Toward Sustainable Transitions in Healthcare Systems

Edited by Jacqueline E.W. Broerse and John Grin
Toward Sustainable Transitions in Healthcare Systems

Health systems have long been considered key determinants of well-being within modern societies, a valuable resource which has faced a series of reform initiatives throughout the past decades. These reforms have been used to manage the cost of development, measure the tenability of health systems in globalizing economies and promote the increasing importance of health problems related to lifestyle and living conditions, yet they have failed to provide a true resolution to the persistent economical and logistical problems facing modern-day health systems.

This rich, interdisciplinary work explores the hypothesis that many of these problems cannot be adequately addressed without structural changes to our health systems, and examines the embedded features of our health systems that underlie contemporary challenges as well as how, and under what conditions, our health systems can be made more sustainable. Combining and building upon theoretical approaches from transition and innovation studies for analysing health system deficits, Toward Sustainable Transitions in Healthcare Systems raises fundamental questions about how new research, new needs and exogenous trends are transforming current health systems.

Providing an original and substantial analysis of the complex structural features of the health innovation system, this book will be of interest to students and practitioners of the politics of health, social epidemiology, medical sociology and those with an interest in transition theory.

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1 Introduction

John Grin and Jacqueline E.W. Broerse

The way health systems are designed, managed and financed affects people’s lives and livelihoods. The difference between a well-performing health system and one that is failing can be measured in death, disability, impoverishment, humiliation and despair.

(Gro Brundtland, WHO, 2000: vii)

1.1 Health and health systems: trends, problems and responses

Health systems are key determinants of health in modern societies. In 1948 the World Health Organization (WHO) defined health as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.” The 1986 Ottawa Charter for Health Promotion\(^1\) states that “health is a resource for everyday life, not the objective of living. Health is a positive concept emphasizing social and personal resources, as well as physical capacities.” Health systems were subsequently defined to include:

all actors, institutions and resources that undertake health actions – where the primary intent of a health action is to improve health. It is broader than personal medical and non-personal health services. It incorporates selected inter-sectoral actions in which the stewards of the health system take responsibility to advocate for health improvements outside their direct control, such as regulations to reduce fatalities from traffic accidents.

(Murray and Evans, 2003: 7–8)

Taken together, these WHO definitions of health and health systems underline that health is a resource and a condition for living productive lives. They also point to the widely shared conviction among policy-makers that health systems are crucial for realizing health.

Nevertheless, health systems are hard pressed in meeting their goals, even in the advanced welfare states of Western Europe and North America on which this book focuses. To be sure, virtually all infectious diseases have been
brought under control, while significant progress in areas such as cancer and cardiovascular disease have led to notable increases in years of life lived in good health. But at the same time – partly as the flip side of their very successes, partly due to pressure on health systems – we see the (future) emergence of numerous complex problems. This book explores the hypothesis that many of these problems cannot be adequately addressed without structural changes to our health systems. More specifically, its chapters examine the embedded features of our health systems that underlie contemporary challenges as well as how, and under what conditions, health systems can be made more sustainable.

“System reforms” of health systems have been attempted by many welfare states since the economic crises of the late 1970s. Such reforms, however, are not what we are hinting at. Their focus has been on containing costs and, to a lesser extent, to improving accessibility; even their proponents generally agree that they have, at best, only been partly successful. The following section elaborates upon our hypothesis that many of the problems faced by health systems, as well as the flaws in attempts to resolve them, are rooted in their structural features. In transition studies, complex problems that endure – due to the same features of the system underlying problems as well as solution pathways and mechanisms – are referred to as “persistent problems.” Any resolution is thus bound to involve mutually reinforcing innovative practices as well as structural adaptation (Grin et al., 2010: 2–4).

These processes of profound change are called “transitions.” Transitions are long-term, complex structural changes in societal systems in which radical shifts occur from one system, or configuration, to another (Geels and Schot, 2010). Transitions include changes in institutionalized identities, social relations and “self-evident” assumptions, and typically involve multiple actors from government, the private sector, science and civil society (Grin, 2010). Although breakthroughs can occur relatively quickly, transitions stretch over periods of one or two generations (Rotmans et al., 2001). This book therefore does not offer quick fixes. Nevertheless, case studies of earlier transitions and the mechanisms of their successes and failures in the emerging field of transition studies² have yielded insights into how radically innovative practices and structural changes can reinforce each other over time, eventually yielding a transition (Grin, 2006, 2010: 265–284; Geels and Schot, 2010: 47–51).

