplines at the moment? Is it riding roughshod over more established disciplines and practices like community-based action research and community service learning? With this collection of cases, we seek to establish that work on social innovation provides a new lens for examining social transformation, and that looking back through history can illuminate the complex processes of transformation and innovation.

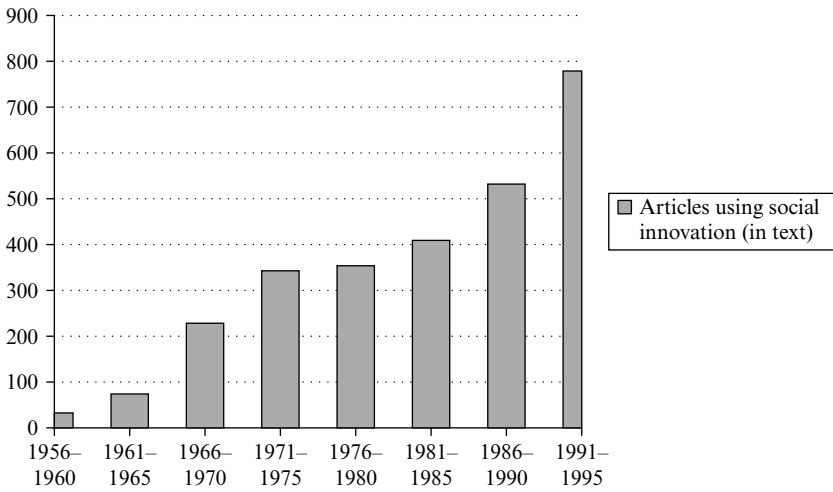
In truth, we are not the first to venture backwards to explore social innovation; Geoff Mulgan explicitly places the origin of social innovation in the industrial revolution. As people moved into cities en masse,

the new human geography overwhelmed the traditional civil society and religious institutions that provided many basic services, and the need for social innovation was born (Mulgan, 2006). In addition, several social innovation, systems-informed and transition-informed case studies have used history to explain or explore the dynamics of a complex system over time, but they are often limited to one or a few cases (Mumford, 2002; Mumford and Moertl, 2003; Bures and Kanapaux, 2011), focused on social-ecological systems (Gunderson et al., 1995), primarily concerned with socio-technical transitions (Van den Ende and Kemp, 1999; Van Driel and Schot, 2005; Geels, 2006; Geels and Schot, 2007) or simply science (Thagard, 2012). In contrast to these and other similar works, our study is a broadly constructed series of case studies of social innovation over time. Although our cases are concentrated in the 19th and 20th centuries, and in North America and Europe, we consider several problem domains, from conservation to economic tools, from Indigenous nation-building to reproductive technologies. Additionally, to support and expand on the cases' utility in discussing and understanding social innovation, we include three bridge discussions diving deep into key theoretical elements, specifically self organization, attractors and adjacent possible, agency and opportunity contexts, and cross-scale dynamics. These theory chapters are meant to supplement the cases and facilitate comparison. We conclude with a chapter that summarizes our insights into the nature and dynamics of social innovation, insights that we feel have important implications for the study of contemporary initiatives.

