Transition Policies

Connecting System Dynamics, Governance and Instruments in an Application to Dutch Healthcare

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Transition Policies;

connecting system dynamics, governance and instruments
in an application to Dutch Healthcare

Transitiebeleid;

verbindingen tussen dynamiek, governance en instrumenten
in een toepassing op de Nederlandse zorg

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Summary

Transition Studies is an emerging, interdisciplinary field concerned with transitions: "radical transformation[s] towards a sustainable society as a response to a number of persistent problems confronting contemporary modern societies" (Grin et al. 2010). Within Transition Studies, Transition Management (TM) is one of the main lines of research on influencing these transitions towards sustainability. In TM, intervention is determined on the basis of the dynamic state of the societal system. TM addresses this dynamic state in two ways: through general principles and concrete case studies. Using a policy perspective, this thesis explores how specific dynamics states can be linked to specific strategies to more systematically translate general principles to specific cases. An argument, in the sense of Toulmin (1958:2003), is a form of 'practical logic'. A transition policy argument is defined in this thesis as: motivated courses of coordinated action by an actor (persons, (parts of) governments, other organisations or networks) within a given environment in an effort to influence the course (pace, direction and/or substance) of transitions in order to address 'persistent problems'.

Research framework

In developing a research framework to study the relationship between transition dynamics and Transition Management, we have to address that both transition dynamics and Transition Management are multi-level concepts. Within transition dynamics, the so-called 'Multi-Level Perspective' distinguishes between the following three levels:

Figure 0.1 Research framework
(numbers refer to chapters)

- On a meso-level, the **regime** is located: the incumbent structure, culture and practice of the societal system. This regime typically has (nearly) the same extensiveness as the system, so this level can also be called the 'system level'.
- On a macro-level, the 'socio-technical **landscape**' is located, which is 'beyond the direct influence of regime and niche actors' (Geels and Schot 2010, 23).
- On a micro-level, '**niches**' are located: these are on a lower level than the regime, and are the typical source of radical novelty in the system.

Furthermore, we distinguish levels within Transition Management:
- Transition Governance: This is a relative high-level perspective on managing transitions, including reflections at the level of transition dynamics. Some transition governance approaches take more of a bird's eye, multi-actor view, whilst

others are focused on a single actor that initiates a TM process in a multi-actor context.

- Transition instruments are a more operational approach to TM, dealing with project design, but also with methods within projects.

In the research framework for this thesis, we combined and grouped these levels. The results are seven relationships as depicted in figure 0-1:
- Within transition dynamics, from the landscape to the level of the system
- From the level of the system to the level of the niche (which we will reframe in chapter 3 to ' from the system level to subsystem level')
- From transition dynamics to Transition Governance
- Within Transition Governance, from transition politics to transition policies
- From Transition Governance to transition instruments
- From transition dynamics to transition instruments
- Within transition instruments, from projects to methods

Methodology

Each relationship in the framework has been studied by iteratively reflecting on relevant literature, identifying critical issues, and adapting concepts to provide analytical lenses to address these issues (see fig. 0.2). For each relationship an explorative case study in Dutch healthcare was conducted. Each case 'zooms in' on the previous and in this way a 'nested case' is developed at a meta-level. The method for information gathering is determined by the scale of each case: cases on long time scales are studied through literature, instrumental cases on short time scales through interviews and action research.
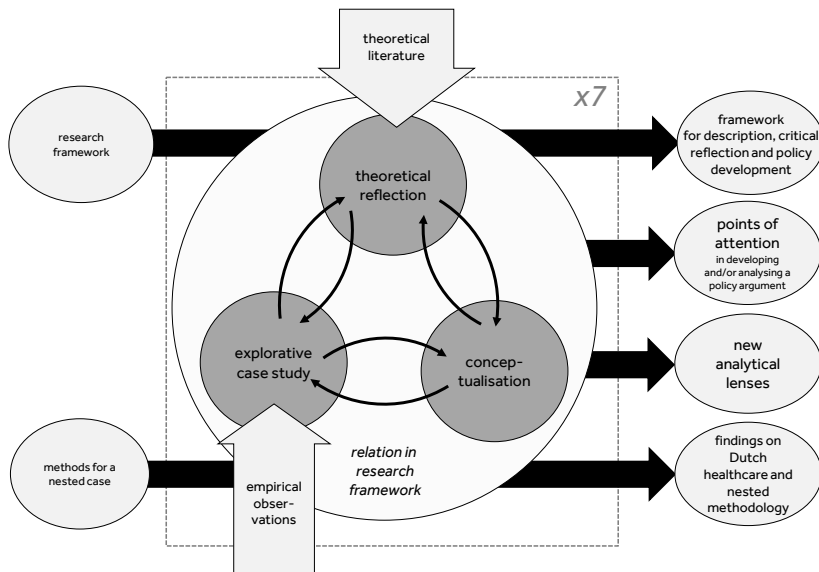
Figure 0.2 Research approach

Relationship 1: From the landscape to the system

Although the dynamics between the landscape and the system have been thoroughly addressed in literature, the demarcation between the landscape and the system is underdeveloped. In policy arguments, the demarcation of the problem and solution space is of particular import. Applying TM to policy problems rooted in many regimes leads to fundamental complications. A new method for analysing such multi-regime problems is proposed. This method involves mapping all significant regimes and their niches, followed by the constructing of a partially shared landscape. Such an overview allows the identification of cross-sector opportunities to mitigate the persistent problem (see figure 0.3). The method facilitates the design of strategies aimed at incrementally exploiting opportunities as they arise, in contrast to the more usual, vision and aim-driven application of Transition Management. The method has been applied to the issue of Particulate Matter pollution in the Netherlands in an action research case.
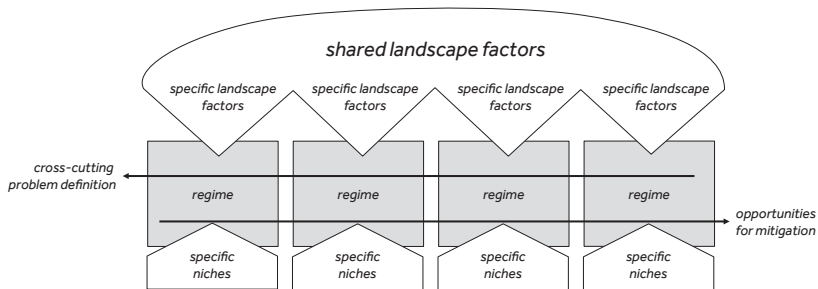
Figure 0.3 A multi-regime perspective on describing and managing persistent problems)

Relationship 2: From the system to subsystems

The interaction between 'regime' and 'niches' is attributed a pivotal role in transition studies. This niche-regime relationship is usually seen as part of the aforementioned Multi-Level Perspective (MLP). The MLP has been applied successfully to many different cases, however within Transition Studies, the MLP is also criticised for methodological weaknesses, among which are: underemphasizing of agency, underemphasizing consumer practice, arbitrary demarcation, and retrospectively 'picking the winner'. Much of these criticisms could be related to a lack of distinction between 'what is to be explained' and the explanation (explanans versus explanandum). Partly as a response to these weaknesses of the MLP, many adaptations and elaborations of the MLP have been developed, which build upon the original MLP.

These adaptations help forward-looking application of the MLP, which transition policy arguments typically are. This thesis has taken and further developed the adaptation of the MLP by De Haan (the so-called multi-pillar theory, 2010) for policy purposes. De Haan distinguishes between three typical patterns of change:
- The empowerment of niches, who gain power in relation to the regime
- Adaptation of the regime to the changing landscape and pressure from niches
- Reconstellation: a top-down intervention into the regime.

We elaborated this approach by developing a method for empirical applications and for describing the substance of 'constellations' (such as niches and the regime) in terms of structure, culture and practice. In this conceptualisation (see figure 0.4 right), structure and culture are both structuring elements in a continuum; structuring agents related to, but outside, the constellation through practices. These agents also shape the culture and structure through these practices. The practices act as an interface between structure and agency and can be positioned on the boundary of the constellation. These practices generate cultural legitimacy and material goods and services (see figure 0.4 right).
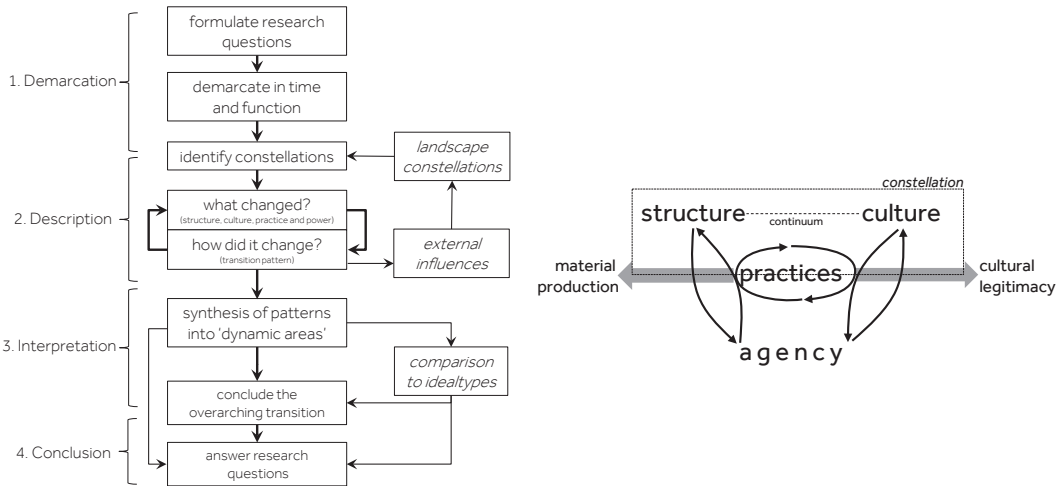
Figure 0.4 Method for empirical application framework of De Haan (left) in which the framework for describing structure, culture and practice of a constellation is incorporated (right).

This method has been applied to the historic case study of Dutch healthcare 1800-2000. This case study starts by describing the history of each constellation through their changes in structure, culture and practice using an empirical method based on the De Haan's multi-pillar framework (see figure 0-4 left). Next, a system-wide interpretation of dynamic areas is given:

- **Growth of many alternatives (1840 – 1875/1940):** In around 1840 the Netherlands entered into a new era. The economy picked up, creating income surpluses, thus allowing for niches to gain power. New religious and liberal attitudes limited poor care to the disabled and sick, medicalizing the hospital. From 1880 to 1920 large-scale industrialization and urbanization drove a new wave of changes. Many approaches in health care were initiated (such as community care through 'Kruiswerk') or gained power; all strengthening each other.
- **Empowerment of the physician as the new regime (1840 – 1900/1940):** the culture, structure, and practice of the physician became the focal point of the health system. Besides practising medicine, they advised and promoted health in many other domains. Their power was largely the result of a successful merger of the professions of the surgeon and the academic doctor.

- **Empowerment of the hospital, the specialist, and healthcare financing into a 'compound regime' (1930 - 1970)**: The focal point of healthcare shifted to the combination of the individually practicing specialist and the larger scale hospital. In a long process of co-evolution, the hospital (and its nurses) became subservient to the specialist's practice. In this period the system takes its dominant culture, structure, practice and power relationships. The state becomes heavily involved, financing arrangements become compulsory, and the focus shifts from prevention to curation, and from the ideal of a universally educated 'general doctor' to specialist healthcare.
- **'Depowerment' and regime conformation of niches (1925/1950 - 1970/1980):** Many approaches lose power to the regime, such as community based care, the aforementioned general practitioner, and public health. Approaches also went into an adaptation pattern and so conformed to the regime. For example, mental healthcare imitated the somatic hospital and specialist.

This new method allows more transparent demarcation, classification, and interpretation. Moreover, it provides a different perspective of a transition. In contrast to conventional MLP describing a single transition path, it reveals a more complicated 'spaghetti' of intertwined developments from a bird's eye view. Change at the system level features major twists and turns (for example the transition shifting from prevention and universal medical knowledge towards curing and specialisation). Disadvantages of this bird's eye view are that it only scratches the surface of history, it does not address criticism on limited attention for agency, and it is reliant on secondary literature. To address these points, the method can be used to identify key events and developments for in-depth study; for this case we identified six such events.

This bird's eye view of complex interacting alternatives might be more suitable for policymakers to develop policy, and for others to position themselves in a transition. Points of attention for developing and/or analysing policy arguments are: (1) the transition policy argument should preferably be based on a broad analysis of the dynamic state of the system which the policy aims to influence as part of a 'given environment' of transition policy; and (2) if the policy aim is a broad, public interest, a broad strategy would be consistent which such aim (and not a single path or niche).

Relationship 3: From transition dynamics to transition governance

The governance of transitions is an emerging (sub)field within Transition Studies. Approaches within this subfield differ considerably in many aspects, such as: (1) the locus of governance in the system, concentrated in a general political system or dispersed through the whole of society; (2) the level of coordination deemed possible; and (3) the material or idealistic focus. This diversity implies that a governance claim in a transition policy argument cannot simply be founded by referring to Transition Governance, or Transition Studies in general.

Most relationships between governance and dynamics are addressed in Transition Governance literature. There is, however, a paradox between the resistive role of the regime in transition dynamics and the various proposed mechanisms through which Transition Governance can influence adaptation by the regime. We propose a new mechanism, hypothesised as follows:

In governance processes that normally conform and reinforce the regime, a window of opportunity for an adaptation pattern occurs only if a persistent phenomenon is perceived from the paradigm of that regime as an unacceptable problem to its own standards, yet cannot be solved by the solution space available from within that paradigm.

We explore this hypothesis by examining a case study into Dutch water management: the regional 'Amstelland vision' process. The case describes how a team of civil servants and consultants devised a revolutionary vision on water management which conflicted with the prevailing regime. The vision process obtained formal status, and was follow-up in local plans. We also reflect on the initiation of the transition programme in the long-term care from the perspective of our hypothesis.

These case studies confirm some mechanisms in the current literature, such as the role for entrepreneurial activity and 'loosely coupled' processes. The new hypothesis can additionally explain the support for this transition process from the regime governance process and the incorporation of ideas from the transition process into the regime governance process.

Relationship 4: from transition politics to transition policies

Transition Management typically focuses on the actions of a single, TM initiating actor in a multi-actor context. This is consistent with a policy perspective, but we also conclude that the connection between initiated TM activities (categorised into strategic, tactic and operational 'layers') and already on-going transition governance processes. The structure, culture, practice triplet, which we also used for describing transition dynamics, is adapted for this purpose (see table 0.1):

- Strategic TM encompasses "processes of vision development, strategic discussions, long-term goal formulation, collective goal and norm setting and long-term anticipation; in essence, all activities and developments that relate in the first place to the 'culture' of a societal system" (Loorbach 2007a, 104). We propose to consider strategic TM part of a wider context of on-going processes of 'Cultural Transition Governance'
- Tactical TM encompasses "steering activities that are interest driven and relate to the dominant structure or regime of a societal system." (ibid, p. 107). We propose to consider tactical TM to be part of on-going 'Structural Transition Governance'
- Operational TM encompasses "all short term actions and experiments of individuals and organizations that have an innovative potential. At this level the focus

is primarily on practices."(ibid, p. 109). We propose to consider practical TM to be part of on-going 'Practice-oriented Transition Governance'

We thus reconceptualise the hierarchical Transition Management layers into three (interacting) streams of Transition Governance (see table 0.1). Subsequently we develop a method to empirically study these three categories of Transition Governance. We combine a grounded-theory, bottom-up approach with a semi-quantitative top-down coding approach for this purpose. This method is applied to trade journal articles on Dutch long-term care for the period 2006-2011. We found that in this case, Transition Governance are focused on incrementally adjusting and reframing short-term structural changes to better align a long-term transition perspective or provide space for a specific niche (for example sustaining an experimental living arrangement for patients under the new financing laws). It should be noted the results are limited in their validity as they are confined to a single news source. Generally, we conceptualise the relationship between a specific policy and on-going governance processes to be aimed at (1) reinforcing, (2) complementing, and/or (3) confronting on-going processes (with the aim to redirect them).

TM activity clusters (segments of the cycle)		TM layer		Transition Governance layer		aspect of societal system
Problem structuring, arena, envisioning		Strategic Transition Management		Cultural Transition Governance		the culture of a societal system
Coalitions and agendas	...are instruments used in...	Tactical Transition Management	....is a specific instance of...	Structural Transition Governance	...is a process addressing regime shift through changing...	the structure of a societal system
Experiments and mobilising networks		Operational Transition Management		Practical Transition Governance		the practices in a societal system
Monitoring and evaluation		Reflexive Transition Management		(Reflexive Transition Governance)		not applicable

Table 0.1 Relating TM activities, TM layer, governance aspects and aspects of societal systems

Relationship 5: From Transition Governance (policy) to transition projects

In the TM literature, a general transition policy and its individual activities are connected to each other through the 'TM-cycle', which could be seen as a specific ordering of the layers of TM: vision development, agenda-setting, experimenting (and mobilising) and reflecting. We argue that the TM-cycle does not describe the sequence of processes or activities undertaken, rather it describes the cognitive ordering of the insights resulting from these activities.

We conceptualise the order of activities by assuming activities run in parallel and within the context of the wider, on-going Transition Governance dynamics. From this perspective, dealing with interfaces becomes even more important in TM. TM at the intersection of instruments and a general policy becomes about: (1) initiating, facilitating, and directing 'instruments'; (2) managing the interfaces between these initiated streams of activities (stimulating cross-pollination of resources and ideas); and (3) managing the interface between self-initiated activities and on-going Transition Governance pro-

cesses. The different tracks in a transition policy (such as a programme), become now loosely coupled (rather than of tightly coupled) – primarily oriented towards their own challenges and environment and only secondarily interacting with other tracks in the programme.

We further describe how such a reconceptualisation successfully supported the design of a large scale transition programme in long-term care, confirming the usefulness of this new perspective in terns of how instruments relate to each other in a Dutch transition policy programme ('Transition Programme on Long-Term Care'). From this case, we conclude from this case that activities in practice and design can run in parallel, and that the framework provides overview in such situations. Nevertheless, the tactical track (and its interconnections) proved challenging and the development of a transition agenda instrument might assist in overcoming these challenges.

Relationship 6: From system dynamics to instruments: adjusting design characteristics

Transition instruments are the envisaged actions in transition policy arguments. They can be process or analytical instruments and they are specifically designed, non-conventional instruments of network governance. These type of instruments are complemented by regular policy instruments. Each transition instrument is different, but can be described by certain shared 'design parameters', which can be tuned to specific situations. These are: (1) who participates, (2) openness of the process, (3) magnitude of efforts, (4) authority, (5) level of commitment, (6) diversity, and (7) destructive or constructive orientation.

instrument parameter	pattern		
	empowerment	adaptation	reconstellation
who	mostly niches	mostly regime	mostly outsiders
openess	low to medium	medium to high	low (elite intervention) or high (societal movement)
authority	low	high	high
(destructive)	(low or high)	(low to medium)	(low or high)

instrument parameter	phase			
	predevelopment	take-off	acceleration	stablisation
openess	low	low / medium	medium / high	high
magnitude	small	medium to large	medium to large	medium to large
commitment	low	medium	medium	high
authority	low	low	medium	medium
diversity	very high	high	medium	low

Table 0.2 instrument design – phase/pattern framework

On the relationship between the design of an instrument and the phase of a transition, some theory is already available in the literature. Little is known on the relationship between pattern and instrument, however some inferences can be made. We construct a framework presented in table 0.2.

We tested the framework in an action research case, namely the transition arena for chronic care. The framework was presented to the transition team as narratives that illustrated how for specific patterns the arena might be designed. This aided the team and shaped the 'arena'. However, there was considerable ambiguity in the area, and within the team, regarding the pattern for which to aim. What resulted was a shift in emphasis on empowerment of niches towards the adaptation of the regime. Several explanations can be offered, among which the rhetorical value of the 'empowerment' narrative.

Relationship 7: From projects to methods: role conflict (mitigation)

Within instruments, the research framework distinguishes two levels of actions: that of the project implementing the instrument and that of the methods within the project. In a case study on a 'transition arena' for housing and construction in Flanders, we found role conflicts within the TM team, spilling over into the larger group. We critically reflect on TM's apparent interpretation of roles as a division of tasks on the base of skills of team members. In other literature, roles are much more encompassing 'expected behavioural patterns', which are often driven by an underlying value system. We found that conflicts particularly occur between two groups: on one hand advocacy, creative and interpersonal roles, and on the other, knowledge and authority roles. Role conflicts in TM could be mitigated by: (1) awareness and dialogue of these potential conflicts; (2) separating roles by assigning different persons to different roles and allow them to play these different roles (also towards external participants); (3) assigning different organizations to different roles in the process; and (4) not incorporating more roles than necessary in a TM process.

Synthesis and conclusion

Our research focus was on enhancing the embedment of Transition Management in theory on transition dynamics. However it also became necessary to adapt transition dynamics theory for the use in policy arguments. With regard to our findings that directly deal with the relationship between system dynamics and Transition Management, we can group these in four 'red threads' of recurring aspects on each level:

- **Demarcation (of the dynamics):** in TM demarcation is not merely an activity at system level, but also involves the politics of demarcation and many demarcational choices on lower levels.
- **Phase**: we found that phase is not only relevant for the dynamics of the system as a whole, but that subsystems may experience different dynamics. Moreover, those involved in Transition Governance might differ in their perception of the phase the system is in, and there might be struggles about the need to accelerate

the transition into the next phase, which may or may not also be an aim of the policy at hand.

- **Pattern (& underlying conditions):** patterns vary considerably within the system under study. We observed that transitions governance can be focused on different patterns, including 'mainstream' or 'regime' governance becoming susceptible for adaptation patterns. At the policy, programme and project level, choices can be made (and debated) about which pattern is to be stimulated (or exploited) and how programmes and instruments should be designed for specific patterns.
- **Structure, culture, practice (& power):** although arguably not a dynamic characteristic, we did find that through this triplet (complemented with power as characteristic) we could consistently tie changes at the system level, to the type of Transition Governance and specific TM activities.

How to apply these findings, depends on the purpose of the application. Following a reflection on, amongst others, the science-policy interface, we describe three typical applications: (1) describing policy, (2) critically assessing policy, and (3) developing policy. We explore these three options further in a preliminary application to Dutch Healthcare. We indicatively conclude that present Dutch healthcare policy is not consistent in translating its aims to instruments and is largely ignorant of on-going transition and governance dynamics.

Discussion and recommendation for further research

The nested case methodology provides a way to study complex cases, even though some limitations in case selection were noted. We critically reflected on the paradox of a systematic framework for a category of policy problems that, in literature is considered particularly difficult to analytically grasp. We argue that the systematic framework can be applied to such policy problems because: (1) persistent problems are typically based in a regime, which is a source of resistance but also provides analytical focus; (2) the framework allows for adaptation and/or incremental steps; (3) a non-systematic approach is not an alternative; (4) the framework allows for participatory, co-production of policies. Lastly we address issues of simplification of this framework in policy practice, and transition concepts in general.

After concluding on the scientific value of allowing systematic description and the societal value of providing more transparency and a better approach to transition policy developmen, we conclude the thesis with recommendations for research. In addition to a number of specific recommendations, the main recommendations are to develop the framework further by linking it to the process of policy development and applying the framework to a diversity of cases.

1. Approach and framework

This chapter will introduce the research topic of the thesis: the relation between the dynamic state of a 'system in transition' and the steering of these transitions through Transition Management. We will, after an introduction of Transition Studies and Transition Management, discuss how this relation is addressed in present literature (§1.2). In §1.3 we will formulate our research question as an enquiry into transition 'policy arguments'. Subsequently we develop a framework to study these policy arguments in transitions (§1.4) and develop a methodology to apply this framework and introduce the 'nested' case in Dutch healthcare (§1.5).