This book will investigate whether and how the transition perspective helps us identify more promising ways to understand and address the problems confronting contemporary health systems. Through the conceptual framework of transition studies, it seeks to: (1) better understand the embedded features in the foundations of our health systems that underlie complex problems, and (2) find ways to innovate health systems to more sustainably address these problems. The following section provides an overview of modern health systems, the problems facing them, and their attempted solutions. Drawing upon key insights from transition studies, we will then further outline the book’s design.
1.2 Modern health systems, their challenges and attempted solutions

Many of the problems facing modern health systems, we argue, are embedded in their foundational features, while the difficulties encountered in addressing persistent problems often reveal how these features reproduce themselves. Nevertheless, pursuing analysis on the generic level of modern health systems is a risky undertaking that needs to be preceded by at least three disclaimers. First, while we believe that our analysis of problems and their causes is relevant across a wide range of health systems, we acknowledge diversity between and within systems, and in how and how far our claims hold. Second, we do not reify particular structural features and suggest that they determine practices; we instead adhere to what Giddens (1984) has called the “duality of structure,” where structures are both the medium and outcomes of action. It is agency within practices that yields diversity. Third, we do not claim that our analysis is anything close to comprehensive. Our aim is to render plausible our hypothesis – the starting point of our analysis – and to tie our argument to wider discussions about health, healthcare and health systems.

Infectious diseases

Modern health systems have a proven track record in combatting infectious diseases, in some cases having eradicated them. But the work is far from over as new challenges emerge, partially due to, and more often complicated by, the global mobility of people and pathogens. HIV/AIDS and Ebola are two cases in point. Another is how climate change is increasing the incidence of Leishmaniasis in Europe (Ready, 2010) with the sand fly, its vector, following rising temperatures. Such challenges require changes in how we organize prevention, surveillance and care for emerging diseases.

Since the seventeenth century, the medical profession has come to rely on what Toulmin (2001) describes as “applied biology”: medicine typically relies on applying to a particular case universal knowledge of a supposedly universal body, understood from the quintessentially modern perspective that we can control nature on the basis of universal principles. Disease is then understood as an abnormal state caused by outside pathogens or (hereditary) internal malfunction, to be remedied through interventions based on this knowledge (e.g. surgery or medicinal correction of hormone levels), prevented by intervening in the pathogenic process (e.g. antibiotics), or by denying access to pathogens (e.g. through sanitary or job safety measures). This approach has obviously been successful. Modern medicine has realized a significant part of the dream that accompanied its birth during the early Enlightenment when Francis Bacon (1626: 449) proclaimed that Newtonian science would enable medicine to go beyond the two aims stressed by the ancient Greeks, namely remedying disease and promoting health. It would, he claimed, now also become possible to prolong life.
This modern vision has guided the development of medical science as well as relationships among medical practitioners, researchers, government, industry and patients. Health maintenance is primarily understood as the responsibility of the health system which – in line with the WHO definitions cited above – is to enable people to live productive lives. This has typically translated into a relatively strict functional differentiation between the health system and other societal systems, such as the energy system and the educational system. A key feature of health systems in advanced welfare states (e.g. Patel and Rushefsky, 1999) is the central role of both medical rationality and medical professionals. The modernization of the medical profession was accompanied by a process of “protoprofessionalization” (De Swaan, 1996) – the internalization of professional rationality by members of the general public who now name and address their diseases and health in professional medical terms, and rely on professional advice and intervention to maintain and restore health. The flip side of this reliance on formal medical knowledge is the tendency to de-emphasize local conditions and tacit knowledge, generating in healthcare what Scott (1998: 302) has observed elsewhere: the “logic of homogenisation and virtual elimination of local knowledge.” This is also reflected in priority-setting for medical technology, where medical interventions are seen as much more important determinants of health and disease than patients’ life conditions, lifestyles and agency (Van der Wilt, 1995).

A crucial consequence is that modern health systems tend to intertwine public knowledge institutions, the medical profession and industry, yielding a well-oiled machine that produces a continuous new supply of aids and appliances for diagnosis, medicine and treatment. These factors together tend to fuel supply-driven development, further encouraged by the dominant policy mechanisms of “innovation support,” “drug admission” and “reimbursement.”

The emphasis on modernization and associate, reductionist conventional medical rationality in both clinical practice and the organization of health (research) systems has systemically embedded problem-solving paradigms that do not acknowledge the complex and interconnected nature of (problems in) health systems. In the words of Plsek and Greenhalgh (2001: 625):

The traditional ways of “getting our heads round the problem” are no longer appropriate. Newton’s “clockwork universe”, in which big problems can be broken down into smaller ones, analysed, and solved by rational deduction, has strongly influenced both the practice of medicine and the leadership of organisations…. But the machine metaphor lets us down badly when no part of the equation is constant, independent, or predictable.

Complex challenges often lead to persistent problems. One set of problems concerns the perverse effects of dominant practices, which can undermine their own effectiveness. A well-known example is the overuse of antibiotics, which together with poor compliance among patients triggers resistance in
microbials (Levy and Marshall, 2004). The most obvious solutions – reduced prescription and use, patient compliance with treatment regimes, and the development of new antibiotics – are difficult to implement due to the economic interests of pharmacies and the livestock industry (where antibiotics are used to promote growth), demand from patients (belief in antibiotics as silver bullets), the willingness of physicians to fulfill patient demands, difficulties in realizing compliance (lack of awareness), and lack of incentives for the pharmaceutical industry to develop new antibiotics. Below we will elaborate more on the perverse effects of dominant practices in health systems.