HISTORY “OF” VS. HISTORY “AND” SOCIAL INNOVATION

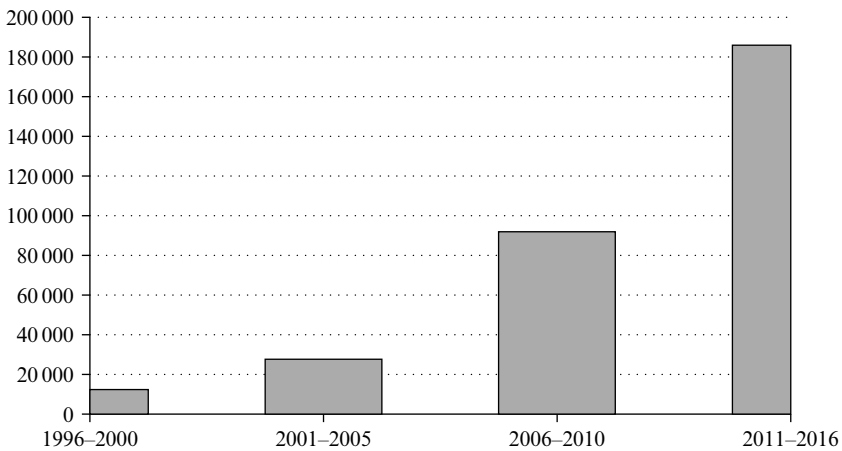
This collection uses an explicitly historical approach to explore cases of social innovation through time. The concept of social innovation itself seems to emerge in the early 20th century in sociology (Ward, 1903), and then appears more and more frequently in the post-Second World War period. This does not necessarily mean all those using social innovation employed the term in a common or even mutually intelligible way. It was often employed in the context of social policy and social action, in relation to issues surrounding race, employment and urbanization in the United States. In these instances, the term often refers to some sort of improvement in the social (as opposed to medical, ecological or economic) realm. Until the 21st century however, the term was rarely used critically: it was employed descriptively rather than analytically.

The increase in use of the term “social innovation” from the 1960s to



Note: This figure is based on a Google Scholar search of the discrete term “social innovation” excluding citations, patents and indexes. It is meant as heuristic, not definitive.

Figure 1.1 Uses of social innovation in academic articles, 1956–95



Note: See Figure 1.1. Note the changing vertical scale between Figures 1.1 and 1.2.

Figure 1.2 Uses of social innovation in academic articles, 1996–2016

today creates a false sense of unity and progression in the field. In fact, few scholars are trained in social innovation. Instead they come from the distinct intellectual traditions of sociology, political science, complexity, ecology, business (and especially entrepreneurship), non-profit studies, social work and even, increasingly, Indigenous studies. It is a concept that still attracts people more for its promise than its certainty.

This book arises from a very specific tradition within the broad and fuzzy social innovation canon, combining resilience theory (Gunderson and Holling, 2002), complex adaptive systems theory (McElroy, 2002; Berkes et al., 2003), and innovation process theory (Quinn, 1985; Pascale, 1984; Nonaka, 1995; Kanter, 1984) to create a relatively robust and analytically useful definition of social innovation. We define social innovation as *a new program, policy, procedure, product, process and/or design that seeks to address a social problem and to ultimately shift resource and authority flows, social routines and cultural values of the social system that created the problem in the first place* (Westley et al., 2011; Westley et al., 2006). Unlike many of the term's historical (and even contemporary) uses, here "social" is not merely a qualifier of a novel invention (differentiating it from the technological or the material), but a descriptor of process and of ultimate goal: to transform social institutions at all scales (from micro to macro). In this, our approach is also closely tied to structuration theory (Giddens, 1984).

The origins and content of our definition of social innovation inform our case selection (see the Methodology section below); some of our selections may initially surprise readers. Contemporary actors in our cases rarely if ever used the term "social innovation" (it was not in common use during many of the historical periods we considered), so we looked for several key elements to determine whether a social innovation was actually part of the transition under consideration. First: was there a new program, process, procedure, product, policy or design that could be directly tied to the transition in question? Did it deliberately or inadvertently seek to shift authority and/or resource flows, social routines or cultural values? Was the architect(s)' and/or advocate(s)' specific goal, at least at some stage of development, to disrupt a system and transform it? This is a high bar, based directly on the University of Waterloo's Waterloo Institute for Social Innovation and Resilience (WISIR)'s definition of social innovation (Westley et al., 2006). Importantly however, the actors in these cases appear deeply intentional in their actions, generally displaying an understanding and attention to systems dynamics and scale.

THEORY AND TERMINOLOGY

This project began with an insight and a moment of juxtaposition between technological innovation and social innovation. In *The Nature of Technology*, complexity theorist Brian Arthur argued that the discovery of new natural phenomena (through scientific advances), and new ways of capturing/exploiting such phenomena, catalyzes the creation of a cluster of new technologies (2009). The combination of existing technologies within or between domains or regimes can also create new technologies. So, according to Arthur, novelty in technology originates in new or different understandings and exploitation of the natural world, which in turn results in path-dependent combinations and recombinations of elements.