1.1 Introduction

Transition Management was introduced in a study for the 4th Dutch National Environmental Policy Plan (Rotmans et al. 2000). Transition Management is presented in this report as "a new management concept that assumes complexity and uncertainty, and is sometimes also known as co-evolutionary management with the catchphrase: adjust, adapt, and influence" (Rotmans 2005). TM's defining characteristics can be summarised from Loorbach's ten starting points for complexity governance and eight starting points specific for transitions towards sustainability (Loorbach 2007a; Loorbach, Frantzeskaki, et al. 2009) as focusing on:

- long-term changes towards shared collective, sustainability goals, that are internally defined within participatory processes (instead of a priori);
- in the context of a multi-level, multi-domain, system in a highly uncertain and complex environment;
- using this complexity as a lever for change by joining bottom-up and top-down forces;
- by selectively involving frontrunner actors;
- that engage in a learning-by-doing approach in which initially many different (radical) options are explored on a small scale; and most relevant to the topic of this thesis:
- management (or steering) is, and needs to be, informed by the dynamics of the larger system. The conditions of the societal system determine if intervention is feasible and the interventions need to be shaped on the basis of the dynamic state of the system.

Transition Management is part of the field of 'Transition Studies', which is concerned with "radical transformation[s] towards a sustainable society as a response to a number of persistent problems confronting contemporary modern societies" (Grin et al. 2010, p.1). Transition Studies as a field de facto studies a limited set of such transformations by various disciplinary and multi-disciplinary methods. For example, the research on economic transitions (such as in the post-communist era) or political revolution is not – or barely – connected to Transition Studies. There is no authoritative delineation of the object of study (or methodology) of Transition Studies. Publications and the theories therein seem to be more linked by a 'family resemblance' (in the sense of Wittgenstein 1953) or a research community than by a simple set of demarcation criteria. In the terms of Kuhn (1970) we might describe it as a pre-paradigmatic (or even non-paradigmatic) field, in which there is no consensus on what is studied and how it is studied, and thus a field without agreed upon standards in methodology, terminology, research strategies, etc.

Markard, Raven et al. (2012) use the term 'emerging field' and identify four prominent frameworks within Transition Studies: (1) the Multi-Level Perspective (MLP), (2) Transition Management (TM), (3) Strategic Niche Management (SNM), and (4) Technological Innovation Systems (TIS). These four frameworks might be the most pro-

minent frameworks, but such a characterisation of the field does not fully address the richness and diversity of ideas, cases, concepts and frameworks in Transition Studies. For example, the MLP has been pivotal as a framework to describe transitions, but other frameworks to describe transitions (and model their dynamics) independently from the MLP exist, such as the multi-phase concept (Rotmans et al. 2001; Rotmans and Loorbach 2010a, 2009), derived from complexity science and non-sociotechnical transitions). Moreover, many frameworks incorporate ideas from the Multilevel Perspective, but are foremost frameworks in their own right (such as the multi-pillar theory of de Haan and Rotmans 2011; De Haan 2010). With regard to management theories, Transition Management and Strategic Niche Management are early, prominent lines of thought in Transition Studies about instrumentalising descriptive models. But governance and political processes around transitions have been studied from perspectives that might take TM-processes as object of research, but use their own frameworks (more grounded in the political and social sciences, e.g. Kern 2012; Paredis 2013).

I would propose to reinterpret the four main frameworks identified by Markard et al. to be four frameworks archetypical of broader categories. If this is the case, a possible ordering of streams of thought within Transition Studies could be:

- Regime shift dynamics (to explain transitions in functional systems): such as the MLP and other micro-meso-macro dynamics models, but also the multiphase model.
- Transition steering (to understand influencing these systems in transitions): among which Transition Management and Strategic Niche Management, but also including broader, social science approaches, which could be grouped under the emerging subfield of 'Transition Governance'.
- Technological Innovation Systems: which includes both descriptive concepts (such as the dynamic models of function interaction) and prescriptive concepts in TIS (such as strategies to address and interlink the different functions of the Innovation System).

Our research interest is in how a specific theory, namely Transition Management, from the group of governance theories is related to the theories of regime shift dynamics.

Regime shift dynamics

Most theories in Transition Studies on high-level dynamics of (socio-)technological, functional, geographical and/or societal systems, share the concept of 'regime' (Rip 1995; see also Kemp et al. 1994), usually as a source of (initial) stability, even if the conceptualisations of a regime can be quite different (see chapters 2 and 3). One important theory of regime shift is the Multi-Level Perspective (MLP). The MLP has extended the level of the regime, into a multi-scale perspective of technological change (Rip and Kemp 1998). These scales can be described as (Geels and Schot 2010):

- **On the meso-level we find the regime:** "the rule set or grammar embedded in a complex of engineering practices, production process technologies, product characteristics, skills and procedures, ways of handling relevant artefacts and persons, ways of defining problems, all of them embedded in institutions and

infrastructures" (Rip and Kemp 1998). 'Rules' must be interpreted thus in the broadest sense, including cognitive, regulatory and normative aspects (Geels 2004).

- **On the macro-level we find the 'socio-technical landscape':** this exists on a higher level than the regime, is 'beyond the direct influence of regime and niche actors' (Geels and Schot 2010, 23) and consists of both the actual, geographical landscape and, as a metaphor, the cultural context of technologies. In applications of the MLP, often only the influences of an implicit macro-level are explicated, similar to 'exogenous' inputs or forces more common in analytical approaches to the dynamics of change (we will elaborate on this in chapter 2).

- **On the micro-level we find 'niches':** these are on a lower level than the meso, and are outside (or on the fringe) of the regime. Niches are the typical source of radical novelty in the system. Similar to ecological niches, the selection environment in niches is different and thus provides 'incubation rooms' to these novelties. Niches can be market niches (which occur spontaneously) or created artificial 'policy niches' to deliberately provide such incubation rooms. It should be noted the term 'micro' is relative to the regime-level and usually on a more aggregated level than typical use of the 'micro-'prefix (i.e. the level of individual transactions or interactions). Also, there is considerable variation if the niche refers to phenomena that are smaller than the scale of the regime, but within the same order magnitude, or the niche level is situated several orders of magnitude below the meso-level (for example Hoogma et al. 2002 on SNM and transport consider niches as both 'public transport' and small experimentations with new vehicles). Rotmans, De Haan (2011) distinguish between these by defining an intermediate niche-regime level.

Besides scales, the Multi-Level Perspective also merges concepts of technology: (1) technology as tangible, identifiable configurations that work, and (2) technology as seamless (socially constructed) webs. Rip and Kemp (1998) explicitly and deliberately follow different paradigms on different levels: with micro-level artefacts as tangible arrangements (in contrast to artefacts as social/historical forces), whereas on the macro-level Rip and Kemp chose a more societal perspective of socio-technical landscapes (instead of the 'Mumfordian Megamachine'). On the meso-level, the regime is offered as a 'merger' of the two paradigms, more specifically "technical systems" and "sectorial structures and strategic games". This combination of paradigms has two profound impacts on the MLP central to Transition Studies: (1) the levels are of a different theoretical nature; (2) the nature of the regime is ambiguous with some scholars tending towards 'rules' (or institutions) and other including actors (Rotmans and Loorbach 2010b).

Although by itself the MLP does not have a time dimension (Rip and Kemp 1998 suggest the time dimension is perpendicular to the MLP), from Geels (2002) onwards, the MLP has evolved into models of the dynamics of a transition: signals from the macro-level trigger niche-innovations, which eventually 'open up' the socio-technical regime which, also under macro-influences, restructures and may eventually slightly change the landscape. Geels and Schot, in further advancements, allow for different patterns of change,

especially with regard to different influences from the macro-level (Geels and Schot 2005) and the regime takes over the more active role in the transition of the niche (see chapter 4). 'MLP' can thus refer to only an ordering in three levels or a more elaborate quasi-dynamic model. 'Quasi' because owing to the static nature of the MLP, the MLP provides, at best, a series of 'snap-shots' of a system in transition.

In both forms, the MLP is not without criticism, as the elegance of three loosely defined levels, combining theories of different natures appears to limit rigour and resolution of description. For example, Rotmans and Loorbach (2010a, 133) note: "still weakly developed aspects of the multi-level concept are: the 'repository' character of the macro-level, containing too many incomparable and unlike components. (…) The main challenge lies in answering the question whether three scale levels form an adequate ordering for the complex multiple-scale interference of transitions. It becomes increasingly obvious that much of the dynamics between niches and regimes occurs in between the micro- and meso-level." We will further discuss these criticisms in chapter 3.

Independently from the MLP, Rotmans (2000), has proposed such transition dynamics to happen in a 'S-curve' fashion with an increase pace of change after a relatively long stable period and the subsequent stabilisation of the new regime, leading to four phases (Rotmans et al. 2001, 17):

- "**A predevelopment phase** of dynamic equilibrium where the status quo does not visibly change.
- **A take-off phase** where the process of change gets under way because the state of the system begins to shift.
- **An acceleration phase** where visible structural changes take place through an accumulation of socio-cultural, economic, ecological and institutional changes that react to each other. During the acceleration phase, there are collective learning processes, diffusion, and embedding processes.
- **A stabilization phase** where the speed of social change decreases and a new dynamic equilibrium is reached."

These theories, together with theories from different fields, merged to form new concepts. For example, De Haan (De Haan 2010; de Haan and Rotmans 2011) has developed a formal, dynamic model of change. The most striking features are the distinction between three different patterns of change driving transitions, leading to three typical paths of change, in which the macro»micro»meso»(macro) dominant sequence as outlined above is no longer a priori given. The MLP has thus evolved beyond a 'sorting heuristic' for historic observations, merging with other theories into new models of sequences of change (and even causality) on different levels. These models differ greatly in their approaches, and usually they are not models in the sense of mathematical or algorithmic simulations. We will give an overview of such models in chapter 3.

Transition Management as distinct approach within Transition Governance

Transition Management entails three different perspectives (see figure 1-1)[1]. The first

is a more philosophical view on the world, featuring reflections on the network society and interpreting sustainability and collective problem solving from such a perspective. Second, some Transition Management publications empirically study (or critically[2] reflect) how actors not only aim to steer transitions by explicitly using TM, but also retrospectively reflecting on processes that have similarities to TM, see for example Van der Brugge (2009) or Brown et al. (2013). We will give an overview of literature in chapter 4. These aspects of TM are very similar to other reflective and descriptive publications in Transition Governance and are interwoven with these, although they are built more on complexity science. However, Transition Management is setting itself apart from most other approaches within Transition Governance by the third perspective: the instrumental component[3], which places the emphasis in applied science firmly on applied. This is not only demonstrated by the content of the theory, but especially by the action research methods through which it is developed, where researchers test interventions in practice (learning-by-doing) to further develop and refine hypotheses, models, and assumptions (Loorbach 2007a).

Closely related to the prescriptive nature, Transition Management is problem-driven by nature and features a prominent role of the 'persistent problem'. Persistent problems are 'deeply rooted' in societal systems, thus requiring a transition of such a system to solve such a problem (we elaborate on this in chapter 2). This problem-driven nature allows for using a policy analytical perspective (see §1.3), even though we draw some critical conclusions on how TM deals with problem demarcation (see chapter 2).
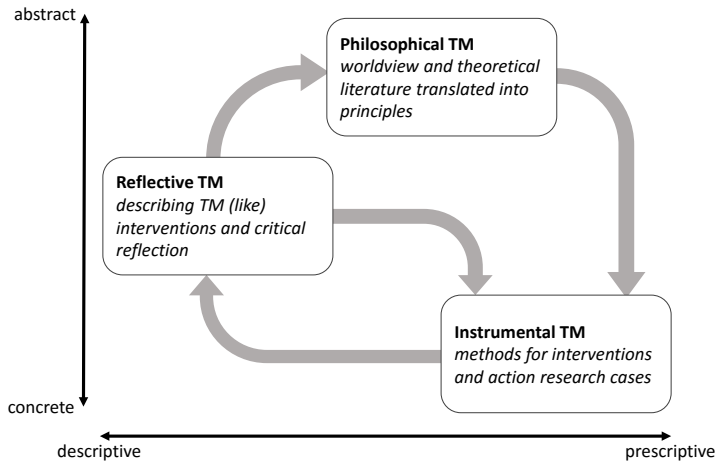
figure 1.1 the three components of Transition Management theory

Transition Management has a distinctive position within Transition Studies, but can also be positioned in different fields, amongst which the broad field denoted by public administration, policy science, or governance, as TM is an instrumental, prescriptive theory on how to solve collective problems involving collective action. More specifically Transition Management can be seen as part of 'networked governance' (Huppé et al. 2012) (see also chapter 6). Positioned in such fields it is not a typical theory either, as TM was specifically developed to counter a perceived shortcoming in governance

theories to address complex, large-scale societal systems (Rotmans et al. 2005). One striking feature in comparison to many other governance theories is the combination of a focus on content (or substance) beyond analysing discourses and a focus on the process (such as participatory, process and network theories). TM also claims to be able to adequately address these complex problems, which can be juxtaposed to prevailing paradigms on limits to solving such problems going back to the 1970s work on Strategic Planning (Rittel and Webber 1973; Simon 1973). From these paradigms, 'wicked' or 'ill-structured' issues can never be addressed in a complete or neutral way for a number of reasons, among which the impossibility to hit the 'moving targets' of ever-changing, competing problem definitions. After 'the argumentative turn' in policy analysis (Fischer and Forester 1993; Fischer and Gottweis 2012) one could even question if any collective (public) problem can ever be addressed in a neutral or comprehensive way. The purpose of this thesis is to study the relation between Transition Management and theories of transition dynamics, not to question TM as such, but given the crucial relevance of the planning debate to this thesis' framework, this topic will be reflected upon in chapter 8. We will conclude in chapter 2 that at least for some policy problems related to transitions, a comprehensive approach might be indeed impossible. The relation between studying substance and process will also be discussed in the introduction of a policy argument in §1.3.

Interrelation of theory groups

The three theory groups (regime shift dynamics, Transition Governance and TIS) represent three subfields with each their own methods and strengths. Yet I would argue the regime shift dynamic models and other theories hold a special position within Transition Studies. SNM (Kemp et al. 1998; Raven 2004; Hoogma et al. 2002) explicitly uses the MLP as a basis, as described in the founding paper for both approaches (Rip and Kemp 1998). TM uses a variety of dynamic theories, among which elements of the MLP, but also the multi-phase (Rotmans et al. 2001; Rotmans 2005) and the multi-pillar model (De Haan 2010), as well as insights taken directly from complexity science. TM and SNM thus depend[4] on regime shift dynamics, however theories from governance (and TIS) are not a prerequisite for regime shift dynamics theories. TIS (Hekkert et al. 2007) uses insights from the regime dynamics model, but has a strong pedigree in (national) innovation systems literature. As it is quite independent from the two other theory groups, TIS is largely outside of the scope of this thesis, as it does not inform on the transition dynamics – TM relationship. SNM is also not directly related to the research interest of this thesis, but at some points SNM literature addresses issues highly similar to relevant issues in TM. Such points we will discuss in this thesis.

From the rough ordering of the field of Transition Studies into three groups, we can better position Transition Management, and understand our research interest as how theories on regime shift dynamics affect Transition Management.

1.2 Transition Management's position to regime shifts dynamics

Early applications of Transition Management modelled the transition dynamics with the SCENE-model of ecological, economic, and social stocks and flows (Grosskurth and Rotmans 2005), for example in the TM process for Parkstad Limburg (ICIS 2002) or the province of North-Brabant (Telos 2002). This model seems no longer current, with no published applications for almost a decade (last known application in Henneman et al. 2006). TM appears to have taken the regime shift dynamics as its descriptive, system perspective (together with general systems and complexity science). This integration between description of the wider system and prescription of TM has become seamless. For example the niche-regime interaction patterns (under landscape influence) are pivotal elements in TM.

Rotmans and Loorbach (2009) have described the relationship between insights in complex, dynamic system change (among which transition dynamics) and Transition Management in eight principal rules: (1) creating space for niches, (2) focus on frontrunners, (3) guided variation and selection, (4) radical change in incremental steps, (5) empowering niches, (6) learning by doing and doing by learning, (7) multi-level and multi-domain, and (8) anticipation and adaptation. They connect these principles to specific TM instruments.

Most regime shift dynamics models, contain some notion on different types of dynamic states, either over time in the same case or between cases. For longitudinal differences within transitions, we already mentioned the multi-phase model. Geels and Schot, in listing the five defining characteristics of transitions, mention that "radical innovations may be sudden and lead to creative destruction, but they can also be slow or proceed in a stepwise fashion," (Geels and Schot 2010, 11–12) and that "breakthroughs may be relatively fast (e.g. 10 years), the preceding innovation journeys (…) usually take much longer" (ibid). The notion of different dynamics between transitions can be found explicitly in those concepts distinguishing between pathways. Geels and Schot (2010, 54) distinguish five pathways of change. De Haan distinguishes between three patterns of change and three associated ideal type paths of a transition (De Haan 2010; de Haan and Rotmans 2011).

1.2.1 TM's ambition on steering on the system state

For Transition Management this notion of different possible dynamic states of systems in transition and thus basing strategies and actions upon these states is essential:

> "The status of the system determines the way it is managed. The dynamics of the system create feasible and non-feasible means for management: This

implies that content and process are inseparable. Insight into how the system works is an essential precondition for effective management"

<div align="right">(Rotmans 2005)</div>

"Analytical lenses such as the multistage, multilevel (Rotmans et al. 2001), and multi-pattern concepts (de Haan and Rotmans 2008)[5] provide us with opportunities for identifying patterns and mechanisms of transitional change. Once we have identified transitional patterns and mechanisms, we can determine process steps and instruments to influence these patterns and mechanisms."

<div align="right">(Rotmans and Loorbach 2009)</div>

Loorbach (2010) suggests that not only those applying TM, but also actors in general implicitly or explicitly adapt their strategies and actions to the system dynamics of the transition. This would suggest that establishing a relationship between system transition dynamics and Transition Management is not limited to the prescriptive component, but also applies to the more descriptive component of Transition Management:

"An understanding of these patterns and mechanisms [that drive change in societal systems] provides greater insight into the dynamics of a complex, adaptive societal system, which offers a basis for improved insight into the feasibility of directing and influencing it and vice versa. The governance- or network-processes co-evolve with these broader societal system dynamics. (…) there is a relationship between the nature of a 'system', the specific patterns and dynamics, and the way that actors influence and react to these. Transition Management is therefore analytically based on the concept of "transitions" as multilevel, multiphase processes of structural change in societal systems."

<div align="right">(Loorbach 2010)</div>

The ambitions of Transition Management are thus clear. We can take stock to which extent the prescriptive component of TM indeed addresses the dynamic state of the system in two aspects: the aspect of principles (the eight principal rules) and the aspect of systemic instruments (Rotmans and Loorbach 2009).

1.2.2 TM rules and dynamic states

Rotmans and Loorbach's eight rules are rather abstract and generic, the principles apparently apply regardless of the system state, although they do suggest new principles are needed for different phases. This (near) universality is their strength, but also necessitates a high level of abstraction and is thus lacking in information on how to specifically adapt to specific system states or patterns. The exception to this is the multi-phase model, for which different strategies have been inferred in general terms (Rotmans and Loorbach 2001; Loorbach 2007a). Different steering strategies in different phases of transitions have also been empirically studied for water management in Melbourne (Brown et al. 2013).

These principles are often used in TM literature followed by a leapfrog to attention for

the unique, context-specific adaptation of 'rules'. For example, Rotmans and Loorbach (2009) note:

> "we have formulated rules for managing societal change, but we realize that once we apply these rules in a process context, they need to be adjusted because the conditions and dynamics (content) will change as a result of the application of these rules".

We might wonder if there is not a middle way between unique adaptation for specific cases and universal rules, and if some of the adjusting should not take place already on the basis of the analysis of the system at hand. Especially as TM's starting point is "the steering philosophy is the modulation of ongoing societal developments against a set of collective chosen goals" (Kemp, Loorbach, et al. 2007), it seems reasonable that the rules need to be also adapted **before** instead of only **once** they are applied to fruitfully interplay with these on-going dynamics. This would also explain the need for an a priori system's analysis, as prescribed by Loorbach (2007a), as the logical role of such an analysis seems to be to adapt the rules before engaging with the system dynamics. The current approach delegates the task of adapting the general principal rules to the system state completely to practice (including researchers engaged in practice). This raises the question if academics can characterise the different ongoing dynamic states and patterns in the system, why cannot academics characterise the general strategy and actions associated with these system states, either deductively or inductively.

The case studies appear to confirm this leapfrog from universal principles to a unique context. For instance, Loorbach, Van der Brugge and Taanman (2008) identify five principles specific for an energy transition. For each specific principle, a general principle (similar to the eight listed above) is directly applied, with no reference to the system state in terms of the mentioned analytical instruments. Loorbach and Rotmans (2010) discuss four key examples of TM cases, with little attention to system dynamics in the discussion of the cases and no attention in the subsequent identified insights from these cases. More from a modelling approach, Holz states:

> "the high level of abstraction of these frameworks does not allow directly deriving conclusions with regards to policies for inducing or directing a transition. Therefore their use with respect to on-going and future transitions to sustainability is limited to the provision of some overall structure for debates. In order to derive recommendations for policy development, a connection to the level of entities (e.g. actors, technologies, rules) which may be subjects and objects of such policies must be made."

> (Holtz 2012)

TM systemic instruments and dynamic states

With regard to systemic instruments, a different gap becomes visible. The systemic instruments listed by Rotmans and Loorbach (2009) are two types of instruments: analytical instruments that lead to conclusions about the system state (namely complex system analysis, multi-pattern analysis, multi-level analysis) and process instruments

that intervene. How the results of the former group of instruments are used to adapt the latter group of instruments is not explained.

Descriptive cases and steering on dynamic state

As discussed, Loorbach also considers a descriptive relationship between transition dynamics and Transition Management to exist: apparently actors already anticipate on the long-term dynamic system state and adapt their strategies. However in current descriptive literature we find very little on this 'spontaneous' system analysis and Transition Management by actors, with the exception of Brown et al. (2013) study on strategies of actors with regard to transitions in Melbourne Water Management. Thus, although it is postulated that actors relate their Transition Management to the dynamics of the transition (whether they consciously apply TM or not), we know very little about how actors actually perceive, plot, and act upon these dynamics.

We can thus conclude that despite the identified needs in the literature for prescribing and describing the relationship between dynamic system states and specifics of Transition Management; this relationship in current TM literature is weak, apparently left to practice and the logic of this practice undescribed. Important building blocks are however already available: (1) the consequences of steering systems in transitions in general are thoroughly reflected upon; (2) analytical methods are available for understanding the specific system state for steering; and (3) in action research cases apparently the instruments applied are using instruments adjusted for the system state. The challenge thus appears to be to explicate the relationship between transition dynamics and Transition Management in a systematic fashion.

1.3 Main research question and transition policy

Until now we discussed the 'relationship' between transition dynamics and Transition Management. For a thorough exploration, we need a more precise concept than the general term of 'relationship'. Possibly owing to the multi-disciplinary, emerging nature of the field of transitions (and the positioning of Transition Management therein), a rigid definition or framework for studying this relationship was not yet available within the field – and thus developing these has become part of this research. Earlier we argued that besides a theory within Transition Studies, Transition Management could also be considered to be a specific theory within governance approaches. Governance itself is however a plethora of different theories, ranging from perspectives that focus on the analysis of the content of policy on its own merits to perspectives that focus on how the content is ultimately shaped by actors, their positions, their power relations, and their strategic behaviour. Or as Laswell (1951), with respect to policy science, puts it: 'knowledge of policy' versus 'knowledge in policy' (process versus substance).

1.3.1 Policy argument

This research's primary interest is in the substance of the relationship between dynamics and management, not in the process around formulating relationships (although because of their interconnection, we will address these to some extent). Therefore, we use the notion of a policy 'argument' in the sense of Toulmin (1958; 2003)[6]. The benefit of this concept is that it is a well-defined, thoroughly studied notion, yet is a good compromise with respect to focusing on the practical construction of arguments and the pure logical validity of arguments. Arguments are originally a concept of a formal logic nature. Toulmin, given the disparity of formal logic and logic applied in practice, came to a more practical view on arguments, which considers practical arguments to consist of a certain structure of reasoning (even though for practitioners this might be implicit[7]), abandoning the strict norms of formal logic and allowing for different types of logic in different (professional) settings i.e. a lawyer and a physicist make logical arguments of a different nature. Fischer (e.g. Fischer and Forester 1993) later shifted the focus more to how context shapes the content and form of arguments; and the implications this has for the neutrality, validity, and transparency of policy science being put to practice. We will not follow Fischer's interpretation of argument as a 'communication practice', as this starts from a process of 'knowledge of policy' (but a better analysis of the content of policies might still help a more 'argumentative' approach). We will revisit this in chapter 8.