Non-communicable diseases

So-called non-communicable diseases (NCDs) – diseases that are non-infectious and non-transmissible among people – have entered the limelight over the past few decades. This class of afflictions comprises both chronic diseases that progress slowly and diseases that appear suddenly. Examples include diabetes, Alzheimer’s, auto-immune diseases, chronic obstructive pulmonary disease, cancer, cardiovascular diseases and obesity. NCDs were designated as “one of the major challenges for sustainable development in the twenty-first century” at the United Nations Rio+20 conference in 2012, and are also included in the agenda of the Sustainable Development Goals (2016). According to the WHO, NCDs now account for nearly two-thirds of global mortality, and more in Europe and the USA. Figure 1.1 shows both the successes of modern health systems in combatting infectious diseases and the

![Figure 1.1 Causes of death by region: communicable diseases, non-communicable diseases and injuries](image-url)
increasing prevalence of NCDs. This is partly a consequence of that success and partly due to other facts, not least changing lifestyles and the structural landscape trends underlying that shift (including urbanization, individualization, and changing practices and structures in industrialized food production).

The pathology of NCDs is usually complex: in addition to (hereditary) physical defects, life conditions (toxic substances, radiation), lifestyle (poor nutrition, lack of physical activity, smoking and stress) and patient agency are mutually interacting causal factors (Balbus et al., 2013; Horton, 2013). While NCDs may be partly addressed through standard research, policy and health-care practices that focus on cure, the most effective approach is prevention by controlling risk factors in circumstances and lifestyles, and promoting patient agency. And though a wide range of prevention efforts have been tried, their success is often limited, as existing health systems are geared more toward cure than prevention.

Echoing Beck’s (1992) notion of risk society, risk factors may be seen as the dark side of established practices in other domains: stress at work, toxic substances from industrial and transportation emissions in the environment, dietary patterns associated with urban lifestyles, and so on. Appeals to adapt eating, drinking and exercise habits, or to maintain lower stress levels in the workplace, may well threaten “normal” practices. As prevention efforts often reverse the relationship between health and other social realms, they violate the culturally embedded expectation that (health) professionals are responsible for ensuring health so that people can lead productive lives.

Conventional medical rationality is still far from fully grasping the complex interactions among physical disorders, life conditions and lifestyles, and patient agency. The promotion of healthy lifestyles in many countries is even at odds with acceptable relations between health professionals and their (proto-professionalized) patients. Thus the capacity of health knowledge infrastructures to develop and support measures to remedy or prevent NCDs remains limited; when innovative prevention practices emerge, their effectiveness often cannot be proven according to the structurally embedded standards of “evidence-based medicine (EBM),” upon which decisions on admission and reimbursement are usually based. EBM theoretically and methodologically reflects the assumptions of conventional medical rationality, and is thus well tailored to relatively mono-causal afflictions such as infectious diseases but a simplification at best for more complex pathologies with interacting dimensions, as in NCDs. Based on the case studies that follow, we will return to this issue in the concluding chapter of this volume.

Increasing demand for long-term care

Another problem facing health systems in advanced welfare states is the increasing demand for long-term care. This is at least as much due to the increasing prevalence of NCDs as it is to the graying of the population. As reported by the OECD (2005; see Figure 1.2), the correlation between the
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Demand for care and aging is weak. In part, this is because today’s comparatively healthy elderly population have fewer care needs than their predecessors (see e.g. Muszyńska and Rau, 2012). Nevertheless, demographic trends remain crucial – not only as they partially inform the demand for care, but because they reduce the share of the population that will generate income and provide (professional and informal) care to meet this demand. In the Netherlands, the old-age dependency ratio is expected to rise from 20 percent in 2000 to 43 percent in 2050 (Meier and Werding, 2010). Similar patterns exist for the EU as a whole, where the old-age dependency ratio is expected to double to nearly 55 percent in 2050, in the USA (from 18 to 35 percent) and in Japan (from 35 to 70 percent).

Demographic trends provide another set of challenges for modern health systems, with the growing demand for care and changing old-age dependency ratios dramatically increasing the financial burden. In virtually all OECD countries, there is a gap between the demand for care and available personnel (OECD, 2011), a problem often exacerbated by cost-cutting measures and the introduction of new public management, which have undermined job satisfaction in the sector. In addition, as argued, for instance, by the Institute of Medicine (2011) and by Triantafillou et al. (2010: 22), the very notion of “being taken care of” in standardized ways decreasingly fits contemporary lifestyles shaped by individualization, cultural and economic globalization (Beck and Beck Gernsheim, 2002), and neoliberalization (Newman and Tonkens, 2011).

Here again, key features of the health system may be a part of the problem. In many welfare states, care has become highly professionalized and institutionalized, though with significant variation between countries. Expectations placed on the welfare state have grown, while individuals’ and communities’

Figure 1.2 The correlation between the demand for care and aging
Source: OECD (2005: 5).
sense of agency and responsibility has declined (Olson, 1994; Leichsenring et al., 2013). Paradoxically, this is accompanied by citizens rejecting patronization by the state and healthcare professionals, as well as the emergence of novel practices of (virtual) community care, informal care, new professionalism and so on.