For the researchers at WISIR, already committed to a complexity perspective, this led to the question: was a similar process at work in many transformative social innovations? And, if so, were the number and types of phenomena broader than just those commonly associated with science and technology? Could, for instance, new social or political philosophies be considered as examples of phenomena that have the same catalytic effect? If so, it solved a challenge presented by our own definition: how does the researcher interested in the transformation of social institutions determine which novel ideas, designs or initiatives, identified in the early stages of their development, are most likely to have transformative impact?

And so we began a journey of discovery using historical examples. We chose historical innovations rather than contemporary or ongoing ones because we wanted to be able to trace the entire process from successful scaling/transformation back to new phenomena. Many promising or popular current innovations may still be in the process of scaling, or the consequences of their mass adoption are still emerging. The failure of social innovations to have a lasting impact is common. An historical approach to these phenomena gives us a different perspective on how and why some social innovations do in fact result in the transformations to which they aspire.

TERMINOLOGY

Specialized terminology, drawn from the theoretical traditions of complexity theory, resilience theory, innovation theory and structuration theory may not be familiar to all readers. Here we have chosen to focus on defining concepts we believe to have explanatory or theoretical significance to the overarching story we seek to tell surrounding social innovation and systems shifts. They are as follows:

Social Phenomena/Social Fact

Social phenomena are socially created concepts that a discrete group (a culture, a sect, a political group) believes to be true and that guide their behavior accordingly. This concept is derived directly from Durkheim's social fact – ideas that are real in their effects (we believe them to be true and therefore act accordingly) (Durkheim, 2014 [1938]). As noted above, Arthur saw the discovery of new scientific phenomena as being the catalyst for new technologies. For example, the discovery of the light spectrum stimulated innovations from lenses to original styles in painting. In the social sciences, it would appear that social philosophies and religious beliefs have a similar capacity for stimulating cascades of social innovation. Take for example Martin Luther's break with the Catholic church and his belief that all men should have direct access to the word of God, which meant not only that the Bible should be translated from Latin to the local language, but also that all men should learn to read. This may be said to be the "social fact" which stimulated mass education. In our cases, the phenomena at the root of social innovation are extremely diverse, ranging from mathematical formulas governing financial transactions (see Chapter 9), to legal rulings on Indigenous rights (Chapter 6), and new technological innovations in computing and telecommunications (Chapter 7).

Adjacent Possible

The term "adjacent possible", first coined by Stuart Kauffman (2000), refers to:

a kind of shadow future, hovering on the edges of the present state of things, a map of all the ways in which the present can reinvent itself . . . captures both the limits and the creative potential of change and innovation . . . its boundaries grow as you explore them. Each new combination opens up the possibility of other new combinations. (Johnson, 2010, p. 11)

Adjacent possibles are the range of alternative social arrangements just beyond the horizon of the prevailing possible (the current reality) (Johnson, 2010, p. 31). Arthur indicates that the adjacent possible defines the various possible trajectories along which an innovation develops. Social facts or phenomena, such as the belief that all men should read the Bible, may start initially with the education of a few. However, depending on what other inventions or innovations occur in the adjacent possible, the trajectories may take very different directions. The discovery of the printing press, for example, accelerated access to reading and to education.

Had such an invention not been available, other trajectories would have developed. Chapters 6 and 10 showcase two different adjacent possibles in the history of the relationship between the Canadian government and Canada's Indigenous population, one that had tragic consequences, and one that now gives cause for renewed hope for the future.