An argument consists of two main elements according to Toulmin: (1) a claim, in this case to a course of action as formulated within Transition Management; and (2) a foundation, in this case the linking of this course of action to the dynamic state of the system (in which a foundation is not necessarily equal to the way the course of action is developed or otherwise conceived).

This thesis thus does not address if substance or process is (or should be) decisive in understanding or formulating policy, it merely focuses on substance. For Laswell's "knowledge in policy" understanding substance is the ultimate goal. For Laswell's "knowledge of policy" substance provides clues for understanding the process.

Field dependent criteria for Transition Studies

Yet, the multi-disciplinary nature does pose an additional difficulty for a rational-critical exploration of the relationship between transition dynamics and Transition Management. Toulmin's practical logic is partly field dependent in that it differs if we are analysing an argument in, for example, an engineering context or a fine arts context. Each context has its own rules on accepting and weighing different statements. We noted transition studies is a pre-paradigmatic stage (or of a non-paradigmatic nature) and the same goes for Transition Management as a profession. We thus limit ourselves to an extensive exploration from the criterion of consistency[8], without the pretence of being exhaustive.

Another question is if a transition policy should be an adaptive policy, or a strategy for adopting policies, given Transition Management's close relation to Adaptive Management (Brugge et al. 2007) and the emphasis in Transition Management on continuously learning and adapting. This thesis will focus on transition policy arguments at one given point in time, as our interest is more in the knowledge in policy than the process of policy; notwithstanding that such arguments need to be continuously adapted and improved as lessons about the Transition Management process and the transition are learned.

1.3.2 Policy argument

Of course, to interpret Transition Management strategies and instruments not only as arguments, but as 'policies' also needs some clarification, especially as 'policy' is easily associated with a top-down operating government. This is, however, not necessarily how policies are defined. Smith (2003) lists a number of definitions, among which:
- "Whatever governments choose to do or not to do" (Dye 1992, 18).
- "A proposed course of action of a person, group or government within a given environment providing obstacles and opportunities which the policy was proposed to utilize and overcome in an effort to reach a goal or realize an objective or purpose" (Frederich 1963, 79).
- "A broad guide to present and future decisions, selected in light of given conditions from a number of alternatives; the actual decision or set of decisions designed to carry out the chosen course of actions; a projected program consisting of desired objectives (goals) and the means of achieving them" (Daneke and Steiss, 1978).
- "Commitment to a course or plan of action agreed to by a group of people with the power to carry it out" (Dodd and Boyd 2000, 2).

Williams' (n.d.) overview of public policy definitions include:

- "A set of interrelated decisions taken by a political actor or group of actors concerning the selection of goals and means of achieving them within a specified situation where those decisions should, in principle, be within the power of those actors to achieve" (Jenkins 1978)
- "A purposive course of action followed by an actor or set of actors in dealing with a problem of matter of concern" (Anderson 1984, 3).
- "Public policy is subjectively defined by an observer as being such and is usually perceived as comprising a series of patterns and related decisions to which many circumstances and personal, group, organizational influences have contributed"(Hogwood and Gunn 1984, 23–24).
- "The actions, objectives, and pronouncements of governments on particular matters, then steps they take (or fail to take) to implement them, and the explanations they give for what happens (or does not happen)" (Wilson 2006, 154).
- "What government ought or ought not to do, and does or does not do" (Simon 2009,1).

It is significant to note that in some definitions, (public) policy is the exclusive domain of the government or requires authority, commitment or power to implement and in others not. Given that Transition Management builds upon ideas such as the network society (Castells 1996; Rotmans and Loorbach 2010a; Loorbach 2007a), it was chosen not to include authority or government in the notion of a policy for this thesis. We thus define transition policy (arguments) to be:

> **motivated courses of coordinated action by an actor (persons, (parts of) governments, other organisations or networks) within a given environment in an effort to influence the course (pace, direction and/or substance) of transitions in order to address 'persistent problems'**

Policy arguments are thus explicit (or can be explicated) and intentional. Notice that most of this definition reflects the claim aspect of Toulmin's perspective, and the foundation aspect is largely introduced by the term 'motivated'. As we are focusing on the substance of policies, it is irrelevant for our definition if policies are the product of a group process, a lone policy analyst, or the outcome of a complex political process. Where relevant, we will touch upon policy formation (and reflect on this in chapter 8). We will take a closer look at 'persistent problems' in relation to policy and Transition Management in chapter 2.

1.3.3 Main research question

Having established a more accurate conceptual basis for our research interest, we can formulate the main research question:

> **How can transition policy arguments that relate the dynamic state of the system in transition to Transition Management strategies and instruments be studied and (further) developed?**

Note that we leave the purpose of a better understanding between dynamic state and Transition Management strategies and instruments open to be reflective study or instrumental development of prescriptive policies (or anything in between). We will discuss various applications of the framework and findings in chapter 8.

1.4 A multi-scale framework for reflecting on the connection between transition dynamics and Transition Management

1.4.1 The multi-scale nature of transition theories

A key feature of Transition Studies is the multi-scale nature of the phenomena it describes. Transition dynamics occur on several, interacting scales; as emphasized by the multi-scale nature of models such as the MLP or multi-pillar theory. All these levels (or the whole range of scales) have implications for Transition Management. Transition dynamics typically deal with large societal or socio-technical systems, which evolve over decades and centuries. Transition Management reflects upon a similar functional and time scale, but prescribes and describes actions of groups of actors on lower functional and time scales, initially constituting only a small fraction of the whole societal system, undertaking actions with a duration of months to years. Regime dynamic models are thus typically, at least at the start of a transition, of a higher scale than Transition Management[2].

Multi-scale nature of Transition Management

In addition, the actions described and prescribed in Transition Management, can span several orders of magnitude in scale and vary in nature. At one end of the spectrum are concepts such as large societal movements, broad political coalitions, multi-departmental policies, or seven figure transition programmes (such as the Dutch energy transition programme or Dutch healthcare programme, see chapter 6); whilst on the other end of the spectrum we find very small scale experiments, visioning exercises, methods of dialogue moderation, or project management skills. Concluding, there is a triple mul-

ti-scale complexity: (1) scales within the theory on regime shift dynamics (at least 3 scales); (2) scales between the MLP and TM; (3) and scales within TM.

Beyond three MLP scale levels?

The Multi-Level Perspective, in the original sense of distinguishing macro-meso-micro levels, is the dominant ordering model for the dynamics of systems in transitions with respect to scale. As mentioned, this three level approach is not without criticism, and newer models with more levels are evolving (see chapter 3). However, given the triple challenge in scale complexity, taking a more sophisticated model for scale-aspects in transition dynamics, would be infeasible owing to research constraints in time and resources and might result in an overcomplicated framework. Moreover, most of the body of literature at the moment on transition dynamics uses the classical model (and adaptations). We will therefore take the three classic levels as a 'first order' approach to regime dynamics. Yet, as much as possible, we will take advantage of more sophisticated concepts and models, especially in chapters 3 and 4 where we will extensively integrate such concepts and models.

1.4.2 Adapting and extending the macro-meso-micro framework

This raises the question if the classic three level model can be extended in such a way that each of the three classic levels in transition dynamics, is related to each level of Transition Management. For Transition Management, finding a ordering in levels to add to the MLP is complicated, which has been explored to some extent in Frantzeskaki et al. (2012) as they note "the importance of scale" and "the inherent tension between the aspiration for long-term, radical, but quite-uncertain change, on the one hand, and practical and short-term needs for specificity". TM has recursive perceptions due to the presence of agency (actors in the system reflecting upon the system and theories about the system).

Existing TM layers not suitable

There is an existing framework of 'Transition Management Layers' (Loorbach 2007a; Rotmans and Loorbach 2010a), but these layers are not a suitable multilevel concept for two reasons. First, although these strategic, tactical and operational layers have timescales and functional scales associated with them, these are the scales of the phenomena they reflect upon (and try to influence), not the scale of the TM processes themselves. For example: the TM strategic layer, addressing culture, has a timescale of '30 years' associated to it. It does not seem that any strategic TM policy, activity or programme would truly take 30 years, especially as a typical full TM cycle takes about five years (Loorbach 2007a). Second, the TM layers are difficult to align with a multi-pattern view on transitions, as the TM-layers implicitly presuppose a bottom-up approach to transitions, whilst the multi-pattern concept allows for different paths. Third, the TM

layers do not encompass the whole of TM theory: it does not address general, overlaying principles or underlying specific instances of TM activities and methods (these are elements within the cycle and layers, thus each TM layer is a nested concept by itself).

Overlap between TM and dynamics (in governance)

Another complication is that although we stated that transition steering and transition dynamics typically play out on different scales, but this is not necessary, and depends on the combination of theories we study. Moreover, not all transition dynamic theories are void of notions of steering. If we take the dynamic model of Van der Brugge (2009), his model does include actors and their behaviour. Many case studies of regime shifts (for example Geel's description of progressive actors in the transition to sewage systems; 2006) also describe vividly how opponents and proponents of change perceive and behave. On the other hand, Transition Management's more (cultural-)philosophical component reflects on society and societal systems in general. In such governance approaches, autonomous developments of a system and management interventions are thus not a clear-cut dichotomy.

Proposed new ordering

A way out of this conundrum is to relate levels within Transition Management to each other the same way as Transition Management relates to regime dynamic models, thus ordering theories and phenomena in such a fashion that exact delineation between 'influenced' dynamics and 'managed' TM processes becomes less of an issue (see figure 1.2). This might also address the tendency within applications of the MLP to assign more agency to the niche than to the regime. The main (relative) differences between Transition Management and transition dynamics are (see §1.1 for a description):

- Transition dynamics are more descriptive and Transition Management is more prescriptive.
- Transition dynamics are more analytical (or reflective) and Transition Management is more instrumental and action research oriented.
- Transition dynamics deal with exogenous and autonomous developments (from the position of an individual actor with the intent to steer), whereas Transition Management assumes a partial malleability and assumes even a higher level of control within specific methods.
- Transition dynamics deal with societal systems, which are typically on a global or national level, whilst Transition Management reflects and sets goals on the same scale, but the actual activities are often much more local.
- Agency expressing itself as highly aggregated actor behaviour[10] is a modest factor in most models of transition dynamics and essential in most reflections on Transition Management.
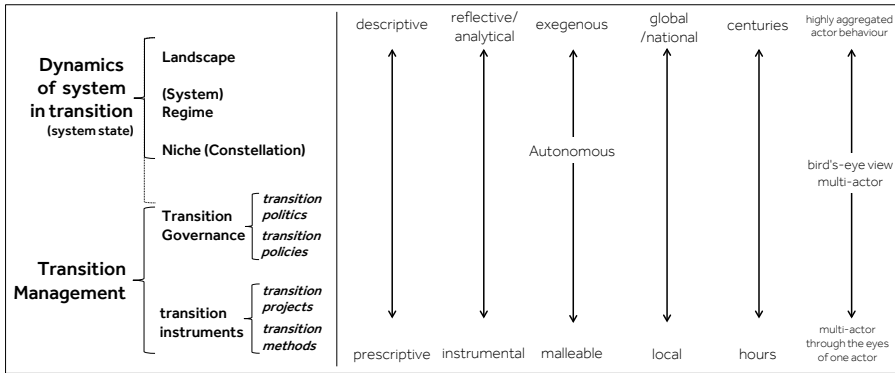
Figure 1.2 Dimensions in Transition Studies and levels within and between TM and transition dynamics

Given these dimensions, I propose to first distinguish between 'Transition Governance' and 'transition instruments' within Transition Management, positioning governance above instruments in this respect. Transitions instruments are defined as those actions or other efforts that in general are a direct intervention in the system, and thus to a large extent under the control of the action research in which they were developed. Typically such instruments are part of Loorbach's Transition Management cycle, can take a few months to years to complete, and are executed and described in a project management style. The best example is probably 'the transition arena' (Rotmans 2003; Loorbach 2007a); but also 'transition experiments' (Bosch 2010; Kemp and Bosch 2006), a 'transition training', or the developing of a 'transition scenario' are typical examples. Within these projects, specific methods can be distinguished, such as visioning techniques, moderation, systems analysis etc. We will elaborate on this distinction in chapter 7.

Transition governance is defined as those actions, and (collective) efforts, that are (mostly) the result of intentionally attempting to influence transition dynamics, but that are typically above the scale of controlled interventions (the instruments) described in Transition Management. All theories and concepts within Transition Governance take a multi-actor approach, but some theories allow for some degree of central decision-making or 'policies', which could still be under the control of a group (either a formal or informal group). Examples are the efforts of the interdepartmental directorate on energy transitions (Kemp, Rotmans et al. 2007; Kern and Smith 2007), or the efforts of the ministry of public health to stimulate a transition in long-term care (see chapter 6).

Of course such high level policies could be further translated in lower level policies, and depending to what extent one considers operational planning or implementation plans part of these policies, these aspects could also encompass Transition Management instruments. The high-level policies are the highest level of policy arguments that could be formulated, as at a higher level, arguments will no longer concern the 'coordinated actions' of our definition of transition policy. Higher level processes of Transition Governance are part of the 'given environment' of policies. I would designate these 'transition politics'[11], in the sense of the ideological dialogue or struggle for setting the

new paradigm towards a transition and the allocating of resources. Transition policies (and the instruments applied as a result of these) could be considered to be part of transition politics, as a means used in the struggle and/or as one of the outcomes of such struggle. This distinction has resemblance to the 'double vision' Grin recommends for studying transition policy: "empirical research (…) should look into the phenomena not only from a helicopter view, but also from the perspective of the actors engaged in these perspectives" (Grin et al. 2010). We thus arrive at the following nested[12] ordering (see figure 1.2):

- Transition dynamics
    - Landscape developments
    - Regime / system-level developments[13]
    - Developments in niches
- Transition Management
    - Transition Governance (on the boundary between dynamics and TM)
        - Transition politics
        - Transition policies
    - Transition instruments
        - Transition projects
        - Transition methods

The TM-cycle is not positioned as a separate level. Instead, I would propose to consider the TM-cycle as an existing linking pin between the governance level and the instrument level (see chapter 6).

1.4.3 Completing the framework: relations between levels

Now, we have arrived at an adapted and extended multi-level concept, how can we interpret a transition policy argument in this light? We defined a transition policy argument in §1.3 to be: motivated courses of coordinated action by an actor within a given environment in an effort to influence the course (pace, direction and/or substance) of transitions in order to address 'persistent problems'.

The 'course of coordinated action' are the actions entailed in high level policy and Transition Management instruments that are associated with these policies. The transition dynamics levels and transition politics constitute the 'given environment' (which may be subsequently influenced by the policy). A transition policy thus becomes about relating the aim (the influencing of the course of a transition), the environment (which provides barriers and opportunities), and the means (the policy in the narrow sense). The ordering of reasoning in policy arguments (as in Toulmin's approach) is unidirectional, in that claims are reasoned from givens (aims and circumstances) to actions, underpinned by foundations[14].

The existence of seven levels complicates establishing relationships between them, as this would theoretically lead to many relationships (6 x 7 = 42 relationships; or 21 as

we structure policy arguments unidirectionally). Fortunately the nested nature of the levels also allows us to group levels together (depicted in figure 1.3) in the following manner (numbers correspond to subsequent chapters):

2. Within transition dynamics, from the landscape to the level of the system[15]
3. From the level of the regime to the level of the niche (which we will reframe to from the system level to the 'constellation' level in chapter 3).
4. From transition dynamics to Transition Governance
    5. Within Transition Governance from transition politics to transition policies
6. From Transition Governance to transition instruments
7. From transition dynamics to transition instruments
    -   Including:within transition instruments from projects to methods

This framework is by itself a research result, which can be used to establish a list of relevant questions for research into transition managers' and policymakers' motivations (see chapter 8). It is also a framework that will be substantiated by researching each relation, the methodology for which will be described in the next section.

1.4.4 Reframing the MLP levels

The original three MLP levels need to be examined and adapted as well. These levels originate from the MLP, which has been developed as a heuristic for explaining given transitions from a techno-social or techno-historical context. The MLP is thus not necessarily suitable as a policy argument framework. For example, policy approaches typically start from problems (or opportunities) with great attention to (the politics of) demarcation. This is not the case for the MLP. Moreover, if we want to take advantage of new insights in newer models, we need to include these in our analysis. For example, as part of this research, and as a joint research effort with De Haan (Van Raak en De Haan 2016), multi-pillar theory was used to develop a description of niche-regime dynamics better suited for policy argument than the MLP (see chapter 4).
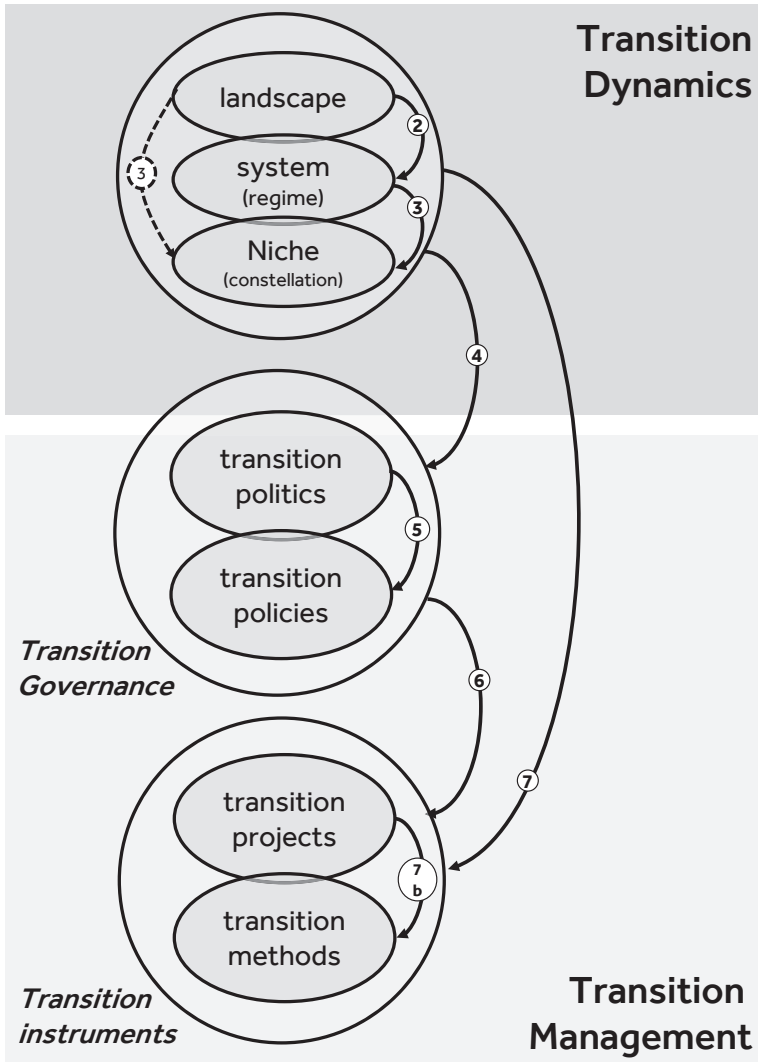
Figure 1.3 Research framework

1.5 Methodology

transition (management) theory in literature

7 relations between MLP levels and TM levels

Methods for nested case in Dutch healthcare

establishing the research framework

Emperical observations, action research & literature

theoretical reflection

indicative emperical findings

theoretical addition

inconsistencies and missing links between levels

subject of interest for case study

explorative case study

refinement of concept

concep-tualisation

concept

applying and substantiating the framework

findings on Dutch healthcare and nested methodology

framework for analysis, description and critical reflection

points of attention in analysing and/or developing policy arguments

new analytical lenses

Figure 1.4 Research approach

1.5.1 Research approach

Having proposed a framework to order the levels and relationships in a transition policy argument, we can develop an approach to study each of these relationships. For this, we take three complementing approaches (see figure 1-4): (1) an application to a case, (2) take inventory of, and reflect on, available literature on the relationship and the two levels it connects, and (3) explore further substantiating the relationship by new, bridging concepts or reframing existing concepts for the purpose of analysing and/or developing policy arguments where necessary. These three steps are of an iterative and cyclical nature, as depicted in figure 1-4. The research methodology is thus of a more explorative nature, and as a consequence, the depth of the results vary per level and per case. For each studied relationship, the three elements (reflection, conceptualisation, case work) were iterated, but different emphasis in starting points and 'sequences of discovery' can be noted (see figure 1-5).

Chapter structure

Nevertheless, we present these approaches in the same logical order in each chapter. Each chapter starts with a theoretical reflection. This step is concluded by identifying the need for further theory development or conceptualisation. The second section in each chapter develops this new conceptualisation, or adaptation, of an existing concept

for studying and/or developing transition policy arguments. In each third section, a case study will be used to explore the applications of the new concept and deepen our understanding of the issues identified in the theoretical reflection.
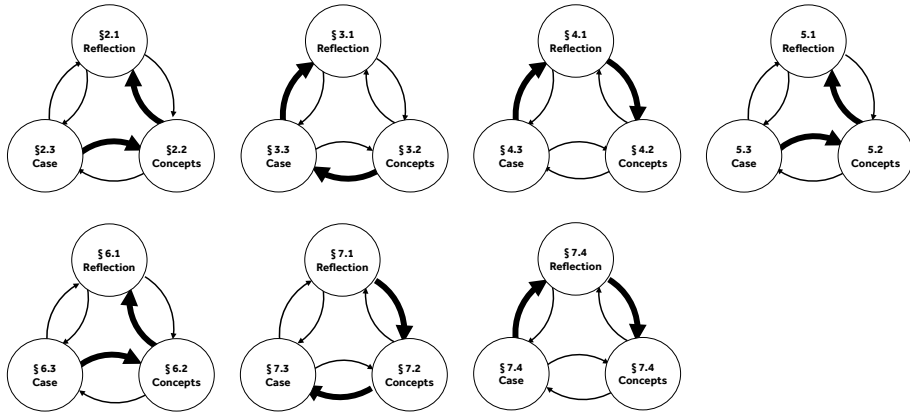
Figure 1.5 Dominant sequence of discovery in cases (some auxiliary cases not shown)

Three types of research results

We want a framework that also allows for examining existing policies. One possible pitfall in developing a meta-level framework for analysing or developing policy arguments is to end up with a framework that merely repeats the studied TM prescriptions. The research framework in this sense already suffices as a framework for general analysis and is thus a first type of result. The remainder of the thesis will identify possible critical points of attention on a general level, which in specific circumstances (or from a specific school within Transition Studies) may or may not apply. In chapter 8 we will integrate these points into a systematic question list.

Another pitfall may be not providing concrete methods or concepts that can be used to remedy critical points in a transition policy argument or to perform a more in-depth analysis. We will thus also develop more specific supportive analytical lenses. In chapter 8 we will explore different applications of both categories of findings. Lastly, some of the findings for Dutch healthcare can be seen as a research 'byproduct'.

1.5.2 Nested case in healthcare

The research framework and approach require a selection of cases, in which each case explores a relationship between levels. In this respect, cases have no direct relation to each other. However, by choosing cases in such a way that each case falls within the demarcation of the previous case, thus effectively 'zooming in' in each chapter, cases are put in each other's context. This could be considered an extended form of the 'embedded' case study (Yin 2003). Through this approach, we can construct an analysis of an embedded case, providing first insights into how the framework can aid in developing and/or analysing policies for a concrete policy programme.

The choice for healthcare as application domain

Given the concept of a nested case, an application domain in which the nested case will be situated needs to be chosen. The primary motivation to select healthcare as a subject is to contribute to the widening of Transition Studies from socio-technical systems to societal systems. Transition Studies has strong roots in technology studies and even though, on a theoretical level, it has now developed into a more general theory, its main application domain are still cases that have a significant technological[16] and physical component. As we are facing ecological, economic, and social challenges in many different societal systems, it is worthwhile to examine if we can also apply regime shift theory and Transition Management to non-technological industries and services. Although technology does have a role in modern medicine, technology is not dominant or central. Healthcare is thus an ideal test case for a theory that might still be biased towards matters with a large technical component. If a theoretical transition framework can be successfully applied for healthcare, confidence is gained and it can be applied to other non-technical systems.