Yet, innovative practices often remain plagued by problems rooted in health systems (Nies et al., 2013). Care often focuses on patients with NCDs; practices here thus face the same kinds of problems discussed above for NCDs. Informal caregivers in the future may also be in shorter supply due to changing old-age dependency ratios and gender and family relations (e.g. the share of broken marriages has increased). In addition, the meager social appreciation of care work that accompanies the dominance of reductionist conventional medical rationality and new public management shapes the image of informal care. Healthy citizens expect to be able to focus on their working lives and leisure. All of these factors together already imply a significant burden for informal caregivers, especially for women who provide the lion’s share of informal and community care (Triantafillou et al., 2010: 55ff.).

**Increasing costs**

The rising cost of healthcare is the problem that has received the most political attention. The percentage of GDP spent on health increased significantly between 1980 and 2010 in nearly all EU countries (see Figure 1.3), with health spending in EU countries growing by an annual average of 4.6 percent per capita between 2000 and 2009.

Due to growing concerns over financial tenability, many reforms have focused on cost containment. In 2010, for the first time since 1975, health spending in Europe declined – by 0.6 percent per capita. This is partly due to the effect of different cost containment policies. These typically include restricting reimbursement of medical treatment (among others by stimulating the use of cheap generics over brand medication), giving room to health insurance companies to bargain with health providers for reduced prices, and providing hospitals with a limited own budget. Less common (tellingly), but recently emerging (Schippers, 2016) in, for instance, the Netherlands are possibilities to bargain (collectively) with pharmaceutical companies for price reductions. In a very different way, the financial crisis played a role in this, with significant spending reductions in countries like Ireland and Greece as extreme cases. While increasing uncertainty over the availability of future resources for healthcare may help create room for systemic change, hitherto blunt austerity motives seem to drive the process.9

But these successes in cost containment seem to be short-lived. Although for several decades only small steps in drug improvement were witnessed (the so-called “me-too” products), recently a new category of medicines, based on biotechnologies, are reaching the market often for unmet needs (e.g. lung cancer, cystic fibrosis and hepatitis-C). The good news is that patients are
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Cured or live longer with improved quality of life. This comes at considerable cost, however. Using public innovation subsidies and market protection mechanisms to their advantage, pharmaceutical companies are labeling these new biologicals as personalized medicines or orphan drugs, which enables them to set so-called societally value prices.10 The prices of these new, innovative, monopolistic personalized medicines can be extremely high, up to as much as 500,000 euros per patient per year (Godman et al., 2015). Governments around the globe thus find themselves in a continuous rat race with other stakeholders in the system in which cost containment and profit maximization continuously try to catch up with each other.

While budgetary problems continue to be a major focus of governments in welfare states, concerns about the quality, appropriateness and accessibility of health services remain as well, despite increasing investments in care, knowledge and available technology (Dirkzwager and Verhaak, 2007; Jankauskiene and Jankauskaité, 2011). Questions arise on what kind of care one is entitled to, and what “good care” is. Should we conduct invasive medical procedures

Figure 1.3 Annual average growth in health expenditure and GDP per capita, in real terms, 2000–2010 (or nearest year)
on the very elderly? Which drugs are really needed and how much are we willing to pay for them? Whose decision is this to make? Discussions over which kinds of care can be removed from reimbursement packages are now the order of the day. And despite the aim of equitable distribution of costs and benefits in health systems, less privileged socio-economic groups continue to live less in perceived good health.

Over the past decades, discontent with the functioning of health systems has led to advanced welfare states pursuing a wide range of health system reforms, defined as purposeful changes to the structure of the health system (Roberts et al., 2004; Mills and Ranson, 2012). Due to growing concerns over financial sustainability, reforms have tended to focus on finances and organizational structures (Martineau and Buchan, 2000). And reflecting the global tendency of neoliberalization, policies have emphasized reliance on the private sector and market mechanisms (also within the public sector) as the ultimate solution for challenges facing health systems (Figueras, 2003). Evidence of the effects of such reforms is scarce due to poor monitoring and evaluation, while the number of variables makes causality difficult to determine. But in most cases evidence indicates that costs have not really been tamed, quality concerns have not been solved, the poor are not benefiting, and reforms have had unintended effects such as reduced equity (see Gwatkin, 2001; Whitehead et al., 2001; Stambolovic, 2003; Pollock, 2005; WHO, 2007; De Savigny and Adam, 2009; Mills and Ranson, 2012). In addition, reforms at the system level have usually only focused on one concern (funding, quality, access, etc.).

We argue that these reforms have generally not resulted in the hoped-for changes because they were not radical enough to change the health system’s underlying features: to the extent that structures were changed, this mainly involved market-conforming measures, while dominant culture (the way of thinking) has been addressed insufficiently (Essink, 2012). Underlying features include the supply-driven nature of the health system – which cannot be remedied by casting patients as consumers (knowledge asymmetry and the protoprofessionalism of patients mean that they cannot easily become critical consumers of healthcare). Casting health institutions as competing businesses is no solution either – lack of transparency on quality and price, and lack of choice in health providers and treatments mean there is often no genuine competition. The strategy of casting health insurers as “consumers” in the health system – often advocated by policy-makers as the next best route – is constrained by the profit-focused interests of health insurers. In the meantime, each stakeholder blames the others for the failure of cost containment.