Elective Affinity, Bricolage, Paradox and Basins of Attraction

Four additional concepts are useful for enriching our analysis of how adjacent possibles are formed, and how they impact social innovations. First, elective affinity, a concept developed by Max Weber (1922), helps us to understand why certain adjacent possibles become more likely to succeed than others. As Weber indicated, of the sets of available adjacent possibles, some will be more likely than others to form a mutual attraction with the developing social innovation. Weber noted, for example, that the economic form of capitalism and the Protestant ethic had a kind of natural fit in which “they mutually favor one another’s continuance or conversely, hinder or exclude one another – are ‘adequate’ or ‘inadequate’ to one another” (Weber, 1992, p. 138). We see an example of this in Chapter 3, where the intelligence test had an unfortunate elective affinity with the then popular concept of eugenics. So too, as social innovations develop over time, they attract elements of the adjacent possible and in doing so create a kind of *bricolage*, a coming together of elements not previously juxtaposed but which nonetheless fit together to form something new and generally coherent; for example, in Chapter 7 the World Wide Web is not only an amalgam of three different inventions, but also builds on the inventions of the Internet, email, hypertext and several others. Once formed, the elements continue to reinforce and amplify each other, creating a coherent, consistent and stable pattern of interaction to which the system returns even when perturbed, such as the modern derivatives trading market described in Chapter 9, which survived the 2008 recession largely unaltered. Complexity theorists refer to this as a basin of attraction (Walker et al., 2004). The fit is never perfect, however. Over time, the social innovations in this book go through further transformation, in response to tensions between the original, disparate elements. *Paradoxes* become part of the dynamic that drives the continuing evolution of the innovation. For example, as we will see in the chapter on national parks, some of the tensions that characterize today’s parks system are a result of the dynamics of combination and recombination, the process of bricolage which is essential to successful social innovation. Nonetheless, as we shall also see, the sensitivity to initial conditions which some complexity theorists have gone as far as to call prophetic, continues to characterize the innovation, despite

those permutations and transformations. An innovation's basic DNA – the values and hopes of its earliest architects and advocates – may be easy to obscure but are very difficult to eradicate.

Agency and System/Institutional Entrepreneurship

In these historical cases, identifying individuals associated with our innovations was an invaluable means of bringing focus to the details of our narratives, allowing us to see how actions at the smallest scale of the systems related to the broader trends associated with the adjacent possibles (for example, in the case of the intelligence test, the role that key actors played in getting the test launched at a massive scale despite limited peer review). Institutional or system entrepreneurship is used to describe a particular form of agency associated with social innovation. The creators of social innovation ideas are often described as social entrepreneurs. Social entrepreneurship has been defined by three components:

1. identifying a stable but inherently unjust equilibrium that causes the exclusion, marginalization or suffering of a segment of humanity that lacks the financial means or political clout to achieve any transformative benefit on its own;
2. identifying an opportunity in this unjust equilibrium, developing a social value proposition, and bringing to bear inspiration, creativity, direct action, courage and fortitude, thereby challenging the stable state's hegemony; and
3. forging a new, stable equilibrium that releases trapped potential or alleviates the suffering of the targeted group, and through imitation and the creation of a stable ecosystem around the new equilibrium ensuring a better future for the targeted group and even society at large (Marten and Osberg, 2007, p. 35).

To this list we add a focus on and connection to the institutional resources required to assist in destabilizing the “unjust equilibrium” – what writers such as DiMaggio describe as “institutional entrepreneurship” (“when organized actors with sufficient resources see in them an opportunity to realize an interest they highly value” (DiMaggio, 1988, p. 14)). Institutional entrepreneurship adds to the definition of social entrepreneurship in that it identifies a category of actor whose role is to secure, resource and scale the social value proposition created by the social entrepreneur. The social entrepreneur and institutional or system entrepreneur may be the same person, or they may be different people operating at different phases of the dynamic process through which an innovation moves from phenomenon

to institution. The two roles each require a different skill set (Westley et al., 2013). Certainly the latter is highly dependent on the opportunity context.