Next to this scientific rationale, there is a strong societal rationale. The need for long-term, fundamental change in our healthcare system is virtually unchallenged. Already at the foundation of the WHO (1946), health was defined as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". Since that time much effort has been made to move beyond a healthcare system that is not disease-focused, but health-focused. The WHO (WHO 2000; Frenk 2010), noting the enormous challenges, has called for a systems understanding of health and healthcare. Healthcare policy is increasingly concerned with the long-term, such as ageing populations and long-term health risks from certain lifestyles. Policy horizons of decades are becoming more common. TM appears to be a suitable approach for such long-term planning for fundamental change.

The choice for Dutch healthcare has been one of opportunity and practicality: the availability of funding specifically for healthcare transition research from the KSI programme, and the researcher's familiarity with the institutional context, language, and culture. The challenges Dutch healthcare faces may be similar to those faced by the healthcare systems of most western developed countries, but chapter 3 will demonstrate how specific Dutch developments have shaped the Dutch system. One should thus be careful in any generalisation beyond the Dutch context of case findings.

chapter	relation	theoretical reflection	conceptualisation	case study
2	landscape → system	system demarcation	boundary shifts and overlaps	shifting boundaries in the history of the Dutch healthcare system
		problem - regime relation	multi-regime transition problem analysis	multi-regie problem of particulate matter
3	regime → niche	separating explanans and explanandum	emperical method for describing transitions	Dutch healthcare transition 1800-2000
4	dynamics → governance	mechanism of regime adaptation	frustration in regime processes create windows of opportunity for adaptation and TM processes	initiation of healthcare transition policy
				Amstelland water vision
5	politics → policy	on-going multi-actor TM in relation to single actor initiated TM		transition governance in the Dutch long term healthcare
6	governance → instruments	TM cycle as cognitive ordering instead of sequence of activities		long term healthcare transition programme
7	dynamics → instruments	TM strategies for different patterns		arena health care
	projects → methods	roles versus competences in TM teams		sustainable building programme Flanders (DuWoBo)

Table 1.1 Chapters, topics and selected cases)

Case selection

Cases have been selected by two criteria: first and foremost, they should be good examples from which to explore the crucial theoretical points identified from literature. Second, each case should preferably be demarcated as a smaller part of the previous case to achieve the described nested case. Once one case is described, the context of the next case is also (largely) described. The practical drawback is that, at some points, finding a subcase proved difficult. In these cases, an explorative, short case study was done within the structure of the larger nested case, and a separate case study that better aligned with the theoretical reflection was done with more depth. The last case deals with (conflicting) roles as a connecting element between the project level and the application of specific methods. The author has been in various roles involved with such a project team in the Transition Programme for Long Term Care, which fits into the nested case. However, after further consideration, it would be difficult to distance myself from my own role in the process and the direct relationships with those with whom I worked. Therefore a different case, outside the nested case, was chosen in which the author was not involved in the action research through which TM was introduced in the case, but instead interviewed those involved for an evaluation after the process. The selected cases will be introduced in each chapter; the following provides a preview of this selection:

- **Landscape to system (Ch. 2):** the theoretical reflection on this subject addresses

the relationship between persistent problems and the (demarcation of) societal systems and shifting and overlapping boundaries with other systems. To this end, the present and historical boundaries of the Dutch healthcare system will be discussed. A second theoretical issue, cases where policy problems are not strongly rooted in a single regimes, is not applicable to healthcare. Therefore, we have chosen an environmental health case, namely a transition analysis for particulate matter in the Netherlands: a policy problem rooted in many different regimes.

- **System to 'constellations' (regime and niches, Ch. 3):** the theoretical issue discussed in this chapter is the difficulty of applying conventional MLP in forward-looking policy contexts. De Haan's multi-pillar theory (De Haan 2010), in joint research effort with De Haan, was adopted for empirical application and applied to a historical case of the previous transition in the whole of Dutch Healthcare (1800-2000). Developments in care[17] and cure, in mental and somatic care, and institutionalised and ambulant care over 200 years were systematically analysed.

- **Systems to governance (Ch. 4):** this chapter will address the paradox that theory on system dynamics considers regime adaptation as an important pattern of change, but Transition Governance lacks an adequate mechanism to describe how this occurs. A new hypothesis – namely that a window of opportunity for adaptation opens if the regime becomes frustrated to its own standards – is formulated. This hypothesis is explored in a case of a visioning process in regional Dutch water management and further explored in two examples from the processes related to the chronic healthcare transition programme (see Ch. 6).

- **From transition politics to policies (Ch. 5):** this chapter will reflect upon how to reconcile the idea that there is a central, initiating actor in Transition Management that at a certain point in time starts a transition policy (including instruments), versus the idea that transition influencing as a highly political, networked process will not have such a clear beginning. For this we will describe the on-going Transition Governance processes at the time the Dutch ministry of public healthcare was introducing a transition policy for long-term healthcare.

- **From governance to instruments (Ch. 6):** is strongly related to the previous chapter and deals with the reinterpretation of the Transition Management cycle as a connecting element between general policies and specific instruments in light of the findings in the previous chapter. For this we will describe the transition programme in the long-term care (for which Ch. 5 described the governance context) and explore conceptualisation of the cycle.

- **From dynamics to instruments (Ch. 7):** in this chapter we developed a framework to systematically relate dynamic parameters of the system to design parameters of instruments. We will apply this framework partially to the Arena Long Term Care, which was an instrument within the programme described in ch. 6.

- **From projects to methods within instruments (Ch. 7):** the theoretical reflection dealt with roles in the project team in relation to methods applied. A case outside of the nested case, namely the 'DUurzaam WOnen en BOuwen (DUWOBO)' TM project was chosen to be studied retrospectively.
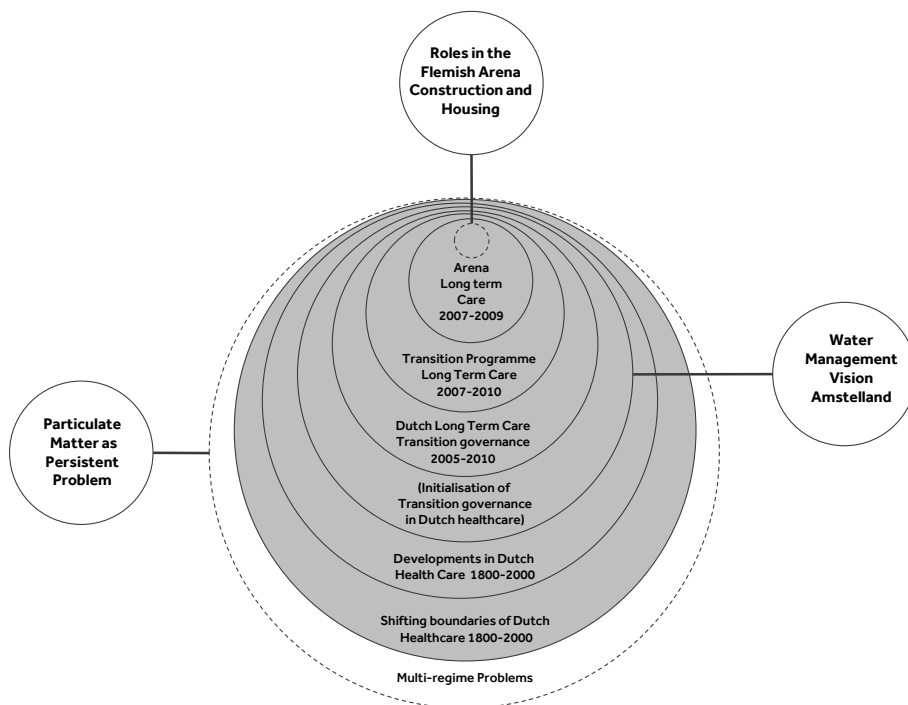
Figure 1.6 Nested structure of the nested case and support cases from different contexts

Research methods in case studies

Such a nested case requires a diversity of research methods. For each case, methods are chosen and applied that are suitable for both the scope of the case and the type of concept applied. At the higher levels, research is purely descriptive and based on secondary literature (history books, long term statistics). For the governance levels, methods such as interviews turned out to be most suitable. At the more applied, instrumentals levels, the methods for case research became more applied and instrumental, from observing action research and finally to interventionist action research.

	from	via	to
type of theory	purely descriptive	general recommendations	instruments
time horizon	centuries	years	months
function horizon	entire healthcare sector	the transition governance field within long term healthcare	a single project
data sources and gathering	history books	retrospective interviews	unvolved action research (personal notes)
data processing	merging literature, mapping into periods and stream of developments	merging perceptions and observations into overview of (perceptions of) the process.	describing experiences with interventions

Table 1.2 Differentiation in methods per case

Notes

1. Meadowcroft et al. (2007) similarly distinguish between a more applied 'modular structure' in which instruments can be combined and a 'broad philosophy of governance'

2. Although some take an antagonistic position towards Transition Management, these could still be seen as part of the academic discourse on Transition Management; as well as constituting the emerging subfield of 'Transition Governance' (to which the more philosophical elements in TM also contribute).

3. Although TM is in this respect at the extreme end within Transition Studies, Strategic Niche Management (SNM) and the Functional/Technological Innovation Systems (TIS) theories also take to a lesser extent prescriptive approaches and learn from recent or on-going practice how to stimulate and steer the niche.

4. Transition management as a governance approach might be used outside the Transition Studies context, see chapter 2

5. Submitted to research policy in 2008, apparantly eventually pubished as in Societal Forecasting and Societal Change (Haan and Rotmans 2011)

6. It should be noted that we do not use Toulmin's analytical framework (which distinguishes foundations in grounds, warrants, and backings) or the associated scheming technique; we simply use Toulmin's definitions to sharpen the definition of our research interest. It helps interpret our research interest as 'critical assessment' of the 'logic of practice'.

7. Because foundations of claims do not need to equate the method of developing them, a critical rational approach to substance does not preclude a large role for intuitions, hunches, and tacit knowledge in conceiving courses of action in Transition Management; it only imposes a limited structure and standards on subsequently motivating these. Chapter 8 will elaborate on this by proposing different applications for different methodological position in which the framework developed in this thesis can be applied.

8. Inconsistencies in practice are not necessarily wrong; indeed chapter 5 will attribute a large role to policy inconsistencies in bringing about transition policies. Thus even if the thesis suggests ways to overcome inconsistencies in theory, this does not exclude deliberately exploiting or creating inconsistencies as a mean in practice (and such strategies would be part of the use of 'knowledge in policy').

9. As in principle most transition concepts are scalable - i.e. they can be applied at a system at a wide range of scales — niches can be any size. Though as the regime typically is a large societal system and the niche is at most one or two orders of magnitude smaller than the regime, usually the niche is still of considerable size and thus typically larger or more of a force than a Transition Management effort. The exception to this is if TM efforts are qualified as a niche, e.g. the 'policy niche' (van der Brugge 2009; see also Paredis 2011).

10. Or behaviour of highly aggregated actors.

11. As the levels are nested, this does not imply policies and instruments are void of politics, on the contrary, they constitute a subset of politics.

12. It should be noted that often levels are not completely nested in another. For example: not all transition methods will be applied in the context of a transition policy, and not every policy is necessarily a political mean or outcome. It is also difficult to properly position Transition Management as part of transition dynamics. Although in the end, those who influence transitions are also part of the dynamics themselves, they cannot be universally assigned to levels of the MLP. See chapter 4 for a further elaboration of Transition Governance – regime interaction (and specifically section 4.1 on the locus of Transition Governance in relation to the system).

13. We discuss in chapter 2 and 3 the different between these concepts

14. This does not preclude that policies are developed iterative (as we will demonstrate in chapter 8), as in Toulmin's approach the sequence of discovery does not need to be the sequence of reasoning.

15. The reconsideration of the regime-niches relation will result in chapter 4 in proposing an underlying notion of constellations (which can be niches or constitute the regime), thus eliminating the separate consideration of landscape-regime and landscape-niche

16. Geels and Schot (2010) rebut arguments of a technical focus by arguing "we study how material, social and cultural, social and cultural changes interact in transitions" (p13). However technical artefacts still seem to play a priori special role in their theory, as illustrated by their statement a few lines earlier that technology has played an important role in discourses on change since the nineteenth century, which would be an archetypical period in which technical artefacts (in a broader landscape of modernization) played a key role. They argue 'we are not technological determinists', but not withstanding that, their approach is thus technology (or technical artefact) centred, as also expressed by their reference to "technologies-in-context". Geels and Schot defend this position by noting that 'actors in transition processes give technology a prominent role in their change strategy' in 'discussions on the transition towards sustainability'. A statement that borders on a circular reasoning as it may very well be that a socio-technical approach – that is hitherto dominant – leads to cases in which actors assign a technology an important role.

17. In Dutch: 'care' (adopted from the English word), 'zorg' (but this can also refer to entire healthcare), or 'verpleging, verzorging, thuiszorg' (English: nursing and homecare), sometimes also incorrectly refered to as 'langdurende zorg' (long-term care), or even 'ouderenzorg' (elderly care) are those health approaches with a strong nursing or general living support and not a direct curative-interventionist approach.

2. From the landscape to the regime (system): persistent problems in relation to boundary dynamics

The highest level in our framework is the landscape level, in which all other levels are embedded. This chapter will study the relationship between the landscape and the system, according to the research approach of §1.5. First, we will reflect upon the role of the landscape as a context for the system and regime, as well as in relation to the persistent problem (§2.1). We will find two groups of critical points in the landscape-regime demarcation in relation to the policy problem at hand: one on multi-regimes and another concerned with single regime boundary issues. We propose in §2.2 new concepts for each of these, after which these concepts will be applied in case study. Our main case study is addressing multi-regime policy problems through analysing the problem of particulate matter air pollution (§2.3). A visualisation of boundary dynamics and regime overlap is applied to the history Dutch healthcare as an auxiliary case (§2.4).

As discussed in the previous chapter, we will present the findings in a 'sequence of logic' from theoretical reflection, to conceptualisation to the case (and to end with an additional case and conclusions). In the 'sequence of discovery', however the main case was driving the conceptualisation and theoretical reflection, as the real world policy problem of particulate matter encountered and the request for an analysis of this problem was the starting point for reconceptualization (and reflection).
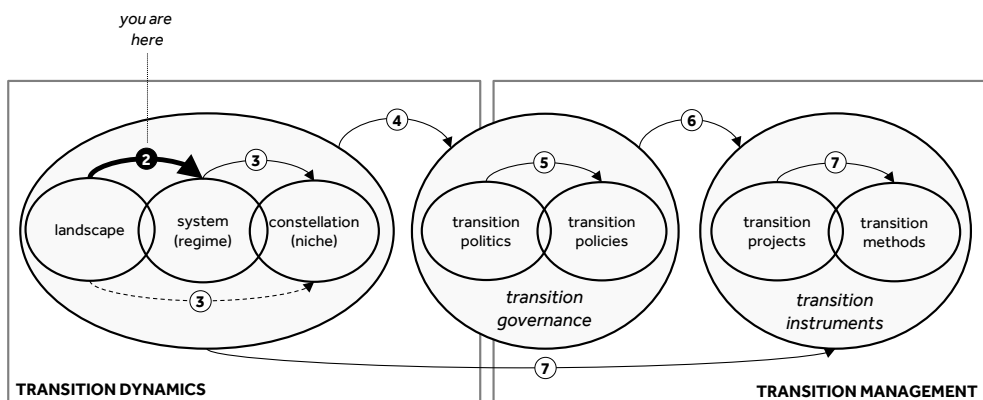
2.1 Theoretical reflection: policy problems and system demarcation

In this section we will give an overview of literature on the landscape and its relationship to the regime (or societal system), the criticism in literature on this relationship, and conclude which adaptations are needed for use of the landscape concept in relation to the system in a policy argument.

2.1.1 Landscape definitions and demarcation

The dominant conceptualisation of the environment of a regime in transition is the 'landscape' or 'macro' notion within the Multi-Level Perspective (MLP). The 'socio-technical landscape' started as a specific conceptualisation of the more general concept of a 'macro'-level and the regime as a specific conceptualisation of the more general meso-level (Rip and Kemp 1998). The terms are used somewhat interchangeable since[1].
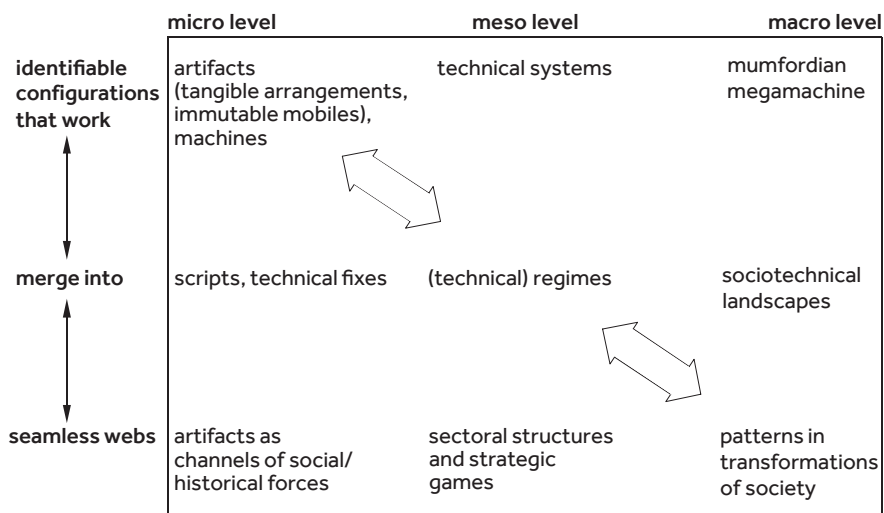
Figure 2.1 Rip and Kemp's conceptualisation of the macro-meso-micro relation (taken from Rip and Kemp 1998)

What is the landscape (in relation to the regime)?

There is ambiguity between publications on what the landscape or macro-level exactly entails. First, it can refer to the 'socio-technical landscape' in the narrow sense of Rip and Kemp (1998). This is described as the physical-geographic (infrastructural) landscape complemented with cultural and institutional aspects:

"The motorcar is not an isolated artefact, but the label for part of our

socio-technical landscape made up of steel and plastic, concrete (the roads), law (traffic rules), and culture (the value and meaning of personal mobility)"

(Rip and Kemp 1998).

Second, the landscape can be seen as a 'patchwork of other regimes'[2]. In this perspective, if we zoom out from a single regime, we see multiple regimes, some adjacent to the regime under study and some more distanced. Distinguishing feature of this patchwork notion is that the landscape is purely composed of 'regimes'. These regimes can be identified, and are separate from the system under study. The patchwork of regimes conceptualisation draws more attention to the fact that some regimes are adjacent and some are more distant to the regime under study. In some publications the patchwork is positioned on the meso-level (e.g. Geels 2002), suggesting the patchwork exists independent from the landscape, with both providing context to the regime under study.

The third approach, identifies global influences and trends without explicating the source. In this view the landscape seems to be more about flows or influences into the regime under study and less about the landscape as a separate entity. For example Smith, Voss and Grin in their editorial of a special issue of Research Policy on Transitions state:

"The MLP landscape includes processes that span societal functions and unfold autonomously of particular socio-technical regimes. Landscape processes include environmental and demographic change, new social movements, shifts in general political ideology, broad economic restructuring, emerging scientific paradigms, and cultural developments. Landscapes provide an influential backdrop with ramifications across a variety of regimes and niches: providing gradients and affordances for how to go about establishing socio-technical configurations that serve societal needs."

(Smith et al. 2010, 435)

Dynamic relationship between landscape and regime

The dynamic relationship between the landscape and the regime, is well described by various models of transition dynamics, among which Geels and Schot (2010) and De Haan (2010). Geels and Schot (2010, 54) distinguish 4+2 pathways of change: transformation (P1), de-alignment and re-alignment (P2), technological substitution (P3), and ad reconfiguration (P4). In addition, they distinguish reproduction (P0) and a fifth pathway comprised of a mix of the four pathways of change (P5). The main mechanism of these different pathways is the different reactions (or strategies) of regime actors under different circumstances with respect to amplitude, speed, and scope of landscape changes, and the matureness of system innovations developing in niches.

De Haan (2010) distinguishes between three patterns of change: reconstellation (dynamics dominated by the landscape), adaptation (dynamics in which the incumbent regime itself has an active role), and empowerment (dynamics in which growth of niches is the dominant factor), which, in combination, leads to different paths. The

patterns are postulated to occur as a result of three forces on the regime: tension (the force of the landscape on the regime), pressure (the force of the niches on the regime), and stress (internal forces in the regime as a result of inconsistencies). We will elaborate on these two models of dynamics in chapter 3.

The exact mechanisms, through which the patterns in these models occur, are less rigorously described. For niche-regime dynamics, this is part of on-going empirical research (for example see Bosman et al. 2014, 2013), whereas the mechanism through which (anticipated) landscape changes affect the regime appear to be less studied. Although, Smith et al. (2005) offer some insight by postulating that 'articulation' of landscape pressures needs to take place in order to influence the regime (see chapter 4).

2.1.2 System: definition and demarcation

In order to understand how the system relates to the environment, we must first establish what the scope, or more specifically the (functional) extensiveness of the system is. We will discuss this by reconstructing the evolution of the 'system' notion in transition studies.

Although prominent in Transition Studies parlance now, the notion of a 'system' originally only played a role in publications related to integrated assessment (e.g. Rotmans et al. 2000). Socio-technical sources originally defined 'configurations', which fulfilled societal functions. Configurations are eclectic lists such as 'technology, policy, markets, consumer practices, infrastructures, cultural meaning, and scientific knowledge' (Geels 2012). The regime is defined as the set of rules governing (and stabilising) these configurations, but is also part of the configuration. As the regime and the configuration have the same scale (or extensiveness), the MLP is typically depicted as three levels, not with a separate 'configuration level' (figure 2-2a).

A system from the socio-technical perspective is simply a "shorthand for these configurations" (Geels 2011). Such a conceptualisation is depicted in figure 2-2a: the regime and system have the same extensiveness. Alternatively one might interpret the niches to be small parts largely within the system but not part of the regime (figure 2-2b).

In other publications (an overview can be found in Rotmans and Loorbach 2010a) the system concept plays a different role. In these approaches, the system is an entity of its own, not unlike the 'configuration', but with a difference in scale with the regime. In the formalisation of this approach by De Haan, the regime is the dominant constellation, among many constellations in the system (De Haan 2010, fig. 3.1). Three scales are thus involved: system, regime and niche. This definition is sometimes used implicitly, for example the analysis by Hoogma of the 'private transport' regime versus the 'public transport' niche is a clear conceptualisation according to figure 2.2c (Hoogma et al. 2002).

However, De Haan (2010, 29) also allows for 'emergence' of properties at a higher level (de Haan 2006). As is discussed in-depth in the next chapter, in the healthcare study we could establish that the regime has a 'global' influence within the system, and is not limited to the dominant constellations. If we, in terms of De Haan, place an emphasis on downward causation, we could say the regime enforces certain conditions throughout the system. From an upward causation point of view, we might state that the dominant constellations are emblematic or typical constellations of the regime. This is depicted in figure 2.2d. From this approach, with regard to the extensiveness of the regime, we have come full circle, as in the regime (at the system level) has the same extensiveness as the system (although its strength might differ).

In this thesis, we will thus use 'system' to refer to what was originally called 'configuration', and assume the system to consist of several constellations, with each constellation consisting of a structure, culture and practice, as we elaborate on in chapter 4. The regime refers to the dominant structures, cultures, and practices in such a system. If we refer to a dominant constellation, we refer to it as such or as the regime constellation.

a. Classic: regime 'fills' system	b. Swiss cheese approach & boundary niches	c. Dominant constellation(s) approach	d. Emergent regime, affecting different constellations to a different extent
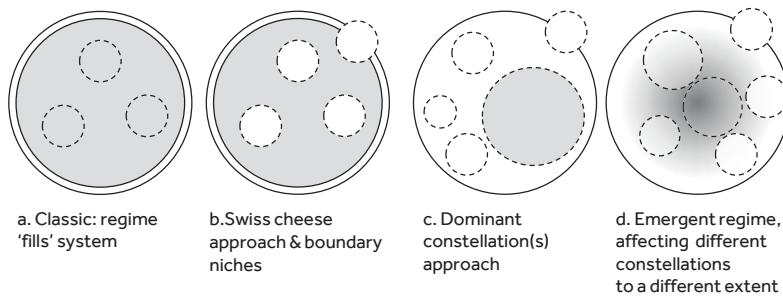
Figure 2.2 Extensiveness of regime and system (or configuration) under several definitions (outer circle the system, grey the regime, dotted niches and/or constellations)

2.1.3 Nature of system – landscape demarcation

In Toulmin's approach, arguments are 'founded', therefore claims can (and should) be founded by additional statements. This raises the question of whether demarcations need to be (or are) motivated, or if they are axiomatic assumptions. In transition studies both a subjective and an objective approach to demarcation appear present.