Transformative experiments, usually more radical in their set-up, have also had limited success because the dominant structure and culture of the system yield inertia (Grin, 2004; Moret-Hartman et al., 2007), i.e. innovative practices cannot draw upon the incumbent regime and thus often suffer a lack of resources outside experimental settings, which inhibits scaling up (Essink, 2012: 101–122), as we will further explain in the next section.
Introduction

The previous discussion has aimed to shed light on some of the key issues confronting health systems and the attempts to address them. We have argued that both the problems themselves and many of the bottlenecks encountered in trying to resolve them have systemic roots. In transition studies, these issues represent “persistent” problems.

1.3 Central notions from transition theory and system innovation studies

The persistence of problems may be understood through the notion of “co-evolution,” inspired by evolutionary sociology and evolutionary economics (Perez, 1983; Callon, 1991; Nelson, 1994; Kemp et al., 2007). In transition research, co-evolution refers to, first, how individual societal subsystems (such as the health system) evolve in interaction with other societal subsystems (e.g. the food system). It also refers to the mutual shaping, as they evolve, of dominant structures and practices (Grin, 2006; Voß et al., 2006) in the dialectical sense of structuration theory (Giddens, 1984). Structures and practices co-evolve around, and are thus shaped by, the central issues of a particular historical period. If a novel issue later emerges, it is far from certain that these practices and structures are optimally suited for, or even capable of, dealing with them. In such cases, the issue will appear as a persistent problem.

A key concept in understanding both the persistence of problems and their resolution through a transition is the “multi-level perspective” (MLP), which studies transitions as the interaction of processes at three different scale levels: landscape developments (long-term, exogenous trends), a patchwork of regimes (dominant structure, culture and practice) and niche experiments (innovative practices) (see Figure 1.4). The multi-level perspective provides a descriptive ordering framework that also has explanatory value (Schot, 1998; Rip and Kemp, 1998; Geels, 2002; Van Driel and Schot, 2005; Smith et al., 2010). In a sense, it refers to wider insights from social theory (e.g. Giddens, 1984; Bourdieu, 1990) and history (e.g. Braudel, 1976) that changing practices, structural change and exogenous tendencies unfold parallel to each other and sometimes interact to produce non-incremental changes in practices and structures (Grin, 2008). Its central claim is that regime shifts occur through interlinkage and interaction among multiple developments on the three levels. More recently, scholars have found that transitions require:

- the creation of niches, locations that are protected from the influence of existing regimes (Hoogma, 2000; Raven, 2005).
- strategic action in the sense of creating linkages to overcome and, despite the existing regime and its path dependencies, connect dynamics at all three levels (Smith and Stirling, 2007; Schot and Geels, 2007; Roep et al., 2003).

Conversely, the MLP may also serve to explain the barriers encountered in experiments when these are not (sufficiently) linked to dynamics at the regime
and landscape levels. This was one of the key insights originally based on the MLP in one of its founding formulations (Rip and Kemp, 1998) – one which continues to inform empirical studies that relate flaws in experiments to features of the incumbent regime (Roep et al., 2003; Grin, 2004; Grin et al., 2004; Bos and Grin, 2008; Lauridsen and Jørgensen, 2010; Cohen, 2010). This latter insight also informs the book’s underlying hypothesis as well as the case studies in Part II, where we analyze how barriers encountered in experiments may be used to identify problematic system features and how these are reproduced within experiments. This will help us “diagnose” contemporary health systems and to identify some of their common problems.

MLP has inspired significant empirical and conceptual research on the dynamics of transition. This has led to the identification of a variety of ideal-typical transition trajectories (Geels and Schot, 2007). In parallel, another strand of transition literature based on complex adaptive systems theory has
identified similar trajectories (Rotmans and Loorbach, 2010). While it would be mistaken to use these for “blueprint planning” to realize these trajectories, they may help agents involved in transitions make sense of the situations in which they find themselves (Elzen et al., 2004; Grin, 2008). More prescriptive notions have been developed in transition studies to support the development and realization of transition strategies, including transition management, strategic niche management and dual track governance.

Although transitions can probably neither be controlled nor steered, they can be influenced in their direction and speed (Rotmans, 2005). “Transition management” addresses complex societal problems through the guiding vision of sustainable development and joint learning among multiple stakeholders, comprising a cyclical process of development at different levels and in different domains. A central instrument of transition management is the “transition arena”: an experimental setting at the niche level where interested actors develop new insights through the processes of social learning. This process is understood as an iterative process of four steps, comprising (1) joint definitions of problems, (2) shared visioning and joint action planning, (3) design and implementation of various transition experiments, and (4) monitoring and evaluating the transition process, and learning lessons.