Windows of Opportunity and Opportunity Context

For institutional/system entrepreneurs to succeed in securing, resourcing or scaling a social innovation or social value proposition, the opportunity context must be right. Opportunity may here be defined as “the likelihood that an organizational field will permit actors to identify and introduce a novel institutional combination and mobilize the resources required to make it enduring” (Dorado, 2005, p. 391). Opportunities can be defined as opaque, hazy or transparent. Opportunity contexts are hazy when there is such uncertainty or turbulence and change in the organizational/institutional field that it is hard to predict where resources will come from and how to stabilize the value proposition. Opportunity contexts are opaque when the “unjust equilibrium” is firmly established, highly integrated, and complacent. Finally opportunity contexts are transparent when multiple competitive institutional frames of reference and resources coexist for their support (Dorado, 2005, p.394). In such contexts novel combinations and recombinations are possible and system entrepreneurs can broker new arrangements. It is in transparent opportunity contexts that social innovations are most likely to flourish. The options open to system entrepreneurs in opaque contexts are more restricted, often limited to creating small disturbances and equally small wins or at best destabilizing the status quo. In hazy opportunity contexts, system entrepreneurs need to focus on sense-making to create the shared problem definition required to stimulate new solutions (Westley et al., 2013). Opportunity contexts were key in the formation of Dutch joint stock companies, as explained in Chapter 11.

Scale/Cross-Scale Dynamics

Of course, system change involves not only time but what we refer to as cross-scale dynamics. This is best captured in the structuration theory of Giddens (1984). Giddens postulated that for analytic purposes social structure could be divided into three structures: legitimation, domination and signification. At the highest institutional scale (macro), structures of legitimation are reflected in the laws of any country, structures of domination in the economic system and political/authority system and structures of signification in the widely shared beliefs and values that define a culture. These institutions are reproduced at the level of organizations or communities (meso scale) and in the ways we interact with each other

in everyday conversation (micro scale). Most social innovations are born at the interactional (micro) level, people imagining together novel social arrangements or technologies based on new ideas and social facts. As the innovations move from idea to substance and are then launched as programs, processes, products and so on, an organization or community forms to support the innovation (meso). Finally, a successful innovation at the community or organization level will encounter the broader system dynamics and institutionalized barriers (macro) of the system that created the problem in the first place. For example, someone creates a new educational program that challenges the broadly held assumptions about how children learn mathematics. The inventor may begin by forming an organization and trying to sell the program to individual schools. In the long run, however, he/she will need to take on the broader educational system (including policies and laws, economics and beliefs) if the new programming is to really achieve its objective: transforming how we believe children learn mathematics and responding with appropriate programming.

One framework based on Giddens's structuration theory is the Multi Level Perspective (MLP). MLP uses the terms "niche", "regime" and "landscape" to refer to, respectively, the micro scale where innovations are developed and nurtured, the meso scale where they are introduced to a broader organizational and inter-organizational field and the landscape scale, defined as exogenous to the institutional context of the problem regime and rarely influenced by actors in that regime. While we take some exception with the treatment of this "highest" scale, preferring to treat this scale as the broadest institutional context, we did use this framework as an initial organizing device to help visualize the unfolding of social innovation over time.

METHODOLOGY

Strictly speaking, this is not a collection of histories or historical case studies. Historians who engage with our cases may find them unsatisfactory in the traditional sense; we are following the evolution of specific ideas over time and landscape, acknowledging rather than challenging path dependence, seeking to trace the origin and direction of that path. Hence it is closer to the works of Charles Tilly, Douglass North or David Byrne, who use historical events as rudimentary laboratories to explore and propose hypotheses about important phenomena that disrupt and transform societies. We acknowledge the risk of looking back and seeing ourselves reflected in our data, but we have tried to use history as a check

on our thinking, following Byrne's assertion that, "historically, we can see what happened" (1998, p. 4) to test our thinking.

This project emerged from the research team at the Waterloo Institute for Social Innovation and Resilience at the University of Waterloo in Ontario, Canada, an interdisciplinary team of graduate students, post-doctoral researchers and faculty members, including sociologists, economists, historians, planners, systems theorists, political scientists and engineers. This team co-collected, co-designed and co-developed the cases over more than two years.

Despite the number of cases contained here – eight in total – this is still very much an exploratory study, which is reflected in the case selection and development. We began by working backwards from the moment when we felt a transition had occurred; the introduction of a new law or the mass adoption of a new program. To be frank, this moment is usually one of the final stages of the transition itself. We worked backwards from that point as a group, asking two key questions. Did one or several discrete social inventions trigger this eventual transition? And, could we trace the invention's origins to a new phenomenon or combination of phenomena, as per Brian Arthur? At this early stage, we hypothesized three general categories of phenomena: Arthur's naturalistic, and also technical and social, phenomena (the former being new technological capabilities and the latter new "social facts", as per Durkheim). Over time we focused most on social phenomena, although we did not abandon naturalistic or technological phenomena and these appear in at least one case (technological most often folded into naturalistic as an expression of the former).