Subjective approach

Loorbach's starting point is that there is no objectivity in demarcation: "systemic thinking is the term used for the approach that sees the social construction of the world as systemic…[in which] societal issues are by definition perceived differently by different actors" (Loorbach 2007a). Loorbach attributes TM a role in coming to a shared perspective by these different actors. These actors are brought together for addressing a specific issue[3]. A subjective approach thus appears to lead to an 'issue-driven' demarcation.

This subjectivity would emphasize the politics in TM: who demarcates? In Transition Management, actors together structure the issue at hand, which might include demarcating the system.

We might wonder if these actors can collectively carve out the system from the surrounding system purely based on their 'social construct' of the issue, as the landscape is in most definitions not a social construct, but an objective, ontological structure (see 2.1.1). This would imply a more objective approach to be more suitable.

Objective approach

Markard and Truffer's (2008) and especially Konrad's (Konrad et al. 2006) method for an 'empirical delineation' of the regime is close to such an approach. Konrad's approach is to demarcate systems based on densities and strength of couplings:

> "drawing regime boundaries depending on the density and strength of couplings between the elements of socio-technical configurations. A boundary between two regimes is said to exist, when couplings between constituting elements (actor networks, technologies, institutions) are stronger (e.g. if they are regularly enacted or difficult to substitute) within a specific regime than outside."
>
> (Konrad et al. 2006)

From this we can identify an important point of attention in analysing and/or developing policy arguments: is a given demarcation not cutting through many and strong (possible, potential) couplings between constellations/systems? However one might wonder which weak points to cut. As Markard and Truffer (2008) point out, there might be multiple, equally valid overlapping regime definitions possible. These multiple definitions are not necessarily reducible to a single definition by analysis of densities and couplings, especially as the system might be defined on different scales.

In conclusion, demarcating the system from the landscape could be expected to be a combination of subjective and objective descriptive statements. In the next paragraph we will reflect on the relation between the normative and the descriptive.

2.1.4 Policy problems (and solutions) in relation to system demarcations

Problem definitions from a policy theory perspective are a combination of descriptive statements and a normative judgement about these: "conditions become defined as problems when we come to believe that we should do something about them" (Kingdon 1995, 109). Or to put it differently: problems are gaps between a normatively desired (future) state and a perceived (future) state. The complexities of defining a problem from such a starting point, has a long history in policy and political science, even more

since the work on wicked/ill-structured problems (Simon 1973; Rittel and Webber 1973). From this literature we learn the demarcation of the problem is determined by the 'solution space' and these both determine the system demarcation.

> "The information needed to understand the problem depends upon one's idea for solving it. (…) To find the problem is thus the same thing as finding the solution; the problem can't be defined until the solution has been found."
>
> (Rittel and Webber 1973, 161

Depending on how one imagines the problem to be solved, one would define what needs to be changed as the root of a persistent problem. For example, the Dutch energy transitions programme demarcated the energy system to be the supply system only, arguably because policymakers expected solutions in supply, not in demand (and not expecting the current blurring of supply and demand). Or as Smith, Stirling, and Berkhout (2005, 1503) relate problem and solution space to matters of power (politics) and agency: "On this last point, power becomes a question of the representation of problems (and solutions) and competition over which representations (discourses) constitute reality or viable alternative realities (Hajer 1995)".

Some of the criticism on the lack of attention for the consumer/daily life perspective could also be interpreted to be part of a normative/prescriptive debate on solutions in technology or in consumption change (including consuming less, radically different lifestyles, etc.). Or as Shove and Walker put it:

> "First, and for all the talk of sociotechnical coevolution, there is almost no reference to the ways of living or to the patterns of demand implied in what remain largely technological templates for the future
>
> (Shove and Walker 2007, 768)"

Persistent problems

Transition Management has its own concept of problems it aims to address: persistent problems. Loorbach notes that the defining characteristic of persistent problems is that they are "rooted deeply within existing institutions and structures" (Loorbach 2007a). Or as Schuitmaker in his dissertation on persistent problems puts it:

> "One of the main features attributed to persistent problems mentioned in current transitions literature is that they are embedded in the system. As such, these problems are interpreted as system deficits and are thus presented as both the reason and the justification a system innovation or transition is needed."
>
> (Schuitmaker 2013, 25, see also 2012)

Rotmans appears to suggest persistent problems are (almost) by definition problems requiring transitions:

"There are no easy, off-the-shelf solutions for persistent societal problems, because these are caused by fundamental flaws in our societal systems. Such systemic errors demand radical changes in our thinking and actions, i.e. transitions and system innovations." Such a course of action is juxtaposed to furthering innovations within the regime, which are deemed insufficient as these are "trying to optimize existing societal systems. (…) As we have already observed in a wide range of areas, current policy making (…), lacks the strength, decisiveness and "visionarity" to confront the large societal challenges (…). A second policy line, in addition to existing policy, is required for these specific persistent societal problems, i.e. transition policy"

<div align="right">(Rotmans 2005)</div>

Alternatively, Schuitmaker places emphasis on the phenomenon that persistent problems tend to reproduce themselves, even if one tries to address them. Rotmans (Rotmans 2005; Dirven et al. 2002) has defined the characteristics of such problems to be: (1) complexity, (2) structural uncertainty in line with Van Asselt's uncertainty typology (2000), (3) difficult to assess; and (4) difficult to steer, offering a third definition of a persistent problem.

Multiple regimes

From a policy problem perspective, there is no reason why a problem and solution space would not involve multiple fundamental regime changes and thus multiple transitions in societal systems. It depends on the definition of a persistent problem, if such policy problems would still be persistent problems:

- If a persistent problem is by definition a problem requiring (a) transitional change in (a) regime, the answer appears yes[4]. We could define a subclass of persistent problems requiring multiple regimes to change. The critical question would be if indeed multiple transitional changes are necessary to address the policy problem or merely multiple minor regime adjustments.
- If we would define a persistent problems by their tendency to reproduce themselves, it would require empirical investigation if this reproducing behaviour occurs, to determine if a policy is a persistent problem.
- If we would define a persistent problem by the four characteristics of Rotmans and Dirven, it will again depend upon empirical investigation. We might expect that complex policy problems relating to multiple societal systems would typically meet those criteria.

Regardless if a policy problem touching upon transitional change in many societal systems is a persistent problem, policy arguments that fit within our definition of a transition policy and involve multiple regimes could be developed and might be useful to analyse. In this chapter we will thus reflect upon (managing) multi-regime policy problems. We will discuss for the case of §2.2 for all three definitions if it is a persistent problem.

2.1.5 Critical literature on landscape-regime relevant for policy arguments

The relationships between landscape and regime, or even within the landscape itself, are not a frequent subject of critiques in Transition Studies. However, if we interpret the landscape to be a special instance of what, in a policy argument, is normally referred to as 'context', 'exogenous influences' or environment, then a significant number of critical publications can be identified that deal with context, embedding, and system demarcation in Transition Studies. These publications criticise specifics of Transition Management (see the overview in §4.1), but also criticise using insights from descriptive Transition Studies (for example the MLP) as a basis for policymaking in general. These are thus highly relevant to the topic of this thesis.

Lack of rigour

A thorough overview of methodological issues regarding the MLP is provided in Genus and Coles (2008). Genus and Coles summarize these issues by suggesting that "work within the systems in transitions branch has not been systematic in applying the MLP." They specifically identify, amongst others, a lack of systematic and explicit methodology to demarcate and study the regime, and a tendency 'to pick winners'. They are also more concerned with temporal demarcation such as determining the beginning and end of a transition, which we will address in chapter 3. Shove and Walker stress the political dimension of the demarcation of the system: "we argue there is a politics to the very processes of abstraction involved in defining something to manage (the 'it', or system)" (Shove and Walker 2007, 765)[5].

Markard and Truffer note that "against the background of these challenges it is not surprising that many articles, although explicitly based on the multi-level concept, have not proven to deal very carefully with the regime concept in empirical terms. They say little about how regime(s) were delineated empirically" (Markard and Truffer 2008, 606). Related to criticism on boundary demarcation are critiques on the lack of attention for 'everyday', 'individual', 'demand side', 'consumer', or 'citizen' practices (Verbeek and Mommaas 2008; Shove and Walker 2007). These critiques stress that systems are defined in such a way that solutions are limited to changes in industrial production. Avelino also criticizes the functional boundary demarcation in relation to the sustainability aim:

> "the problem with such functionalist boundaries is that they focus the attention on sustaining and maintaining the functioning of particular subsystems [of society, not subsystems of a system in society, RvR], without questioning whether these subsystems should be functioning in their current form in the first place. The persistent unsustainability problems in the world today can be seen as a result of the way in which subsystems function and interact with one another. It is thus utterly ironic to translate sustainability goals in terms of sustaining the functioning of current subsystems"

> (Avelino 2011, 7).

Multiple regimes involved

Raven and Verbong (Raven and Verbong 2007; Raven 2007) have explored interactions between regimes that are (or become) interconnected, with a focus on interaction through 'shared' niches, with cases studies: manure as part of the energy system (as fuel) and the agricultural system; biomass as part of both energy and waste regimes; and Combined Power and Heat (CHP) as the niche between electricity and heating regimes. They identify four types of interaction: competition, symbiosis, integration, and spill over. Raven and Verbong reflect that multi-regime problems require more encompassing policies, where "alignment" between visions, strategies, and means of actors or a level playing field for competition should be sought. They conclude:

> "In general, however, policy consequences of multi-regime dynamics are still far from developed and further research for more policy relevant recommendations is still needed."

Stirling, Smith, and Berkhout (2005) give such competing regimes within the energy system as an example of 'overlapping markets' of regimes. Hassink, Grin, and Hulskink (2013) describe a niche between two very different regimes: the 'care farm' at the intersection of healthcare and farming.

Konrad, Truffer, and Voß (2008) build upon this multi-regime perspective for the subject of German utility sectors. They specifically address boundary shifts as a result of transition dynamics, but also as a cause for further boundary regime dynamics. Lauridsen and Jørgensen explored the "multiple regimes at stake" for the problem of electronic waste, in which they question the EU policy for electronic waste. They conclude that the persistent problem is created by how waste is handled and how the electronics are produced in the first place. They conclude these domains develop separately from each other (opposite from the situation described by Raven and Verbong) and that independent developments in the two regimes interfere with addressing the persistent problem (Lauridsen and Jørgensen 2010).

2.1.6 Two categories of system demarcation challenges

Our reflection and review of literature indicate that some demarcation issues are more fundamental than others. Given a policy problem that relates to regimes and transitional change thereof, we can distinguish between the following two conditions[6]:
- For a policy problem, there is a rough consensus among those striving for transitions, on which regime is to be attributed to their persistent problem perceptions, even if there might be considerable differences in defining that regime (e.g. actors all define the energy system somewhat differently, but all agree the problem is in the energy system).
- For a policy problem, problem perceptions are attributed to many different regimes, but the problem perceptions have strong similarities and the attributions to regimes are non-conflicting (e.g. agriculture and transport regimes are both associated to climate change).

Under the first condition, the relevant regime and approximate boundaries of the system it resides in (and its regime) can be established without running into fundamental analytical obstacles. In the second case we do run into fundamental issues, e.g. when a problem that is 'rooted' in many different regimes, a transition of a single regime is unlikely to address the problem. We will subsequently reflect further on these two categories of persistent problem and regime relations.

Category I: Contested and (shifting) boundaries

For the first situation, where the concerned regime and the approximate demarcation of the system within the landscape can be uncontroversially identified, demarcation focuses on grey areas, mostly at the boundary of the future or present societal system for which the transition is desired.

Nature of the boundary between system and landscape
The nature of the system boundaries depends on the nature of the conceptualisation of the landscape, of which we discussed three possibilities in the previous subsection. In the first conceptualisation of the landscape, the classic 'socio-technical landscape', the system under study cannot be seen as simply a demarcated part of the whole landscape, as the landscape is of a fundamentally different nature than the regime (respectively tangible infrastructure versus rules). This perspective is rarely applied empirically.

Nature of the boundary with macro-trends
For the conceptualisation of the landscape as unspecified external forces, the landscape is considered fully epistemological and not ontological, wherein different actors might hold very different landscape-system demarcations and definitions. This will complicate grasping and resolving boundary issues.

Nature of the boundary with a patchwork of regimes
If the regime were one patch in a patchwork of regimes, it would be easier to accommodate influences from adjacent regimes. For demarcating regimes in such a conceptualisation the mentioned approach of Konrad, Truffer, and Voß (2006) appears suitable to demarcate regimes from each other (and thus the focal regime from the landscape), once a general scope has been set. In the remainder of this chapter (and chapter 3) we will thus use this conceptualisation to explore demarcation issues.

Concluding, if a persistent problem can be largely attributed to a single regime, a transition policy argument can be developed even if there are boundary issues by: (1) taking a 'patchwork' perspective on regimes in relation to the landscape and taking overlaps and shifting boundaries into account. As discussed in 2.1.3 demarcations typically consist of a combination of more objective description, subjective description and normative elements.

Category II: persistent problems rooted in multiple regimes

If we turn to the second category of policy problems – problems that are attributed to many different regimes - we first have to reflect on the type of theories developed in Transition Studies. Geels (2007) has characterised Transition Studies as middle range theories in the sense of Merton (1968): theory that transcends individual case studies or individual correlations between parameters, but is not a 'grand theory'. Middle range theories do not strive to generalize mechanisms and concepts to explain all aspects of society and its dynamics. This implies that Transition Studies concepts can only explain a limited set of societal phenomena, namely transitional changes in functional systems within a society. Most of the case studies in Transition Studies focus on functional systems within a society such as energy, water management, waste management, transportation, agriculture and food, construction etc[7]. Some reflections can be found on the transitions of 'societies as a whole', such as Transition Management essays that propose transitions of many different systems within society, adding up to a transition of the whole society (Rotmans 2007, 2012). But these are quite different from the discussed rigorous empirical case studies on historical transformations of industries and public services.

For policy problems there is no apparent reason why they can always be solved by the transition of a single regime in society. A policy problem is thus not necessarily within the scope of Transition Studies as a middle range theory. We will reflect further on this in the conclusion of this chapter. For now we address the question of whether we could nevertheless adapt regime shift theories (and how TM builds upon them) to deal with multi-regime transitions.

A first possibility might be to stretch the concepts from Transition Studies to the level of society. How this might be done depends on how we conceptualise the landscape. If we take a perspective on the landscape, in which the boundary between landscape and system is epistemological, we could be tempted to simply 'scale up' the MLP and consider the regime to consist of a highly aggregated concept ('society', 'our way of living', 'well-being', or 'our country/region'). Such an approach however, would revert Transition Studies to a 'grand theory', including all the surrounding debates[8]. If we take a classical socio-technical landscape (as of a different nature than a patchwork of regimes), such a stretch will be difficult, as landscape changes would be of a different ontological nature than regime changes. Transition Studies does not describe under which conditions the landscape changes, other than that a transition will have some effect on the structure of the landscape, thus leaving us empty handed.

If we take the 'patchwork of regimes' approach to the landscape, we could simply analyse two (or more) adjacent patches instead of a single patch. Including an increasing number of 'patches' (regimes) in a policy argument increases the complexity of the argument significantly. Studies in literature on only two interacting regimes turn out to be challenging: "attempts to capture the interplay of multiple regimes accentuate the methodological problems of identifying the boundaries and interplay of regimes

and sequences of transformation within the Multi-Level Perspective." (Lauridsen and Jørgensen 2010, 493). In the next section we develop a methodology to join 'patches' in analysis of transition dynamics (and more specifically Transition Management opportunities) for seven systems, which could be seen as approaching the limit to which transition concepts could be stretched and still make some sense.

In conclusion, if a policy problem (and its solution space) cannot be attributed to a single regime, this poses serious challenges to the applicability of theories from Transition Studies to the problem and thus the quality of a transition policy argument developed (or the analysis of such an argument). If a limited number of regimes are involved, suboptimal fixes might exist, but as the number of regimes increases, different social theories may be more suitable.

2.2 Conceptualisation: two approaches for two policy problem categories

The two categories of demarcation issues in developing and/or analysing policy arguments lead to very different requirements for conceptualisations that can support developing and/or analysing a transition policy argument. For the first category boundary issues, some reconceptualization can already be found in Genus and Coles' (2008) revised MLP and we will offer an additional method in subsection 2.2.1. In contrast, for the second category of problems ('many regime' situations), a very different method of analysing dynamics and TM opportunities is explored in the subsection 2.2.2.

2.2.1 Conceptualising for category I: Overlapping (and shifting) regimes

Genus and Coles in their 'rethinking the MLP' article (Genus and Coles 2008) already have literally redrawn the lines of the MLP and so allowed for overlapping regimes and niches within multiple regimes (compare their schemes to the Geels' scheme in figure 2.3). If we map this scheme in 2D, we find a more classical Venn-diagram (Venn 1880), which is a common analytical technique to map overlapping categorisations. Such overlap in regimes raises interesting questions for empirical exploration such as:

- Which specific dynamics are occurring in system overlaps, and especially in inter-regime niches; what is their influence on the transition; and what specific opportunities for transition do these provide?
- If systems overlap, does that mean that the Transition Governance processes associated with these systems interfere with each other? For example, are niches supported from multiple governance and policy processes?
- How do these overlaps and system boundaries shift over time? Can and are such shifts stimulated, directed, or otherwise exploited for steering transitions?

Longitudinal changes (shift over time) can be addressed by describing which niches (or subsystems) become part of the societal system or become part of another societal system over time and how this affects the functional scope of the system as a whole. In the next section, the history of Dutch healthcare is given as an example of such an analysis healthcare, by taking a number of 'snapshots' over time.
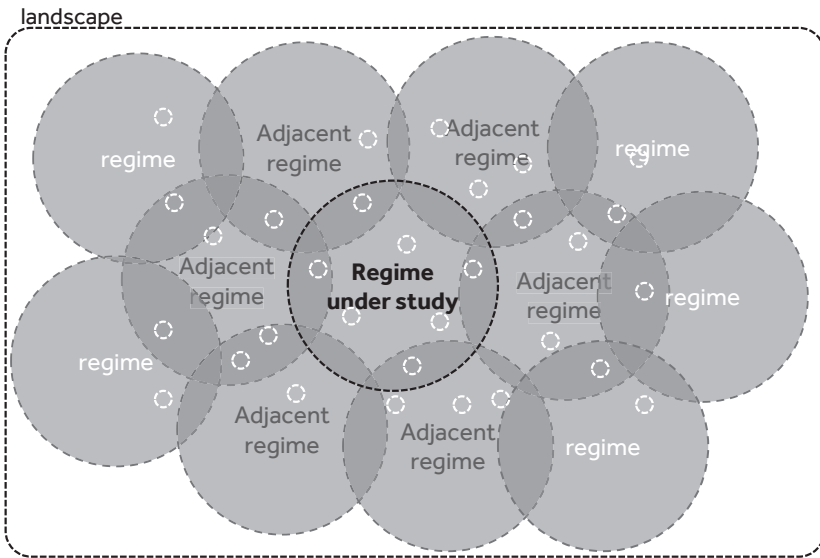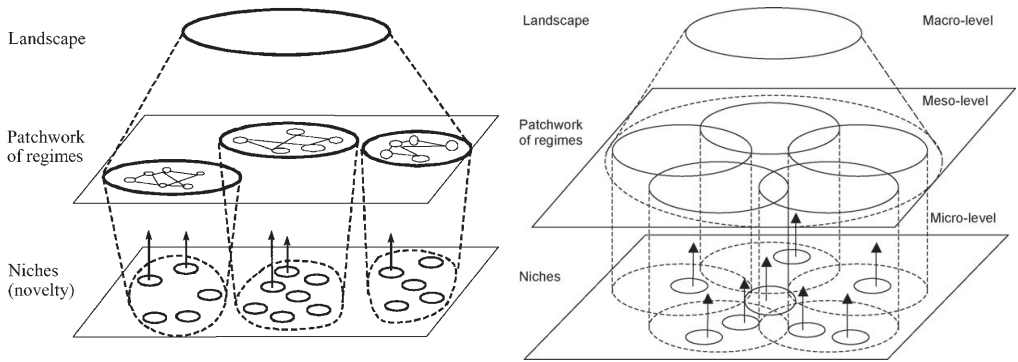
Figure 2.3 Geels (2002) (top left) and Genus/Coles (2008) adaptation of this scheme (top right)
allowing overlaps and a two-dimensional translation of the Genus/Cole approach (bottom)
White circles represent niches.

2.2.2 Conceptualising for category II: Analysing persistent problems rooted in multiple regimes

To formulate or analyse transition policy arguments for multi-regime policy problems, we first would need to consider what managing 'multi-regime transition dynamics' would entail. Many assumptions may no longer apply in a multi-regime situation:

- Regimes that together cause a policy problem are not necessarily causally connected in their dynamics, e.g. one might be in transition and the other not. In the mentioned electronic waste case (see 2.1.3), the two regimes causing the problem (waste management and electronics production) do not co-evolve. The involved regimes are not necessarily themselves dependent on change for their own continued existence.
- Even if all regimes associated with the persistent problem would be susceptible to inducing transitions, a practical feasible transition policy argument might not be possible. Resources may be stretched and it could be difficult to rally people around 'transitioning' not one, but many different regimes.

Managing multiple transitions to address a policy problem might be much more about understanding how the autonomous dynamics of many different societal systems affect the problem and grabbing opportunities to slightly steer these societal systems in such a way that the problem is somewhat mitigated. From this starting point, we can explore further how we might construct such policies.

Analysing multi-regime persistent problems

For the 'managing' of the transition process, one would need to develop a basic understanding of the dynamics and on-going governance processes of each involved societal system. In addition, one needs to understand how the systems are interconnected, both with respect to their dynamics and to the persistent problem one is striving to mitigate. I propose the three following steps, preceded by a check on persistency (the general approach depicted in figure 2.4).

0. Check if the problem is indeed persistent
For this the mentioned criteria of Rotmans (Rotmans 2005; Dirven et al. 2002) can be used, which states that persistent problems have the following features: (1) complexity, (2) structural uncertainty in line with Van Asselt's uncertainty typology (2000), (3) difficult to assess, and (4) difficult to steer. These can be applied prima facie to establish if the problem is persistent, as they do not require a full understanding of the problem and potential solutions. Alternatively, in line with Schuitmaker (2012, 2013) one could assess if solutions to problems of a societal system from that system, only reproduce the problems.

1. Understand which societal systems are involved in creating the multi-regime persistent problem
The problem space determines which societal systems are involved, which in turn

depends on the possible solution space. This selection does not need to be definitive: all systems that have potential to be part of the solution and thus the problem should be included. For example: for the particulate matter pollution case of §2.3, if one would consider a transition in which people start living much closer to work, the regime of working and living patterns should be taken into consideration (and see mobility patterns as 'part of the problem'). A next step is to understand how these systems are interconnected in respect to their dynamics and which other possible systems might be inherently or potentially linked to the systems involved in creating the persistent problem.

2. Understand what these societal systems share in terms of their landscape and map their niches

The next step is to establish a Multilevel Perspective covering all involved niches, regimes, and their landscape factors. Although we discussed the possibility of shared niches, typically most of the niches will be specific to one (or perhaps two) system(s). For the landscape, many trends (e.g. an economic crisis) affect all systems, while some macro-trends are only relevant for one or a few of the involved system(s). This distinction is important as it helps to understand what future landscape developments might mean for the whole complex of related systems (i.e. will it move in a similar direction).

3. Identify steering opportunities within each system involved and find common trends and opportunities throughout all systems.