In “strategic niche management” (SNM), radical socio-technical changes are understood as processes promoted within niches which gradually develop into wider changes including regime transformation. SNM, an offspring from the literature on constructive technology assessment (Rip and Schot, 1996), is both a research model and a governance approach; we discuss it in its latter capacity. Raven (2005: 51), on the basis of an excellent overview of the SNM literature, argues that:

> [P]revious SNM work has focused too much on internal niche dynamics, i.e. how voicing and shaping of expectations, networks dynamics and learning processes account for niche development … [with regimes assumed stable, and showed] too little interest in niche—regime interaction.

Raven therefore proposes to extend SNM with the multi-level perspective to better understand regime transformation. It is no longer assumed that an otherwise stable regime will change through processes of niche development, niche accumulation and so on; for this, niche experiments must be connected to regime instabilities and other regime dynamics, as well as to landscape trends. The processes that take place at the niche level are described as strategic niche management (Geels, 2005; Hoogma et al., 2002; Kemp et al., 1998). Strategic niche management may be used both as a research model and a policy tool (Raven, 2005). Here again, recent work has shown that attention to politics is crucial.

In these prescriptive notions, learning is crucial in promoting “reframing,” i.e. developing novel, shared perceptions of problems and innovative
directions for sustainable solutions (see e.g. Roep et al., 2003; Grin et al., 2004; Loeber, 2004; Raven, 2005). Such learning does not take place detached from practice, but is intertwined with actors’ actions and interactions (Schön, 1983; Grin and Van de Graaf, 1996; Broerse and Bunders, 2000; Loeber, 2004; Grin and Loeber, 2007). To develop this actor perspective, Grin (2010: 233) turns to the notion of “reflexive monitoring.”

In reflexive monitoring, agents consciously reflect on the intended and unintended consequences of their own actions. They do so in relation to the structural conditions in which they find themselves, taking into account the potential of change in structural context, both through their conduct and through exogenous trends. Reflexive monitoring therefore is what we consider the heart of governance efforts of Re-structuration.

Thus innovation becomes eventually consolidated in societal practices. In most cases this also assumes changes in underlying concepts, or second order learning (Loeber et al., 2007).

A more recent strand of work on transitions and system innovation, under the heading of “reflexive governance” (Grin et al., 2004; Voß et al., 2006; Hendriks and Grin, 2007; Avelino et al., forthcoming), seeks to further understand such politics.

Reflexive governance here refers to forms of governance in which the structural embedment of both governance practices and the practices being governed become the object of scrutiny. One key issue pertains to processes of “power,” which have only recently received serious attention in transition studies (Avelino and Rotmans, 2009; Grin, 2010). A key insight is that agents, in exercising power, draw upon structure. As transitions include structural transformation, transition dynamic and powering should be understood as essentially intertwined. In the worst case scenario, actors may successfully draw upon incumbent structure to resist a transition, or novel practices may experience lack of support from incumbent structures. The challenge for agents engaged in a transition then becomes to bring about a constructive, iterative interaction between the innovative practices they are engaged in and transforming structures. Hoffman (2013; Hoffman and Loeber, 2016) have developed a relational perspective on powering, depicting the work involved as creatively connecting practices to each other and their structural context.

Another key question of politics concerns the relation between transitions and deep socio-material structures. Transitions are seen as coherent changes of practices and the (discursive, institutional and material) structures in which they are embedded; or, in somewhat different words, a transition is the reorientation of the co-evolution of practices and their structural embedment. What counts as structure here is contingent – in the same sense as Giddens’ understanding of a system as the whole of (a set of) practices and the structural elements they draw upon, thus reproducing or transforming them. It is a
key debate within social science to what extent it is important to see deeper (especially material) structures as a key determinant of practices and the structural elements upon which they draw (Marsh, 2010).

In this volume, we focus on the more tangible influence of discourses, institutions and material infrastructures and objects. The way in which these structural elements of health systems have been shaped by underlying structures is largely left out of consideration, although trends at the “landscape” level, such as globalization or individualization, may be justifiably seen as changes in such structures. We believe, however, that the influence of deeper structures is mediated by these more intermediate structures of both the health system and “adjacent” systems (e.g. social security, food policy or welfare), and also that this works bidirectionally, i.e. that a transition in, for example, the health system may to some extent co-shape adjacent systems and thus the ways in which deeper structures affect society as well (see also Avelino et al., 2016).

1.4 Sustainable health systems

We propose the notion of sustainable healthcare as a second, more normative, sensitizing framework. Calls for equitable reform show that not only the financial sustainability of health systems but also other values are at stake (Gwatkin, 2001). Toebes (1999) has identified four values most often mentioned in international declarations on health: affordability, accessibility, acceptability and quality of healthcare. Essink et al. (2010) argue that balancing these core values in health system reform – with its one-sided focus on finances – is necessary to address problems resulting from this partial “tinkering.” Frenk (1992), Berman (1995) and Sowada (2003) have likewise argued that reforms should be based on a vision of the health sector as a whole, a process that entails trade-offs and the balancing of objectives.