Not all possible cases discussed were selected for significant consideration; often the link between phenomenon, innovation and transition was too vague or ambiguous. This does not mean we chose the obvious stories, and in fact we sought out uncomfortable stories such as the intelligence test and derivatives market, but as we were exploring largely uncharted territory, we sought the paths that were clearer to follow and that we found most personally intriguing. We hope and anticipate that others will take up this work and discover paths we have not.

Once selected, we began not by writing cases but by mapping them visually using the presentation software Prezi (these have been inserted in image form through the book and are available online in their original dynamic form). We used a few basic framework tools to aid this process, although we deliberately sought to minimize structure at this stage of the case construction process, to leave us open to emergence. First, we employed a basic three-scale approach: landscape, regime and niche – our direct debt to MLP – to follow ideas, institutions, organizations and

innovations over time. We indicated moments of definitive agency (eye), bricolage (funnel and Venn diagram) and phenomena (light bulb). Where relevant we also marked external shocks like war, and internal shifts like court cases and new laws.

These prezis formed the basis of our conversations and cases. It was through comparison that we appreciated the importance of prophetic starting conditions, the constant interplay between bricolage and the adjacent possible, and the importance of war in the modern era as a huge shock and shift in opportunity context and windows of opportunity. We also found that the MLP framework, while very useful for more technical and commercial innovations, became less useful as we expanded the problem domains. In particular, the regime space became more and more difficult to employ, and MLP frameworks for transition became less helpful. We have kept landscape and niche, both of which are used beyond MLP, as descriptive rather than explanatory categories.

The prezi comparisons informed the case writing process, where we explored in depth the role of agents and networks, the shifts in opportunity contexts, occasions of bricolage and the adjacent possible, and how prophetic starting conditions could affect the path of a phenomenon and/or its related innovation even decades later. We also explored the dark side of innovations, how attempts at social engineering, no matter how well-intentioned, can create terrible consequences for many of society's most vulnerable. What was most surprising in these cases was how similar they were to some of the more celebrated examples of social innovation – with the exception of those prophetic starting conditions that disenfranchised and disempowered the target populations.

The results of that iterative process are the cases in this book. We want to reiterate that this is an exploratory study; we sincerely hope readers will see these eight cases as a challenge. What cases have gone unexplored, what agents have been underappreciated and what phenomena still beg for attention?

BOOK OUTLINE

The book contains eight cases, three synthesis chapters and a conclusion. The three synthesis chapters focus on the themes of agency, adjacent possibles and critical transitions, and cross-scale interactions. The book is organized to intersperse these synthesis chapters with case-based chapters, but each synthesis chapter draws on the numerous chapters that are the backbone of the book. The focus of these cases is as follows:

National Parks in the United States

The American national parks system is a story of distributed networks of agents transforming how Americans saw their natural landscape from an exploitable resource to a national treasure in need of preservation and pilgrimage. The adjacent possible of the parks was a visceral experience for many early architects and adopters; they walked the American wilderness and could easily see its many splendors – then they had to strategically convince those across American society and up to the highest offices. The elective affinities of such unusual partners as railroads and conservationists and the exceptional importance of scaling, as the parks were trapped for decades as individual parks and not an effective conservation and tourism system, are key to this case.

The Intelligence Test

Different elective affinities can draw a social innovation in different directions at different times and the intelligence test provides our first example of this. In its early history, the idea of testing individuals' intelligence was attractive to proponents of eugenics, and spoke to contemporaneous concerns about the challenge of the "feeble-minded". The success of the intelligence test in this domain at that time was due in no small part to the efforts of an extraordinary network of social entrepreneurs who used the opportunity of the First World War to launch intelligence testing on a mass scale. It is also interesting to see how the test bore the marks of these individuals' biases and preconceptions. In the aftermath of the Second World War, the intelligence test instead became a tool for educational and social mobility, but still carried with it some of this earlier baggage.