If we understand each of the systems and their interrelation, we can turn our attention to the governance of the systems and the potential for opportunistic steering. If we assume that societal systems experience alternate phases of relative stability and turbulence, and that these phases are not necessarily synchronised in a society, some of these systems will be in a process of change and thus likely to be relatively more susceptible to steering. Also, autonomous changes might co-incidentally worsen or mitigate the persistent problem at hand and the combination of changes in different systems might lead to a dampening or amplifying effect.
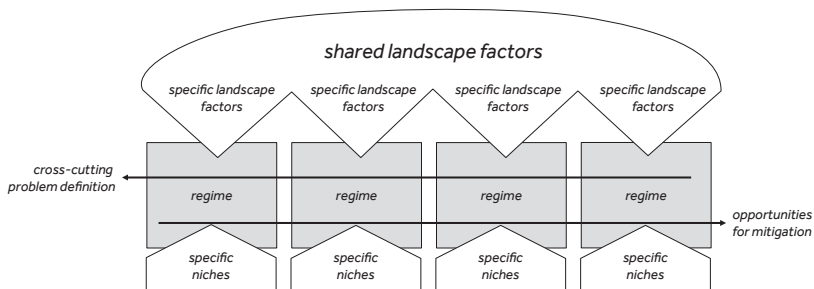
Figure 24 Scheme of a multi-regime persistent problem analysis (not depicted: some niches will fall under multiple regimes as well)

2.3 Case: Dutch particulate matter pollution as multi-regime problem

As outlined in §1.5.2, persistent Dutch health problems in general are not suitable for a 'multi-regime' case, as these are centred on a healthcare regime[9]. This case study describes an analysis from a transitions perspective on the origins and possible solutions for the public health policy issue of Particulate Matter pollution in the Netherlands at a time when this issue was subject to intense political and policy debates. This case study has been published earlier as a professional report (Raak et al. 2006). Funding for this report and the preceding analysis has been provided by ONRI and Habiforum. My role was thus that of a policy analyst (see more on this role in chapter 8). In addition I participated later in organising sessions to stimulate breakthroughs in the stalemate, but this is not related to the research presented here.
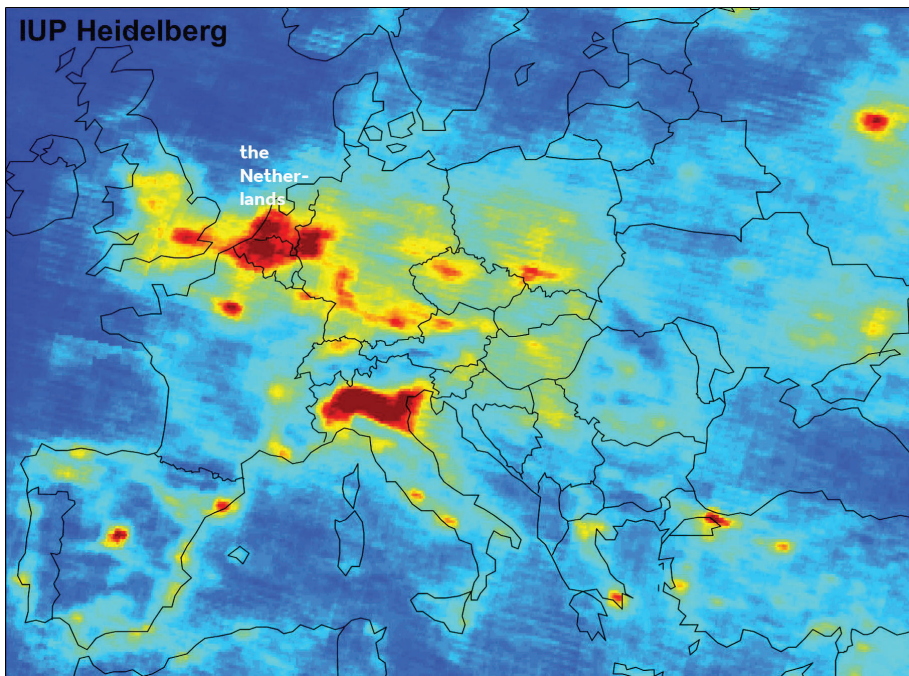
Figure 2.5 The 'Heidelberg image' of NOx pollution over Europe, even though different from PM pollution, this image received extensive media coverage as signifying local and regional air pollution. White arrow indicates the Netherlands. One dark 'smear' roughly coincides with the Dutch central urban area (Randstad) and Antwerp region in Belgium. The dark area to the East corresponds to the Ruhr industrial and urban area

2.3.1 Introduction to the case

Particulate Matter (PM or 'black smoke', Dutch: fijn stof) is a group of air pollutants that are small particles, having a size of several microns[10]. The particle size in microns is often referred to by a two-figure suffix to PM (e.g. PM_{10} or PM_5). These particles have little in common except their size and differ tremendously in origin and chemical

composition, varying from sea salt to combustion soot, without one type or source being the dominant factor. Particles can be directly emitted into the air, or formed in the air, for example out of agricultural ammonia emissions. The occurrence of PM is correlated to serious health effects, such as chronic airway diseases. Statistically, people living close to local sources of PM (such as busy roads) live shorter, unhealthier lives. Yet, it remained (and remains) largely unknown if PM is a causal factor or a mere correlating indicator for other factors.

PM cannot be classified as either local or international in diffusion patterns. PM can travel hundreds of miles, and the Dutch concentrations are largely determined by the wind carrying in foreign emissions. However, local emission sources (industry, traffic) can in a radius of tens of meters to kilometres easily contribute as much as foreign sources to the overall local concentration of PM.

The years up to 2005 could be seen as the proverbial 'silence before the storm'. Local and regional air quality issues had been around for decades in the Netherlands and though not a complete success, thought to be under reasonable control by conventional policy. PM concentrations were gradually decreasing, largely as a result of industrial filters on coal power plants and other industrial installations. The EU had adopted a directive for the maximum single-day average and the maximum year-round PM concentrations, with consent of the Dutch delegation in the council of ministers. Although the Dutch department for the environment expected some compliance efforts (e.g. stimulating soot filters), no major efforts or economic consequences from such efforts were anticipated.

This period of relative stability went into turmoil after unexpected publicity and an unexpected landmark court decision. First was the publication of the 'Heidelberg satellite image' of NO_x concentrations over Europe (see figure 2.5), portraying the Dutch as the 'dirty man of Europe' with a dark-red smear over the Netherlands. Much could be argued against such simplifications: that concentrations throughout the atmosphere do not necessarily reflect the more relevant air quality on ground level; that NO_x is only one of several air pollutants; or that the high population density in the area and the foreign import of PM into the area should be taken into account. However, the message from the image stuck in popular media and political discussion. The notion that the Netherlands was in control of its air quality, especially in comparison to other European countries, was seen by many as invalidated. A significant event in both local discussions and more professional circles was the publishing of a study by the Public Health Service of the municipality of Rotterdam, stating that living next to a highway or busy multi-lane urban road, was equal in health impact to smoking up to 16 cigarettes a day (Hegger and Slob 1999).

At the same time, the highest administrative court of the Netherlands (Raad van State), unexpectedly struck down a series of environmental permits for large urban developments and infrastructure projects (such as increasing the number of lanes on express ways). Suddenly, during a housing and infrastructure boom, many projects became

deadlocked. Hopes existed for a quick legislation fix on the national level. However, although the situation turned out to be caused by the specific Dutch implementation of European legislation, it was not the result of specific choices by Dutch lawmakers with regard to this implementation, but caused by the interaction between the EU directive and the whole Dutch spatial planning and permitting system. At the same time pollution control proved difficult: options seen as effective and acceptable to the EU (e.g. congestion charging), were not acceptable in the Dutch political climate, and options acceptable in the Dutch political climate did not seem to be acceptable to the EU at the time (e.g. banning old diesel vans). The uncertainties about the pathway, mechanisms, and actual causality in the relation between PM and health made it very difficult to ex-ante evaluate options such as filtering materials on roads and houses (or even wetting roads on days with excessive concentrations), or selectively move vulnerable people away. This lead to whimsical policy decisions: a primary school underneath an expressway was moved, whilst a hospital, at the same time, was built next to an expressway in the same region.

Involvement of researchers

An early advocate of a more fundamental solution was the Dutch Association of Engineering Consultants (ONRI)[11], whose larger members, who had divisions active in many different fields, were increasingly finding themselves in difficult positions. Their different divisions were confronted with different aspects of the PM problem and all were under pressure to find quick-fixes. Although such fixes were found, the association was worried that in the long-term these fixes would become exhausted and ultimately consultants managing and advising construction projects could get into conflict with consultants in the same firm dealing with environmental assessments. In cooperation with a fund for innovation in spatial planning (Habiforum), researchers at DRIFT were asked to conduct an explorative study. This consisted of both a problem analysis and a participatory process. For the purpose of this thesis, we will focus on the analytical activities. In this project, the framework and methodology as explained in the previous section for multi-regime problems were ad-hoc developed (and later, as part of this thesis, abstracted and refined).

2.3.2 Step 0: Persistence of the problem

The persistence of the problem was analysed first by the four criteria put forward by Rotmans:
-   **Complexity:** complexity arises from the complex patterns (local, regional, national, international) in which the many different sources of particulate matter diffuse in the atmosphere, as well as the societal and political complexity and whimsical position taking.
-   **Structural uncertainty:** uncertainty about the physiological pathways of PM health damage will continue to exist. In addition, normative uncertainty exists, such as the precautionary principle versus a risk-benefit approach, as well as the

equity dimension. For example, commuting polluters are generally of a higher social-economic class than the houses of those they directly drive past.
- **Difficult to assess (or grasp) and difficult to steer:** the involvement of several industries and governments means there is no single or logical policy arena or policymaker to address the problem. Much of the pollution comes with the wind from abroad and is out of the control of Dutch policymakers, whilst much of the domestic local sources are the result of decades of the co-evolution between living, infrastructure, and work patterns of the Dutch.

These criteria are to a large extent met. However if we take one of the other two definitions (see 2.1.4), PM is less of a persistent problem:
- It is difficult to interpret the PM problem as a self-reproducing problem. We did note that politics, policy-processes and court cases get confronted again and again with this problem, but this by itself is not self reproduction, it is merely a problem that does not get solved.
- As we will elaborate, addressing the Particulate Matter issue requires significant changes in multiple societal systems, but it is uncertain if adaptations in their regimes are sufficient or full regimes shifts are necessary.

The case at hand might thus be interpreted as a multi-regime persistent problem, or only as a policy problem rooted in multiple societal systems. But even in the latter case, many of these societal systems experience transition dynamics, thus a multi-regime transition perspective still has added value to understand the opportunities to exploit these dynamics for addressing the PM problem.

2.3.2 Step 1: Identify involved regimes

We first explored to which extent a single regime could be identified as problem and solution scope for this policy problem. To this purpose we draw an analogy to a well described natural resources management example in Transition Studies, that of water management. To some extent we could identify an 'air quality management' regime. We could further identify actors involved in maintaining this system (mainly governments at different levels, but also exhaust filter industry) and their structure, culture and practice[12]:
- A culture dominated by an 'emission' (in contrast to exposure or intake) point of view.
- A practice of end-of-pipe solutions and incremental regulation.
- An institutional structure regulating this emission approach and monitoring pollution levels, but not being related to many other aspects (such as ventilation systems in houses and cars) of exposure to pollution.

We could even identify some niches, such as the promotion of an 'immision' paradigm (manage what people are exposed to, instead of what is emitted into the air), and road and building surfaces filtering PM.

We could thus formulate a single regime describing the problem space, but the solution space was not within the scope of this 'air quality' societal system. The inability of to solve the problem within the current air quality management system boundaries was indeed the reason from some actors inside this system to request this study.

We therefore sought to identify the regimes that could together span the entire problem and solution space by using a causal chain approach. Figure 2.6 (black elements) depicts the risk chain of particulate matter from natural and man-made sources through patterns of emission and dispersion, further through intake by humans and subsequent internal biological processes to health damage.

To analyse this chain and find the solution space, we applied a method specific for health risk policy: a so-called 'hazard-barrier-target' model (HBT, see figure 2.6). This model finds all possible pathways from source to irreversible, final damage to recipient (OOEAF 1996; Basnyat et al. 2007). In a next step, all pathways or 'barriers' between source and target are identified. These might be physical, but could be of a social or organisational nature as well. If applied systematically, the HBT model allows finding a near-complete problem and solution space with regard to the problem (within the limitations discussed earlier, such as the Dutch versus European scope).

Subsequently, we identified those societal systems closely related to barriers, either directly in the physical processes or indirectly (for example an economic driver or policy influencing the physical component). We concluded the following systems to be significant (see figure 2.7):
- Energy and industry
- Mobility (transport and infrastructure)
- Agriculture
- Spatial planning (policy)
- Construction and living
- Health and healthcare (incl. lifestyle and prevention)

Two aspects that were relevant processes in society, but not a societal system/regime, were also identified: our daily rhythm of activities (e.g. sleep, eating, caring, and working) and the tendency of our economy to focus on growth and consumption (not anticipating the credit crisis). These we excluded, as they would frame the problem as a 'society as a whole' persistent problem and not a multi-regime problem. We included 'environmental governance' as an additional regime and societal system, including paradigms on risk and health, even if it cannot be associated to a particular part of the chain. Figure 2.7 depicts the risk pathway and societal sectors plotted together.
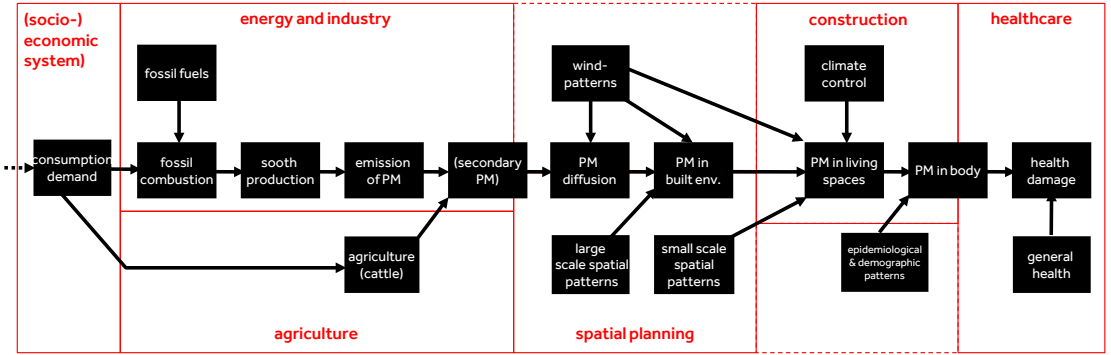
Figure 2.6 Hazard Barrier Target model of particulate matter pollution
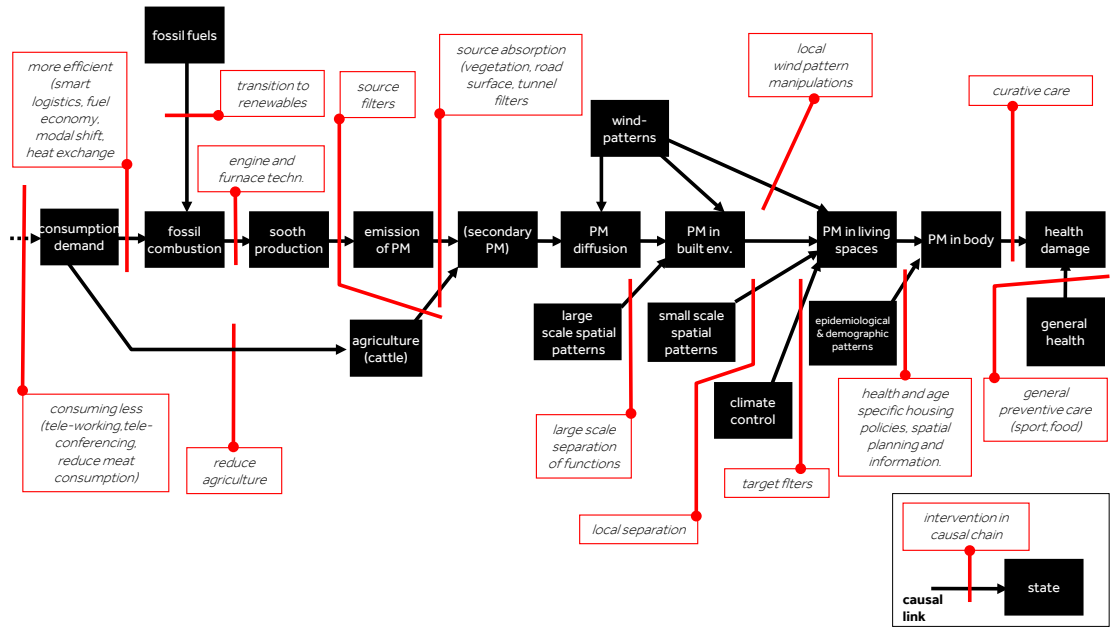
Figure 2.7 Associated regimes to the risk pathways (the overarching environmental governance regime not depicted)

2.3.3 Step 2: Multi-regime analysis

We thus undertook a multi-regime analysis, given the regimes of the previous steps. This analysis was done as desk research and analysis, but with significant inputs from participatory processes. The role of the analyst was to order and complete the input on different systems from the participants. We present the result of this analysis by first elaborating on the involved regimes and subsequently on the partially shared macro-level. In the analysis of the regimes we discuss their relation to the PM problem, their autonomous transitional dynamics, and lastly opportunities arising from such dynamics.

Mobility

Cars and trucks are a major source of particulate matter emitted not only from the combustion engine (especially older diesel engines), but also from abraded material from brakes and tyres, and from secondary PM formed from SO_2 emissions. Mobility was thought to possibly be entering into a transition to a more sustainable future, as mobility is itself became increasingly unsustainable in its current state, not only due to external effects (accidents with pedestrians, sound nuisance, various pollutants), but also due to factors directly affecting mobility such as congestion and dependence on expensive, finite fossil fuel reserves. Such a transition would be an opportunity to include PM mitigation in the process of change. If mobility does not go into a transition, with mainstream technology, innovations and gradual improvements mean the pollution per (ton)km is decreasing. On a niche level (or lower) level many radical environmental technologies are emerging from all-electric vehicles to 'dust-eating' asphalt roads that absorb particulate matter. At the same time many of the larger niches seem to have stagnated. In the Dutch context, a shift to collective transport for persons (e.g. bus, train) is no longer part of the policy goals and the confidence in shifting freight off the road is low. Another important niche, mobility by working from home, assisted by telecommunication technology, is having a revival as 'het Nieuwe Werken'. Although for the political arena not salonfähig, in 2006 it was still expected that variable pricing schemes for road use (known as electronic toll) would re-enter the policy agenda in the coming years. Such pricing could include PM pollution, especially in heavily polluted areas.

Energy and industry

Soot and other products from fossil fuel burning constitute about 30% of particulate matter. The fossil fuel regime was thought to be under increasing pressure by landscape factors such as: increasing energy consumption, a stagnating energy production (and finite reserves), a decreasing willingness to be dependent upon geopolitically unstable regions, and increasing concern for the climate effect of Greenhouse gasses. These are all transition enabling elements.

On a national and international level, many niches such as alternative energy sources and small-scale solutions were emerging. In 2006, considerable resistance against aued 'big is beautiful' paradigm was present at the regime-level. At the same time, the unpre-

cedented commitment of the government to an energy transition and an accompanying policy programme with enormous resources and new EU-policy appeared to warrant optimism for an imminent move from the predevelopment to the breakthrough phase of the energy transition.

The mobility system co-evolves with the energy system, not only because transport is an energy-intensive activity, but, in the future, transport systems might be used for energy distribution and storage: e.g. electric cars having their batteries connected to the grid as emergency and peak supply.

Agriculture

Agriculture is a significant source of particulate matter through sand dust, whose contribution to actual health issues is unclear, though also serves as an absorber of particulate matter. Moreover, 90% of NH_3 emissions are from agriculture, contributing to secondary PM. Under landscape developments of liberalisation, the agricultural regime in the Netherlands was perceived to be under tremendous pressure through decreasing trade barriers, decreasing agriculture subsidies on a European level, and national land-use pressure from urbanisation (with a dwindling pressure to preserve the Dutch countryside). Niches, such as transforming the agriculture sector into 'nature managers' and a growing market for regional products, provide opportunities to include the subject of particulate matter emissions in the design of future agriculture. At the same time, Dutch agriculture was under extreme economic pressure, thus sustainability innovation out of a feeling of corporate responsibility, seemed difficult. Moreover, the agriculture sector traditionally has a sceptical attitude towards environmental policies and opportunities. If measurement techniques would, in the future, be able to filter out the agricultural component (i.e. sand), and the non-toxicity of this component would become clearer, agriculture might get disconnected from the problem. This uncertainty would make it more difficult to involve agriculture as part of the solution.

Spatial planning

Spatial planning has a long policy tradition in the Netherlands. Traditionally, this has been quite a strong regime resulting in the alternating of highly urban and very rural landscapes that now constitute the Netherlands. The system was perceived as having become technocratic and legalistic with a system of protective zoning, permits, and ubiquitous struggles in courts. The way the Dutch organize their geographical development was, however, thought to be in transition. Contributing factors were landscape pressures such as a more right-wing political climate with more attention to freedom and less faith in the malleability of urban development, and niche development such as public-private partnerships and area development (gebiedsontwikkeling). Spatial planning was relegated to regional and local authorities. Some participants feared fragmentation and 'messification' (verrommelling) of the landscape, others felt that bottom-up, citizen and consumer driven initiatives become possible once again. These developments open up opportunities for air quality and at the same time threaten air quality.

The system seems receptive to new ideas and developments, but at the same time it will become more difficult for national government, which is, in the end, responsible to the EU for meeting the directive's goals to implement spatial planning air quality measures (i.e. geographically separating emissions sources and vulnerable recipients). Opportunities for the PM issue would thus need to be grabbed from bottom-up developments.

Construction

The construction and spatial planning regimes are closely interwoven and, as we will elaborate on hereafter, share macro-level influences, such as a greater emphasis on the freedom for citizens to live as they choose, and a lesser emphasis on large project developers contracting large construction conglomerates to produce series of 'copy-and-paste' houses built for, but not with, the people.

The construction industry was perceived to lack innovation, often building whole sets of housing blocks or new districts at a time for large project developers. At the end of the 1990s, the sector was embarrassed by the discovery of an illegal cartel involving virtual all major construction firms. Niches could be noted, but a conservative culture and power play by a few big construction conglomerates still prevailed.

Healthcare

Healthcare has developed into a specialist-curative regime (see next chapter), and is likely to undergo a transition, as it cannot economically sustain itself in its present form. The core of the healthcare system has little influence on the air quality issue, as curative options are limited. Meanwhile, some niche developments, such as a renewed interest in prevention, lifestyle (such as diet, exercising), and a (further) commercialisation of 'health' (e.g. health spas, healthy food, health magazines, health hotels) might be of influence. As health becomes more integrated into daily life and healthy environments gain commercial value, property prices may start to reflect air quality in them.

The renewed interest in prevention and a healthy environment also has a downside, related to what Beck (1992) refers to as a risk society. It could lead to a situation in which any risk or any health damage is regarded unacceptable. As for particulate matter, a toxic threshold is not established and will likely be much lower than what will be reasonably feasible (the EU limits are in the end quite arbitrary). The air quality issue might thus never be solved completely, because developments in healthcare will continue to raise standards on air quality.

Environmental governance

As stated before, the Dutch environmental governance is not particularly strong in relation to air quality. Landscape influences are weakening this regime further, with a political climate currently shifting to the right and a general attitude that most environmental issues, except for climate change, are under control. At the same time, the stronger

EU influence on legistlation strengthens the influence of environmental governance. Measuring air quality is becoming more sophisticated and cheaper, both on the ground and from space. Care for the environment is more driven by local governments, consumers, and citizen initiatives. This also opens opportunities for air quality experiments and innovations.

landscape development	societal system / regime							"megatrend"
	energy & industry	transport / mobility	agriculture	environmental governance	spatial planning	construction and housing	healthcare	
advances in ICT	x	x		x		x	x	technological progress
medical technological advancement							x	
advances in remote sensing				x				
wellfare state reforms						x	x	'laissez faire' and internationalisation
end to malleable public space paradigm					x	x		
retreat of the public domain	x	x	x	x	x	x	x	
public private partnerships						x	x	x
European integration	x	x		x				
competition from Asia / Eastern Europe	x	x	x					
liberalisation of markets	x	x	x			x	x	
individualisation		x				x	x	x	individualisation

Table 2.1 Macro-level developments for societal systems

Macro-level developments

First the macro-level of each of the systems was mapped (some of which we described in the individual system descriptions); the most important ones are listed in the left column of table 2.1, which also gives an overview of which landscape development significantly affects which societal system. This demonstrates that although some factors are shared, different systems can have very different landscape pressures on them. All the landscape factors experienced by all the systems could further be grouped in, for the lack of a better word, 'megatrends' (see the most right column in the table), or as presented in a leaflet on the professional report: umbrella trends (see figure 2.8).