A (long-term) vision or normative orientation toward change is considered a basic requirement in transition theory (Rotmans et al., 2001). A vision provides a clear direction for change and aligns the different actors. In transition theory, sustainable development is a long-term, multi-level and multi-actor process (Loorbach, 2007). According to Loorbach (2007: 23):

[T]he call for sustainable development from a transitions perspective is a plea to transform societal systems that struggle with complex and persistent problems structurally. Since regular and traditional solutions result in optimization of existing structures, fundamental and innovative approaches are needed. A link between transitions and sustainable development therefore speaks for itself.

Attempts to institutionalize sustainable development in other policy domains such as energy, the environment and agriculture have nevertheless revealed the difficulties of balancing conflicting values and interests. In practice,
furthering sustainable development – achieving a better balance between people, planet and profit – is a learning process that involves iterative cycles of actions for change. Sustainable development is thus an open-ended orientation toward change (Grin et al., 2010) that lends itself to deliberative, participatory governance (Grin, 2006). As a concept informing the management of transitions in health systems, we focus on the idea of “unbalanced” systems where core values need to be rethought and balanced in a guiding vision.

The concept of sustainable development has rarely featured in health system reform. Although pleas for balancing core values are found throughout the literature, Essink et al. (2010) found only one instance of health system reform explicitly guided by the concept of sustainability. Their study also traced the concept’s emergence to the advent of the “health field” approach coined by Lalonde (1974), which emphasized people’s responsibility for their own health, the environment’s impact on health and the importance of healthy communities. All this makes the step toward sustainability a logical one. Although there is as yet no evidence that sustainable development is a fruitful vision to guide health system reform, it is worth exploring further.

1.5 Central aims, research questions and outline of the book

This book examines the hypothesis that the current, complex problems facing our health systems are rooted in their core features. This transition studies perspective is to help us to (1) better understand the embedded features in the foundations of our health systems that underlie complex problems, and (2) find ways to innovate health systems to more sustainably address these problems. The following research questions are central:

- How did system innovations and transitions emerge in the health domain in the past, and how do the insights presented here shed light on the origin of persistent problems currently encountered?
- What visions of sustainable healthcare are, implicitly or explicitly, articulated in the contemporary innovations discussed in this book?
- What may we learn from the successes and, especially, failures of these contemporary innovations in the nature of these problems and the features in health systems on which the development of sustainable healthcare critically depends?
- What do the answers to these questions, as well as earlier insights from transition studies, suggest about strategies for remedying persistent problems through structural change in health systems?

Part I presents historical studies on health system changes from a system innovation and transition perspective. In Chapter 2, Eric Berkers begins with a discussion of contemporary changes in health systems and their persistent problems before turning to the Dutch case where a regime centered on
evidence, technology, cure and the hospital has come under increasing pressure since the 1970s. Challenges to affordability and the quality and acceptability of care are illustrated through developments in mental healthcare, gynecology, pharmaceutical care, and a range of legal and financial instruments to control the supply side of the health system. The Dutch case also shows how the dominant health regime has been in a constant process of reconfiguration, trying to meet pressures from the landscape as well as its own negative side-effects. In Chapter 3, Roel van Raak and Fjalar de Haan examine the historical roots of three main features of the modern Dutch health system: its emphasis on curative measures, professionalization and specialization, and its focus on the patient’s body and physical health. These foundational features have created a supply-dominated system in which patients are (or at least feel like) the objects of treatment.

Part II examines recent innovative practices in which innovations were implemented at the niche level of the health system. In Chapter 4, Tjerk Jan Schuitmaker and Erica ter Haar-van Twillert analyze the Dutch health system by focusing on its main problem-producing and reproducing features, such as standardization, protoprofessionalization, specialization and evidence-based medicine. These features, however, are precisely the strongholds of the current system, which bias certain solution pathways. The chapter focuses on two innovative practices that have aimed to reduce costs and increase the quality of care: one for patients with medically unexplained physical symptoms (MUPS), another for providing psychotherapy through the internet.

In Chapter 5, Lenneke Vaandrager and co-authors examine the reorientation of health promotion in the workplace. Traditionally, health and work are seen as functionally differentiated domains. To the extent that health is an issue in the work domain, it is a matter of occupational health services and prevention workers, while themes like employability, development and vitality, stemming from human resource management, are not included. Recent strategies, which emphasize the participation and responsibility of employees, have shifted their focus from individuals to organizations, from reducing costs associated with risk factors to investment in skills and empowerment, and from disease to health. This chapter analyzes practices that seek to bridge the boundary between occupational health and human resource management from the perspective of salutogenesis, whereby it is not the sources of disease that serve as a point of departure (as in the pathogenesis model) but those of health. The solutogenic model thus focuses on factors that support human health and well-being, rather than on factors that cause disease; it specifically addresses the relationship between health, stress and coping. Three case studies are used as an illustration. Salutogenesis may be seen as one interesting elaboration of sustainable healthcare. Unsurprisingly, like the innovations in other chapters, workplace health promotion also faces structurally embedded resistance and inertia.