The Legalization of Birth Control in North America

The case of birth control is an odd one, in some ways not so much a social innovation as a social rediscovery, as a practice that had been considered relatively normal became scandalous, then illegal, before re-emerging in a modern guise. Truly this case is a demonstration of how social forces can reach a tipping point that causes a system to reconfigure into one adjacent possible and then another. In both instances, social entrepreneurs worked tirelessly to transform our understanding of reproductive technology and our views on the morality of reproduction and women's health issues, and in both cases they were aided by broader developments in the religious, scientific and economic arena. This case also provides a timely reminder of how fragile some of the freedoms and rights we take for granted truly are.

The Duty to Consult and Accommodate in Canada

This case shares a historical origin with the Indian Residential Schools (Chapter 10) – that of treaties between First Nations and the Crown. They are another reminder that social innovations may be pulled into different adjacent possibles by different elective affinities at different times.

The treaties were a form of bricolage of European and Indigenous worldviews, although the two adjacent possibles emerged at different times. The first, a wholly European view, justified residential schools as an assimilation tool; the second, a more Indigenous-informed view, sought to balance and reconcile cultures and sovereignties within Canada. Slowly, over the second half of the 20th century, social entrepreneurs, especially in the legal sector, have worked to replace the wholly European view with a more balanced perspective, and recent breakthroughs in the courts have profoundly shocked the institutional landscape of Canada, a critical transition which has yet to mature fully in its consequences.

The Internet: A Dynamic History

Although the Web is one of the most contemporary cases, intriguingly, this modern technology is powerfully shaped by the prophetic starting conditions of the 1960s, when it was first conceived. The Web was a coming together of the US Defense Department's desire to have a reliable (nuclear bomb-proof) information network after the Second World War and a group of computer scientists and programmers who were largely inspired by a Utopianism in favor of open technology and an open society. This tension between security and openness rears its head repeatedly in the Internet's development, scaling and utilization today. The shift in authority flows imagined by those early programmers has not disappeared as the network scaled to become what we now know as the Internet.

The Global Derivatives Market as Social Innovation

The derivatives case is a prime demonstration of how dependent innovations are on a convergence of factors across scales at the right time. In this case we see how academic ideas about economics, tied to a social philosophy, arose early in the 20th century but were out-competed by another adjacent possible, Keynesianism, in the immediate aftermath of World War II. It was only later in the century that a convergence of macro-economic factors, political shifts, and crucially, the emergence of new technology with the right elective affinity, allowed the derivatives market that still exists today to dominate global finance.

Indian Residential Schools

This case study is undoubtedly our darkest and most distressing example of how social innovation can have disastrous consequences. The residential schools were born out of a centuries-old European belief about the superiority of European civilization, and an insight into the power of education as a tool for assimilation. However, they only took on this role because of the steady, violent domination of Indigenous North America by two settler nations, the US and Canada. An alternative adjacent possible existed, glimpsed in some of the early treaties and in the aspirations of some early Indigenous advocates, who hoped that their people could learn from the settlers the tools needed to survive in the new landscape, while remaining part of their own culture. Instead, the social innovation was captured by a mixture of church and state forces which used them as a means to divorce Indigenous peoples from their culture, with the coercive power of the state backing them up.

Dutch Joint Stock Companies

Changes in perception are key to the story of Dutch joint stock companies, changes brought about by shifting worldviews and socio-economic conditions at multiple scales. The trigger for the innovation was the realization that the Portuguese/Spanish Empire was fallible, but only the Netherlands was able to take full advantage. This was due in part to the unique combination of urbanization, religious reformation and rebellion against Spain in the Netherlands. The combination of these variables, acting across sectors and through time and space, is essential to understanding why a small northern country was able to do what Italy and England were not.

We will conclude with a chapter summarizing our learnings from the cases and the projects and suggesting how these are useful for recognizing early social innovations with transformative promise.

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