2.3.4 Step 2: Identifying Opportunities

Many of the systems related to the PM persistent problem were deemed to be in tran-

sition, or at least are undergoing relevant and significant developments. In a series of participative workshops, dialogues were held regarding the possible opportunities to intervene in the on-going dynamics of those systems on the basis of the results of steps 1 and 2 (see table 2.2). The results, that the action researchers, policymakers and other stakeholders co-produced, varied in apparent feasibility and creativity. Three major overarching observations could be made on the results, each presenting a paradox: (1) all systems tend to deregulate, which is by itself an unfavourable development for an externality such as PM, however, liberalisation creates opportunities on the niche level; (2) even if unfavourable, any on-going major overhaul of a system is seen as an opportunity to try to include the PM issue into the debate; and (3) if mainstream decision-making for a system is persistently frustrated, this might open up opportunities for change, as key actors become more receptive for 'out of the box' solutions (see chapter 4 for an elaboration on this mechanism).
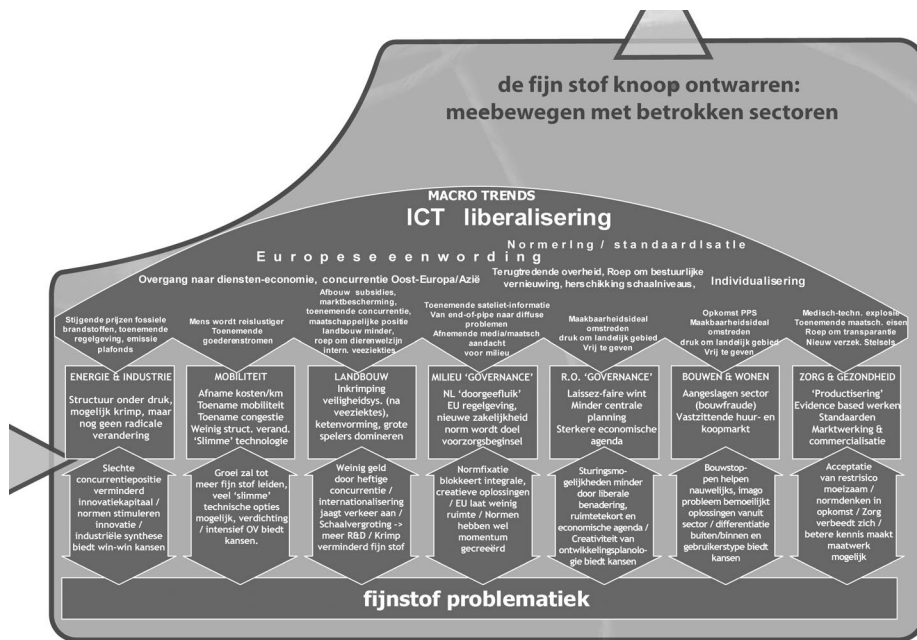
Figure 2.8 Umbrella trends, landscape factors, regimes and their relation to the persistent problem, as presented in a professional dissemination leaflet.

Overarching scenarios

In the final phase of the project, an attempt was made to aggregate the different developments and opportunities for steering into three general scenarios:
- **'Clean air as universal right':** a scenario focusing on the legal ramifications of the EU directive and a strong enforcing environmental governance regime, forcing other regimes to adapt.
- **'Informed (dis)consent':** differences in air quality from region to region and neighbourhood to neighbourhood are accepted, no different from flood risk

or crime rates. Market forces will create a niche for clean air areas that might upscale to a mainstream requirement on real estate.

- **'Don't panic!':** the problem will in the end be solved by denying it. On a national and EU level PM will be framed as a hype without scientific evidence and the confusion of correlation with causation (like radiation from GSM towers or power transmission lines).

Regime	Opportunistic development	Leverage points for Particulate Matter
Agriculture	Shrinking sector under pressure	Exploit autonomous reductions in agriculture PM emmissions to offset infrastructure emmissions
		For abandoned agricultural area: replanting with PM absorbing vegetation
	Upscaling, industrialisation	Industrial approach to emmissions, such as industrial filters on stables
Energy and Industry	Stringent regulation on other toxic emmissions	Incorporate PM into regulationg and trading regimes of toxic substances
	Industrial ecology and synthesis	Include PM into integral design
Mobility	Road use pricing schemes(in near future)	Tax PM emmissions, severely tax polluting diesels entering into urban areas in heavily polluted areas.
	Innovations in ship - dock relation	Provide landside energy to docked ships
Environmental Governance	Increasing frustration with overlegalised fragmented approach	Receptiveness for new corporatist approaches
		Integrated environmental plans can include PM
	Increasing EU pressure	Using the EU as 'bad cop'
	Cheap, high resolution models	Bottom-up initiatives based on open GIS systems
Spatial Planning	Niches such as integrated area development	Include in PM in integrated approaches
	Increasing role corporate sphere in development	PM as corporate responsiblity theme
	Spatial planning blocked by PM regulation	PM as opportunity for new style urban development ('slow cities')
Construction	Construction projects blocked by PM	Redesign blocked projects to address PM (e.g. buildings as filter/deflectors of PM)
	Specific development of health zones	Locate health zones in low concentrations zones
Health	Increasing attention for vulnerable, ageing population	Incorporate PM info into buyers / renters decision (e.g. real estate search engines)
	Increasing attention for prevention and lifestyle	Incorporate PM - especially for people with airway problems - into lifestyle advices

Table 2.2 Opportunities for PM mitigation across sectors, translated from the original report (translated from Raak et al. 2006)

Critical reflection

These scenarios provided participants insight into possible directions. However, none of them aligned with all findings of the multi-regime analysis. The first scenario does not align with deregulation. The second scenario fits well with deregulation and freedom of choice, but ignores the intervening power from the EU level as a result of internationalisation. In this scenario, a Damocles' sword of a new landmark court case and resulting locked-in system will be ever present. The third scenario does not align with the pre-

cautionary principle, contravenes a growing base of scientific evidence (and the 'risk' of the finding of a toxicological mechanism) and a growing attention for prevention in healthcare, already demonstrated by the more political, dominant role public health services played in this matter. One might thus question if an overarching solution can be found or if only partial answers and better insights are offered, as we also expected in our theoretical reflection.

2.3.5 Conclusion and discussion on multi-regime problems

Overall the framework that was developed and applied during the case, proved valuable for understanding the case. Policymakers, to which the results of the case were presented, found the multi-regime approach promising and felt it fulfilled their originally identified need to fit the pieces of the puzzle together. At the same time, it was noted that a multi-regime analysis presented in diagrams such as figure 2.8 are very complex and difficult to grasp even for experienced policy staff.

In retrospect, the study did not induce a major policy change. From a limited, containment-oriented policy approach, a 'national cooperation programme' was launched, which especially emphasized the need of coordinated action over various industries and policy areas by various actors. The coordinated actions had some effects, and PM was sufficiently reduced to meet EU standards, averting the crisis in the short-term and policymakers are optimistic about meeting new standards for $PM_{2.5}$ (I&M 2013). Recently, municipalities have started to take more drastic measures, such as banning older vehicles from inner cities. For now, these policy measures appear sufficient to avoid re-escalation of the problem.

If this policy problem turns out to be a persistent problem in the sense of requiring fundamental change in our societal systems in the long term, is nearly ten years later still not clear. Given the evolution of other environmental health risks, multiple paths appear possible: the problem might be able to be solved by the air quality regime after all, over the years the problem might turn out to require fundamental spatial separation of different human activities or it might remain in limbo for decades. In such an ambiguous case, some form of Transition Management might also be used as precautionary measure.

2.4 Case: Healthcare within a patchwork of systems

The challenges in healthcare, as outlined in 1.5.2, are directly connected to a single persistent regime, namely the healthcare system, thus a multi-regime approach as in the previous section is not necessary. The healthcare system does, however, exhibit characteristics such as shared niches with other regimes, and significant co-evolution with regimes of similar scale. We use results obtained from the case study in the next chapter to give some examples. First, we give a quick summary of the substance of the entire healthcare case of the next chapter.

2.4.1 Introduction to Dutch healthcare 1800 – 2000

The case study starts after the French occupation destroyed an already weakened old structure of guilds (which regulated surgeons and provided a limited insurance system), and religious based healthcare (provided through hospitals). For decades, developments lingered at the niche level, but then accelerated in the second half of 19th century. The Dutch state became stronger and modernised, whilst the old guild occupation of surgeon and the academic 'doctor' merged into the new profession of 'physician' (Dutch: arts). An increasing social status for academics and the increasing use of the scientific method in science, strengthened the physician's position. Through breakthroughs in medicine he was slowly (perceived to be) able prevent and cure disease, instead of only diagnosing and alleviating them. The physician profession (its organisation, paradigms, routines, etc.) became the pinnacle of the regime of the new health system.

The abundance of physicians, led to niche-seeking specialists. Originally specialists lacked a middle-class clientele and instead dealt with the poor in city clinics (or polis clinics). This weakness became their strength as poor patients were suitable as teaching material and their close cooperation with the hospital gave them access to the hygiene and support (nurses and apparatus) of the hospital. Subsequently, a new "compound regime" of the specialist, hospital, and a compulsory financing arrangement emerged with a firm focus on curative therapies. Dedicated financial arrangements allowed spectacular growth of specialist healthcare. Other approaches became marginalized. At the end of the studied period (around 1970-1990), some weakening of the regime was noticed, for example in the questioning of the authority of the specialist or 'demedicalisation' movements.

2.4.2 Boundary dynamics of Dutch healthcare

Superficially, the transition in Dutch healthcare can be explained as the replacement of an old guild based system for modern medicine through a combination of landscape influences (modern state, end of the guild system, urbanisation, breakthroughs in medicine) and niche influences (the physician as new occupation, the progressive

hygienists movement). However, on closer examination, shifting the boundaries of the health system significantly shaped dynamics. The Venn diagram technique of §2.2 can visualise the overlap and relations in a functional space (see De Haan 2010 on the definition of such a space). Figure 2.9 demonstrates the application of such a Venn diagram.

The boundaries of the Dutch healthcare system were constantly reshaped as a result of changing paradigms on what constituted healthcare. For example, hospitals around 1800 had a mixed function: they provided medical care (by medically trained clergy), but they also had a general guesthouse function. They thus had a medical component, but were not healthcare institutions per se. In the following decades, the medical component was nearly completely lost. In the 1850s the poor law restricted access to hospitals to the sick, thus defining hospitals firmly into the healthcare system. Similarly, mental health institutions were originally part of a law and order system, as the mad were seen as a threat to public order. The treatment of many relatively mild disorders such as mild depressions, etc. would be classified as part of the healthcare system only from the 1980s-1990s onwards, taking over functions previously fulfilled by, for example, pastoral services. Interestingly, recent decades see an exponential growth of 'personal coaches', providing therapy not unlike some psychotherapy, but positioned outside the healthcare system.

The case study demonstrates that only focusing on the specific societal system can underestimate the extent to which the function of the societal system is also fulfilled within other systems. Preventive healthcare is in general considered to be (too) weak in the current healthcare system and to have 'lost' to the curative approach healthcare. If we follow historical developments however, a different picture emerges. Around 1900, many preventive activities such as sanitation, hygiene in the modern sense (e.g. hand, clothes, and dish washing), food safety, traffic safety, work safety, chemical safety, etc. were considered to be part of a larger plan to improve health, and these efforts were associated with the work of physicians, especially the radical, progressive-liberal hygienist movement within that constellation. In the decades afterwards, such issues diffused out of the healthcare system (or the boundary of the healthcare system retracted). As a result of this, the enormous continuous investments in preventive health, ranging from road safety features to sewage and drinking water, and from educating children in washing their hands to food safety measures in the food processing industry, are no longer in the healthcare statistics or system descriptions.

Sanitation and drinking water are a good examples of niches with two regimes, both in transition in the 19th century. Such projects can be seen as a combination of a preventive healthcare regime and the emerging regime of large infrastructure and public works as a result of engineering, the industrial revolution, and a stronger Dutch state. On the level of Dutch healthcare as a whole, we could even identify what may be the 'co-evolution' of two regimes (two societal systems shaping each other), in this case the poor care and healthcare systems, as we elaborate on in the next chapter. For some time, poor care was the only organised part of healthcare (such as hospitals, financing arrangements, etc.), thus significantly shaping healthcare.

Figure 2.9 Schemes of the overlapping of healthcare with other societal systems, snapshots 1800-2000
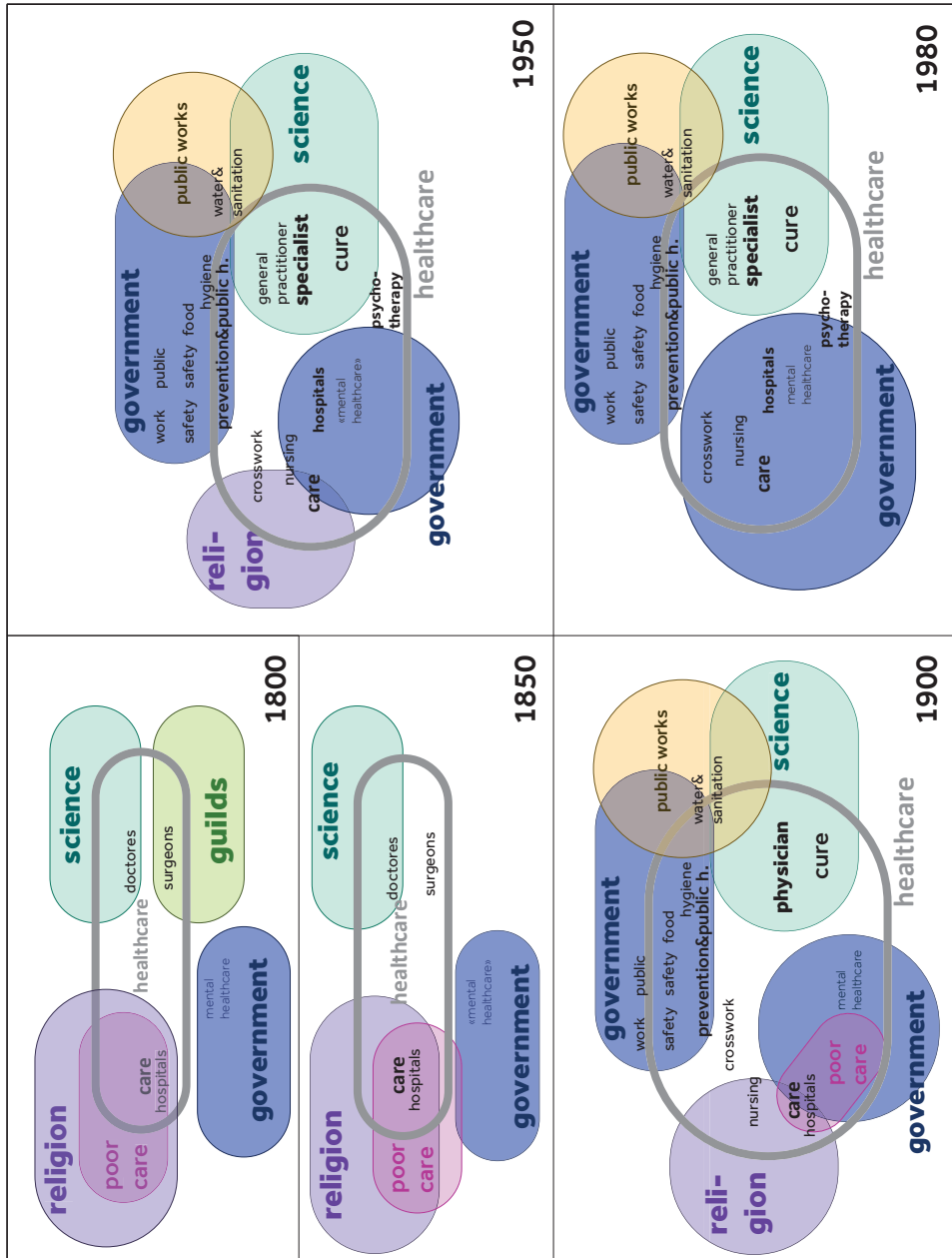
And at a number of points in time, the poor care system crucially influenced the health-care system. It redefined the hospital as a place for the sick. Poor care was a major driver of municipal health services early in the transition. Late in in the transition, the emergence of the modern welfare state was pivotal in transforming healthcare financing from individual and voluntarily to compulsory and public systems. At the end of the case study, specific functions of poor care were taken over by the healthcare system.

2.4.3 Examples of practical/professional applications

The method applied to healthcare history, has been re-applied in actual policy and business contexts, although not in a time series. For example: in a strategic repositioning process of a large mental healthcare provider, this approach was used to understand the boundary dynamics of mental healthcare, in this case even with explicit axes of the functional space (severity of disorder and limitations in daily and social life) were identified (see figure 2.10).

Figure 2.10 Scheme of boundary dynamics from the strategic plan of GGZ Oost Brabant

2.5 Conclusion on the landscape-system relationship

We explored the relation between the system and the landscape within the context of transition policy arguments in this chapter. Overall we found the dynamic relation is thoroughly addressed in existing literature in a way that can be used for analysing and/or developing transition policy arguments. We did find issues with demarcation, although this could largely be addressed by attention to demarcation dynamics as part of Transition Management's existing attention for problem structuring. Some elements in demarcation might be more objective than in the existing Transition Management literature is assumed, leading to the critical point of attention if system demarcation deals in a sensible way with couplings in the system.

We also identified as a point of attention the explication of connections and overlaps with other systems. To address this point of attention, we developed the supportive analytical lens of overlapping societal systems, which can be visualised through a Venn-diagram based on Genus and Coles (2008) revision of the MLP. In applying this to healthcare, we indeed found significant 'boundary dynamics': boundaries are constantly redrawn, and co-evolution with other regimes is possible. These findings are in line with Raven and Verbong's (2007) interacting regimes approach. Allowing societal regimes to overlap while explicating ambiguity instead of attempting to reduce it allows for the identification of boundary issues, and builds upon existing knowledge of 'boundary work' (Hillman et al. 2011; Williams 2002), which also addresses Walker and Shove's (2007) plea to embrace (the politics of) ambivalence in transition studies.

We did find that the relation between policy problems on one hand and societal systems in transition on the other can be quite complicated. From a policy perspective, any gap between perceived (future) situation and desired situation can be a policy problem and the possible solutions determine the problem and solution space. This space can cut through many different societal systems and regimes therein. Such policy problems may or may not be the persistent problems described in Transition Management, which also depends on the definition of persistent problem used.

Our case of Particulate Matter pollution was atypical for Transition Management not only because it concerned multiple regimes, but also because it is a quite technical, perhaps limited problem compared to great sustainability challenges such as the energy or health transition. We might however wonder if not also great multi-regime challenges exist. For example: from a policy perspective, not the much discussed energy system is a problem, but the climate problem, which is a 'mess' of debate about scientific merits, causes and effects, possible solutions in various societal systems, amongst which housing, energy, mobility, and our water system. A problem which is overlapping with other policy issues such as geopolitical resource dependencies, and the north-south divide. From this perspective, the energy transition, mobility transition, construction transition and water management transitions are 'merely' certain aspects of the problem and solution space of the larger persistent climate problem. The interrela-

tion between societal regimes, persistent problems and policy problems thus warrants further research.

Similarly, TM action researchers are now engaging in social-economic issues on the neighbourhood level, which are a 'mess' of poverty, education, employment opportunities, and (environmental) health problems, that play across many scales (from the state of the international economy, through national policies, regional urban planning to the (lack of) social fabric at the street level). Raising the question if a neighbourhood is a societal system to be transitioned, or if a neighbourhood is a cross-cut of many different larger societal systems which need transitions.

For some of these multi-regime problems, it might become controversial if a middle range theory of transition dynamics suffices, a critical point of attention for policy arguments connecting transition dynamics to Transition Management is thus the validity of middle range and other core concepts of transition dynamic theories.

Notes

1. One of the reasons might be that in Rip and Kemp (1998) the conclusion ends with the socio-technical landscape as the way to conceptualise the macro-level, without explaining why they abandon the other two possible conceptualizations of the macro-level they identify in (the other two being the Mumfordian megamachine and patterns in transformations of society).

2. In Geels (2002) the 'patchwork of regimes' is positioned on the meso-level in figure 3. In figure 5, confusingly, the depiction of a single regime is labeled 'patchwork of regimes'. In Geels and Schot (2007) a singular 'socio-technical regime' is positioned on the meso-level in figure 1.

3. Note the actors cannot be selected based upon an a priori system demarcation, as their selection is a perquisite to establish a non-individual demarcation. The actor's own demarcation is thus dependent on a prior selection of participants

4. One might still argue a persistent pr oblem is only a persistent problem if a single transition of a regime suffices to solve it (or alternatively put the transition of a single regime in the right direction is a necessary but also sufficient condition by definition to solve a persistent problem). But this would be very counter-intuitive.

5. A rebuttal of these criticism might be, that system is demarcated in a participatory process (Loorbach 2007a). However, such participatory processes - and their democratic legitimisation – are themselves subject of criticism from the same school, as for example written down in the exchange of views between scholars following the Shove and Walker publication in research policy (Shove and Walker 2007; Rotmans and Kemp 2008; Shove and Walker 2008).

6. A possible third category would be when the second condition is also not met, for example irreconcilable, fundamentally different views exist on even the most general formulation of a problem-regime relation; or within an issue, we find many problem-regime relations without any similarity or interrelation. For example, there is a diffuse set of problems relating to youth, crime, depressions, unemployment, and neighbourhood decay, which various actors blame on the state of mental healthcare, moral decay, the penal system, bad parenting, education, social security, religious differences, the tax system, immigration, and toxic chemicals. The third category we will not address in this thesis, but given the difficulties we found for the second category, it seems unlikely that Transition Management's analytical tools can be applied to such a problem.

7. This is also how the pivotal Routledge series on Transition Studies is structured into books

8. We could argue that parts Transition Management might also be used to manage 'society as a whole transitions', but then TM would no longer be relevant to the topic of this thesis – the relationship between regime shift dynamics and TM.

9. This does not imply that health is affected by many other societal systems and that healthcare has relations to other systems, we only imply that the current healthcare system can be used as a pivot for a transition to address persistent health problems in general.

10. A good factual primer on particulate matter in the Netherlands is 'dossier Fijn Stof' (RIVM 2013). In general, the knowledge on PM reflects the scientific consensus at the time of the case study.

11. ONRI is an abbreviation for Organisatie Nederlandse Raadgevende Ingenieursbureaus

12. We will elaborate on structure, culture, practice to identify regimes and other constellations in the next chapter.

13. The model is related to the older 'epidemiological triad' of Agent, Host and Environment, see for example Macdonald, Gordon. "Violence and health: the ultimate public health challenge." Health promotion international 17.4 (2002): 293-295.

14. RvB GGZOB (2012), strategy formulation supported by author, as part of a consultant team of Viatore

3. From systems to subsystems: applying multi-pillar theory and structure, culture and practice to Dutch Healthcare history

In the previous chapter we addressed how a societal system at hand is positioned in a wider context, in this chapter we will explore the dynamics within this system and the relation of these dynamics to the system-as-a-whole. Such dynamics are at the core of Transition Studies, and covered well in literature. However, known methodological drawbacks of the conventional Multi-Level Perspective particularly affect the analysing and/or developing of transition policy arguments (§3.1). Thus we will adapt the more advanced approach of multi-pillar theory (De Haan 2010; de Haan and Rotmans 2011), for empirical application, with specific attention for the structure, culture and practice triplet of Rotmans (Rotmans and Loorbach 2009), as these three aspects play a crucial role on all levels of the thesis research framework (§3.2).