In Chapter 6, Francisco Ródenas and Jorge Garcés present an innovative social and healthcare model – the so-called “Sustainable Socio-Health Model”
that responds to three problems commonly experienced by (especially Southern) European welfare states: the rise in demand for services, the increasing dependency of the growing aging population on others and the crisis of informal support. Achieving social sustainability entails the reformulation of regulatory, care, economic, administrative, cultural and normative frameworks so that society can respond to the needs of long-term care without compromising the welfare of future generations. The chapter describes how the new model for long-term care was implemented in a Spanish pilot project and discusses its achievements and shortcomings as a transition experiment.

In Chapter 7, Suzanne Van den Bosch and Jord Neuteboom assess the Dutch Transition Program in Long-term Care, initiated in 2006 by the Ministry of Health, Welfare and Sports and care sector organizations to change how long-term care is provided in the Netherlands. Focusing on transition management, the program involves innovative experiments centered on end users and a commitment to learning for the entire care sector. The authors describe and analyze the set-up of the program, its main instruments and initial findings.

In Chapter 8, Erica ter Haar-van Twillert and Suzanne Van den Bosch examine two projects in the Transition Program in Long-term Care in greater detail. The first, “ACT-Youth Rotterdam,” targets youths with complex social and psychiatric problems, which cannot be solved by existing healthcare institutions. The second, a pilot program on “video care for the elderly and chronically ill,” involves ten care institutes. The chapter compares these two projects – their approaches, their relationship with the broader Transition Program, the resistance and barriers they encountered and the strategies pursued to overcome them. This yields insight into the structural factors that tend to reproduce themselves in pilot projects, the relationship between healthcare provision and patient agency, and the difficulties of determining what constitutes adequate evidence as a basis for decision-making.

In Chapter 9, David Clements and Dirk Essink show that problems in the Canadian health system – rising costs, dramatic variations in the quantity and quality of services received by patients, the supply of healthcare professionals, and the realization that increasing supply does not guarantee better access – remain largely unaffected by recent experiments involving financial incentives and local collaborations. Many Canadians have thus concluded that the health system itself is unsustainable. Alongside the overview of persistent problems in Canadian healthcare and attempts to address them, the authors assess the government’s Executive Training for Research Application (EXTRA) program, which may be seen as a Transition Program “avant la lettre.” The EXTRA program aims to make the Canadian health system more sustainable by developing the competencies of selected health professionals to apply, contextualize and generate knowledge (or evidence) and to collaborate across healthcare professions, both through training and intervention projects. This,
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It is argued, will foster a culture of “evidence-informed decision-making” (EIDM) that will improve health system performance. Analyzing the experience of the EXTRA program in implementing the concept of IEDM, the authors derive lessons regarding the management of system innovation and vice versa, with a specific focus on whether and how to train and support change agents.

In Chapter 10, Janneke Elberse and co-authors focus on the Dutch health research system. Decision-making in health research is traditionally the domain of a small group of scientists while the role of consumers (i.e. patients) is restricted to being the objects of study and the ultimate beneficiaries. It appears that outcomes commonly measured to determine the effectiveness of new products do not always (fully) reflect the needs of patients. Like the health system in general, the health research system is supply-driven, biasing the kinds of knowledge it produces. Interdisciplinary concerns (such as co-morbidity) and less sexy low-tech issues (such as ingrown toenails) are rarely addressed. The chapter analyzes processes of change towards a more “needs-oriented health research system” by discussing several experiments regarding the involvement of patients in decision-making processes on health research from a multi-level perspective, discussing trends at the landscape level, niche experiments and resistance from the regime. The chapter also discusses systemic instruments that may be used to overcome barriers.

In Part III, Chapter 11 synthesizes the findings of Parts I and II, analyzing the theoretical and methodical lessons for transitions and system innovation, as well as the merits and limits of strategies pursued to date. It discusses how experiments may be set up more effectively, as well as how learning in and from practice can be better organized.

Notes

2 See e.g. Elzen et al. 2004; Geels 2005; the journal Environmental Innovation and Sustainability Transitions, and special issues of major international journals in various disciplines: Timmermans et al. (2014); Geels et al. (2008); Voß et al. (2009); Berkhout et al. (2009); Smith et al. (2010). Earlier volumes in this Routledge Sustainability Transitions series present an overview of theoretical achievements (Grin et al., 2010) as well as empirical findings in the domains of mobility (Geels et al., 2012), energy (Verbong and Loorbach, 2012) and food (Spaargaren et al., 2012).
6 Old-age dependency ratio: people aged above 65 compared to those aged 15 to 64.
7 “Old Age Dependency Ratios,” The Economist, May 9, 2009.
OECD stands for Organization for Economic Co-operation and Development. OECD has 34 member countries each of them may be characterized as a welfare state; most are European countries but Australia, Canada, Chile, Japan, Mexico, New Zealand and USA are also members.

Available at www.euro.who.int/__data/assets/pdf_file/0005/162959/Eurohealth_Vol-18_No-1_web.pdf.

Prices may be set on the basis of costs to develop and produce a drug (including R&D costs, developments that fail, etc.), on the basis of the added value of the drug in the treatment of patients, or on the basis of the estimation of what a society is willing to pay.
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