The results will be applied to the historic transition(s) in Dutch healthcare in the period from the early 19th till the late 20th century in an extensive historic case (§3.3). The concluding section (§3.4) will identify how we can interpret the dynamic state of a system in a transition policy argument and reflect on the wider implications for Transition Management. The research underlying this chapter has been largely a collaboration with De Haan's Ph.D. research (De Haan 2010) and has been published in Van Raak and De Haan (2016). In this collaboration I focused upon developing the empirical methodology and the structure, culture, practice triplet, whereas De Haan focused on how to interpret the theoretical conditions, patterns and path for analysing empirical situations. The relation to transition policy arguments was exclusively of this thesis' research. The dominant sequence of discovery was from conceptualisation (§3.2), via the case (§3.3) to reflecting upon the explanans / explanandum distinction (§3.1).
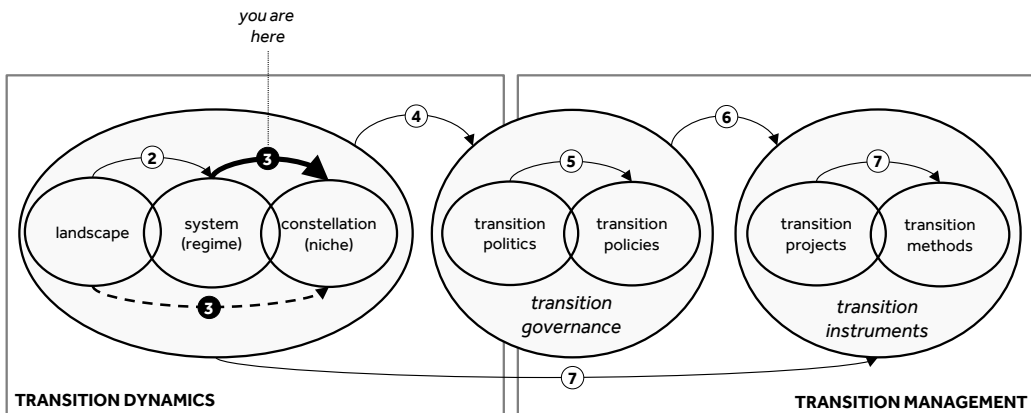
3.1 Theoretical reflection: use of the MLP for policy

This section will first discuss the existing literature on the dynamics within a system in transition before addressing how theories and models in literature might be used for developing and/or analysing policy arguments and the role of historic cases and future projections of transitions in policymaking.

3.1.1 Overview of literature

The niche-regime interaction was originally juxtaposed against a model of innovation diffusion, in which an invention would spread 'as an inkblot' in its adoption by customers or other users in an 'innovation diffusion curve'[1]. It was felt the nature of change was more structural and more complex: "what is usually called technology diffusion is really a transformation process by which a new technological regime grows out of the old regime" (Rip and Kemp 1998, 389). The conceptualisation of technological change as niche-regime interactions emphasizes that socio-technical systems are composed of highly interdependent parts. Innovations occur within a prevailing regime, in which these innovations need to transform the regime in order to breakthrough against the backdrop of a changing context for the system. The focus thus shifts from invention to the formation and active role of the niche in changing the system:

> "New technologies are always introduced against the backdrop of existing regimes and sociotechnical landscapes. New technologies become more robust as they benefit from dynamic scale and learning economies and institutional adaptations, and find new applications. In this process, irreversibilities increase, and a reversal occurs. The technology becomes a force of its own, the new configurations become part of the sociotechnical landscape"
>
> (Rip and Kemp 1998)

In later descriptions, the creation and protection of technologies is still attributed an active role (for example through strategic niche management), however the niche is assigned a more passive role in the niche-regime interaction. Schot and Geels (2010, 24) use the metaphor of seeds, quoting (Mokyr 1990, 299) "the[ir] environment (…) is the main determinant whether they will sprout". Geels and Schot state niches only stand a chance once the regime is destabilised by the landscape (and not the niches themselves): "wider breakthrough of niche-innovations often depends on external landscape changes that create pressure on existing regimes, opening them up" (p. 25). Not all scholars appear to agree, Rotmans (Rotmans 2005; Rotmans and Loorbach 2010a), for example, defines the critical condition of 'modulation' as an alignment of dynamics at all three levels, without a priori assigning the niches a more passive role.

The niche-regime dynamics as described by the MLP, have been criticised by various authors. Genus and Coles in their article 'rethinking the MLP' (2008) and Geels rebuttal to seven groups of criticisms (2011) provide an overview of criticism on the MLP. Key points (besides those raised in chapter 2) are:

- Agency does not have a central role in the regime-niche interaction, as the regime and the niche are both 'structures' in the sense of Giddens' structure-agency dichotomy, leading some to consider the niche-regime dynamics to be a functionalistic explanation (Berkhout et al. 2004). Although the regime is sometimes attributed some agency (Rotmans and Loorbach 2010b; Geels and Schot 2005). Smith et al. (2005) critically reflect on the agency-regime relation.
- The intransparent delineation of various aspects of the 'resulting dynamics', such as the delineation of the transition in time, the delineation of the regime in scope and the distinction between transition dynamics and other processes of change.
- Lack of a rigorous empirical method: "A fundamental concern is that the case study work informed by the MLP has been conducted unsystematically" (Genus and Coles 2008, 1440). This concerns amongst others case selection and selection of information sources (including a possible overreliance on secondary literature), and a focus on technological artefacts in studying transitions.

In addition, as discussed in chapter 1, Rotmans and Loorbach (2010a, 133) also criticize the conventional MLP, for (amongst others) having a too large scale gap between the meso-level of the regime and the micro-level of the niches.

Extending, adapting, alternative conceptualisations

Many scholars have built upon the conventional niche-regime dichotomy in various ways. We can distinguish the following directions in which research on the niche-regime interaction has developed (see table 3.1 for an overview):
- Focusing more on technology (in the sense of technical options) or moving away from this focus to a more societal view.
- Improving definitions and systematic empirical methodology.
- Specifying forces/interactions and mechanisms.
- Typology of interaction patterns.
- Formalisation of the above and sometimes subsequently translation into an explorative, mathematical or algorithmic model.
- Integrating approaches from other disciplines: such as power, culture, economics, or Innovation Systems.

Genus and Coles' critical conclusions could be seen as a modest revision, aiming to improve empirical method, transparency, and definitions and demarcations. Geels and Schot have built upon their own model by developing a typology of transitions based on the timing of developments on the niche, regime, and landscape levels (as discussed in Chapter 2).

De Haan (2010; de Haan and Rotmans 2011) has developed a formal model, which distinguish three levels (landscape, regime, niche)[2], three forces (conditions) driving change (stress within the regime, tension between the regime and landscape, and pressure from the niches towards the regime); and three change patterns driven by these forces (adaptation of the regime, including co-evolution between niche and regime, top-down reconstellation, and niche empowerment)[3]. An ideal type path is also given

for each of these patterns. De Haan (2008) has translated this formal model into a continuous mathematical model, based on differential equations, in which 'niche' and 'regime' are more labels for entities of different 'power' (or share in 'functioning' of the whole system), rather than entities of a different nature. These entities of his model are referred to as 'constellations'.

Markard and Truffer (2008) propose a fundamental revision through a complex integration of the Innovation Systems approaches and the MLP. In their framework, niches would be related to different types of innovation systems and regimes, under landscape influences.

Raven (2006) developed a two dimensional matrix, which predicts niche-regime interactions on the basis of the stability of the niche and the regime. An unstable niche has little chance to succeed (Raven coins these 'dead-end streets' where the regime is stable and 'missed opportunities' where only the niche is unstable), but a stable niche can either compete with a stable regime ('promising technology') or get incorporated into the regime (if the regime itself is unstable). This 'stable niche' concept appears to have some similarities to the notions of niche-regime (de Haan and Rotmans 2011) and empowered niche (Avelino 2011).

Haxeltine et al. (2008) have developed a framework for explaining transitions. Their layers of explanation are: the interactions between subsystems, between subsystems and the socio-technical landscape, and lastly the internal functioning of the sub-systems. This is a four level model, adding the level of 'empowered niche' roughly between the niche and the regime, and a 'support' canvas (which might be considered to be the fifth level of description). As main mechanisms they propose transformations (from entities on one level to entities on another of the four levels) and adaptations (changes in an entity without changing its position on the multilevel framework). The resulting patterns are mapped to Geels and Schot typology of pathways (Geels and Schot 2005). Schilperoord, Bergman, and others have translated the formal model into a multi-agent simulation model and applied this empirically to four historical cases (Schilperoord et al. 2008; Bergman et al. 2008).

Avelino (2011, 257) has elaborated on the power aspects of niche-regime(-landscape) dynamics in a specific theoretical framework. In her framework, transitions can (partly) be explained as the active and passive exercise of powers by groups of actors, with each traditional MLP level associated with a specific type of power: at the landscape level systemic power is exercised; at the regime level and the niche-regime level (similar to Haxeltine's 'empowered niche') transformative power is exercised; and at the niche level innovative power is exercised.

Berkhout's framework (Berkhout et al. 2004; Smith et al. 2005; Rotmans 2005) could be seen as a model integrating dynamics and governance. They argue three crucial dimensions in transformation of regimes: (1) the degree to which the general selection pressures upon a regime 'are articulated' towards the regime, (2) the degree to

which resources needed for transformation are available to regime members or the resource locus is outside the system, and (3) the extent of coordination between regime members. The resulting dynamics lead to a typology of transition dynamics distinguishing between endogenous renewal, reorientation of the trajectories, emergent transformation, and purposive transitions. Both Avelino and Berkhout et al. have thus developed frameworks, which integrate transition dynamics and Transition Governance aspects in a single framework. Smith et al. (2005) also postulate an evolutionary mechanism for regimes, in which regimes with the ability to adapt might be selected (which can be contrasted to a view of the regime as rigid and locked-in).

Verhees (Geels and Verhees 2011; Verhees 2011) has developed a framework more oriented toward the cultural aspects of transitions, explaining how cultural legitimacy of the regime is created, maintained, challenged by opposing actors, and counterattacked by supporting actors. The framework distinguishes six dimensions relevant to the creation and attacking of cultural legitimacy by focal actors: actor credibility, empirical fit, centrality, experiential commensurability, and macro-cultural resonance.

Sandén and Hillman (2011) propose to (additionally) explain transition dynamics from an approach more sophisticated than simple competition in the relationships between technological alternatives. They distinguish relations such as symbiosis, neutralism, parasitism, and commensalism. Spaargaren (2010) has developed a specific framework for analysing transitions from a social perspective, in which consumers (agents) and producers (structure) meet, integrating insights from 'ecological modernization' (Spaargaren 1997).

Van der Brugge (2009) has an approach on interacting processes instead of interacting levels or constellations. In his approach there is a 'double loop' of institutional niche and regime processes. Van der Brugge characterizes the niche-regime interaction by origin (from the regime or not) and patterns of reconstellation, absorption (into the regime of the niche, similar to De Haan's adaptation pattern), and empowerment of the niche. In Van der Brugge's framework, niche-like processes are initiated from regime-processes and the results later incorporated into these processes, as a method for the regime to adapt.

Frantzeskaki (2007) constructed a conceptual framework in which different types of forces are distinguished: formation forces (new practices, niche, and societal demand), support forces (standardisation, provision of resources, and exercise of power) and triggers (systemic failures, crises, and exogenous developments). These forces can be mapped to De Haan's conditions for change (Frantzeskaki et al. 2008). These forces express themselves in the aspects of a system: civil society, institutions, market, and technology (and the environment). Together they lead to 'paths' of alternating genesis, stasis, and metastasis dynamics.

	empirical methodology	specifying forces and mechanisms	typology of patterns / paths	integration of new aspects and disciplines	formalisation	modelling
Avelino		x		x		
Berkhout, Smith, Stirling			x			
De Haan and Rotmans	*	x	x		x	x
Frantzeskaki	x	x	x		x	
Geels and schot		x	x			
Genus and Coles	x					x
Haxeltine, Schilperoord Bergman	x	x	x		x	x
Markard and truffer				x	x	
Raven		x	x			
Sánder and Hillman		x		x		
Spaargaren	x	x		x		
Van den Bergh		x		x	x	x
Van der Brugge		x				
Verhees		x		x		
Yücel		x			x	x

*) as part of joint research with the research for this thesis

Table 3.1 Contributors to the niche-regime interaction in various
research directions (not all modelling approaches shown)

Yücelhas developed an 'actor-option' framework for transitions, in which actors (providers, practitioners, regulators, opinion groups) and options (e.g. different technologies) shape each other, as not only the actor's interactions shape the technological system and the technological options, but actor's preferences, knowledge, and behavioural identity are also shaped by the developments of the system, this is a formalised model capable of running simulations.

Holz (2011) provides an overview of mathematical or algorithmic modelling approaches, which besides mentioned models, lists Safarzyńska and Van den Bergh's economic model of transitions (Safarzyńska and Bergh 2010; Safarzyńska et al. 2012), Timmermans (2008) agent-based punctuated equilibrium model of transitions, Weisbuch's (2008) product competition model, Holtz own agent-based model (2008), Chiong Meza and Chapin's (2008) multi-aspect model of carbon trading and taxing in transitions, and Afman's (2010) agent-based model of consumer choice in lighting.

3.1.2 Use of historic research and future projections in transition policy argument

Typically, a policy argument will be a claim about how future actions can favourably change a future condition of the system. There would be little point in policy practice in devising policies for past situations. Moreover, even if we study historic policies, the typical research question will still be 'how did they at that point in time plan into the future?' and how their expectations of the future in hindsight relate to our current understanding of these expectations. From this we might learn about how we can improve future projections or improve the robustness of policy actions for multiple futures or else what the limitations of long term policy might be.

Incompatibility of the conventional MLP with future applications

The Multi-Level Perspective is positioned by Schot and Geels ground their position in methodology for history research, as they: "to understand and influence long-term and complex socio-technical transitions" is of a "deeply historical nature" (Geels and Schot 2010, 13), such a "theories of history" methodology is not compatible with future applications.

The mentioned issues of temporal delineation by Genus and Coles (2008) are aggravated in future applications. Obviously, the end point of the transition is not known a priori; not only in respect to timing but also on a fundamental level what the transition might entail. As we will demonstrate in the case study, it would be hard to impossible to known before the transition (or early in the transition), what the transition will be. This will also make it challenging to even define the starting point of a transition a priori, if we do not know what the transition will be, it will be difficult to define what would entail the first signs of such change. A transition policy could also be developed for

on-going transitions, thus we would need to interpret how policy actions interfere with on-going dynamics, without knowing the path these dynamics will take.

If we would use the MLP for prescriptive policy analysis, this would require first to decide upon what the future transition will entail and then to interpret the current state of the system in relation to that future transition in a societal system. Such a decision appears extremely difficult to motivate, especially as for societal systems we cannot rely on tangible artefacts or technological innovations to be guiding our analysis, as is advocated for socio-technical systems (for example Strategic Niche Management 'picks' a promising technology on the basis of technology assessment). For complex systems such as healthcare, we might not even know a priori in a forward-looking analysis what the regime at present entails.

Secondary role for historic research

This does not imply historic research into transition dynamics has no role whatsoever in analysing and/or developing policy arguments. We already mentioned that we might compare historic policies to our current understanding of the related historic transition dynamics to learn about how we can make to some extent future projections and design robust policies.

Moreover, we discussed in chapter 2 how the persistent problem plays an important role in Transition Management. These persistent problems often have historic roots. Understanding persistency is thus closely related to understanding a system's past. Furthermore, in determining the current dynamic state, information about the recent past behaviour of the system is very relevant. For example in assessing if developments are increasing in pace and magnitude or stabilising. As transitions play out on very long time scales, the 'recent past' may very well be decades or more.

Theories and models helping to project (scenarios for) future transitions, might be improved or gain credibility by comparing them against past dynamics in societal systems. This might be an actual model calibration or validation, but more likely a more reflective, qualitatively comparison of observed and expected conditions and patterns. This was one of the main motivation to undertake an historic case study for this thesis (see 3.3) to test the method developed in the next section[4].

3.1.3 Explanans and explanandum

One way out of the problem of the conventional theory not being able to project into the future, is to build different scenarios of possible transitions and backcast these to the present, as done by Sondeijker (2009; Sondeijker et al. 2006) for a scenario-methodology, who refers to these as 'multilevel stories'. This thesis takes a different approach to exploring a method, which does not require a priori defining the transition, yet is able to characterise a transition. Such an approach might also help in discerning between

more and less significant scenarios generated by Sondeijker's method and by determining the current state as a starting point for transition scenarios.

If we want to analyse transitions without a priori defining them, we have to distinguish between explanation ('explanans') and 'that what is to be explained' (the 'explanandum')[5]. This also greatly enhances transparency of transition policy arguments.

Conventional MLP does not distinguish between explanans and explanandum

Geels and Schot position the MLP and their dynamic theory of pathways as a process theory (Geels and Schot 2005) as a 'process theory'[6] and defend what they call a "non-positivist" position fiercely:

> "while this qualification [of the MLP as a heuristic device] may be a severe criticism in positivist research traditions, heuristics are seen as important in interpretive traditions. I therefore take the qualification as a compliment in the sense that MLP frames the topic of transitions in a certain way and asks particular questions about patterns and mechanisms"

> (Geels 2011, 34).

This might be the reason why in conventional applications of the MLP explanandum and explanans[7] is blurred[8]. Earlier, Berkhout, Smith, and Stirling criticised (Elzen et al. 2004, chap. 3) the tendency of historic narratives, at the expense of analysis of mechanisms and conditions

Adapting Multi-Pillar as alternative to the conventional MLP

The conventional MLP is thus limited to a certain disciplinary frame, which is not suitable for application in analysing and/or developing transition policy arguments. Fortunately, as described in the previous sections, many elaborations and adaptations of the conventional MLP exist. These models are promising for solving the problems of the conventional approach to transitions by separating explanans and explanandum.

An alternative model is preferred that: (1) is generic instead of focusing on a (disciplinary) aspect; (2) is formalised as assumptions, and mechanisms are explicit, and can thus be examined and adjusted; (3) has at least one layer of explanation to separate explanans from explanandum; (4) is not biased towards technology or in direction (bottom-up / top-down); (5) has an empirical method for application; and (6) minimizes the number of additional assumptions introduced. None of the adaptations meet all these criteria. The Haxeltine c.s. model meets many of the criteria, but has the disadvantage of being a model with discrete changes of the nature of entities, which introduces additional delineation problems in qualitative empirical application.

The multi-pillar conceptual model also fits most criteria and does not have this drawback. A choice was thus made in this study to adapt the De Haan multi-pillar model in a joint effort with De Haan (van Raak and De Haan 2016). As there was not yet an associ-

ated empirical method to apply the theoretical multi-pillar model to empirical material, such a methodology has been developed as part of this study and jointly with De Haan. A particular point of attention is the empirical description of the 'constellations'. De Haan characterises constellations by their 'power', the conditions they experience, and type of change patterns they exhibit. His starting point is that these constellations differ in substance in how they 'fulfil a functioning'. For this we use the 'Structure, Culture, Practice' triplet introduced by Rotmans (Rotmans and Loorbach 2009), and defined as (cited in De Haan 2010):

> "Structures: physical infrastructure (physical stocks and flows), economic infra-structure (market, consumption, production) and institutions (rules, regula-tions, collective actors such as organizations and individual actors). Structure is recursive: it is both the result and means of acting.
>
> Cultures: the collective set of values, norms, perspective (in terms of coherent, shared orientation) and paradigm (in terms of way of defining problems and solutions). In our transition context, then, culture has a quite specific meaning, one that differs from the traditional sociological conceptualization of culture.
>
> Practices: the ensemble of production routines, behaviour, ways of handling and implementation at the individual level, including self-reflection and reflex-ive dialogue."
>
> (Rotmans and Loorbach 2009; De Haan 2010)

The structure, culture, practice has apparently evolved out of experiences in action research and participatory processes as a convenient 'checklist' that in the colloquial meaning among stakeholders offers a comprehensive, intuitive way to describe systems, regimes and niches. Even if intuitively sound, these definitions are somewhat eclec-tic[9]. In the next chapter we will review Rotmans' structure-culture-culture triplet and propose a slightly adapted, more general definition.

3.2 Conceptualisation: integrating the what and how of transitional change

This section will discuss a method for empirically applying De Haan's multi-pillar theory, including the 'structure, culture, practice' characterisation of constellations. The consequences of the new method for developing and/or analysing policy arguments will be reflected upon together with the case results in the concluding section 3.4.

3.2.1 Structure, culture, practice triplet

We will discuss and build upon the current definition of the triplet, by defining and adding one element at a time, taking into account the various insights that have developed in Transition Studies and other fields as much as possible.

Structure (and agency)

The notion of a structure is pivotal in many concepts within Transition Studies. The regime by (the original) definition is a set of rules (in the broadest sense), and the socio-technical landscape can be seen as a collection of tangible and intangible structures. The MLP even has been criticised as being too structural (Smith et al. 2005; Genus and Coles 2008), paying little attention to agency. Spaargaren et al. (2013) states: "the key role of human agents as the prime and ultimate carriers of transitions is receiving only minor attention."

Geels (2011) rebuttal is that the MLP can accommodate agency. Regardless if the MLP incorporates enough agency, agency is considered a crucial aspect of transitions, especially in relation to Transition Governance (Grin 2010), drawing upon sociological sources such as Giddens (1984). For multi-pillar De Haan argues on agency in relation to his theory:

> "One could certainly maintain that this holds especially in the case of pillar theory since it is completely devoid of actors. It is a theory of societal systems proper and actors (in the sense of individuals) are only considered, and even then only implicitly so, as parts of constellations. The straightforward defence of this would be that this is largely a matter of scale and the scale of the individuals is not that at which transitions are studied here. The matter is, however, somewhat more subtle.

On the one hand the protagonists in the theory, constellations, are acting entities. This does not mean that these societal subsystems are personified. They have agency and can very well be considered actors, although they are not individuals. (…) One the other hand pillar theory proposes that constellations do not simply have functioning as a property but rather produce it. This can be understood using Giddens's (1984) duality of structure and recognising that underneath such a social structure are the actors that

through their actions, enabled and restrained by the structure, reproduce it." (De Haan 2010, II.18)

Geels and De Haan have in common that they both seem to argue that in their concepts agents or agency are not an explicit component, but their concepts are interacting with agency. I would thus propose to allow agents (or individuals' agency) to be associated with constellations, but to not consider them part of constellations. This also avoids personifying constellations, or equating individuals with the constellation they belong to. This is in line with Stirling, Smith, and Berkhout's (2005) approach to distinguish between 'regime' and actors that can be a member of one or many regimes and can be core or more peripheral members. In our first step of conceptualising the structure, culture, practice triplet, we thus position structure within the constellation, agency outside the constellation, and the two processes shaping each other (see figure 3.1):
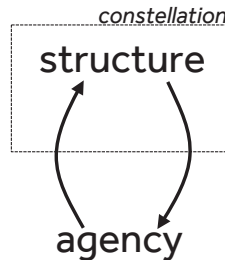
Figure 3.1 Constructing the SCP triplet, step 1 (arrow indicates 'shapes')

One grey area between structure and agency, are collective actors. Is for example a large multinational or small NGO a collective agent? Or is agency limited to individual human beings? This appear to be context specific: for example in global sustainability, we might consider states and international NGO's to some extent to exhibit some level of agency, on the other hand if we study a national energy transition, a national state might be more suitable to interpret as a structural element.

Practice, Structure (and agency)

Geels and Schot, again drawing on Giddens, state "structures are the rules and resources that actors draw upon recursively when acting in a concrete local practice," and further quoting Giddens: "social systems…typically can be best analysed as recurrent social practices" (Giddens 1979, 65–66; cited in Geels and Schot 2010, 44). Practice is thus neither an instance of structure nor agency, and thus neither part of, nor clearly outside the constellation. Practice is at the interface of structure and agency. Or as Verbeek summarizes: "interaction between actors and structures within the context of social practices, hereby connecting the extremes of actor- and structure-oriented research" (Verbeek 2009, p 296).

For empirical description of constellations, the 'practice' element of the SCP triplet could be considered to be examples of 'typical practices' in (or because of) a constellation,

placing more emphasis on the structural (or at least non-agency) aspect of practices. Or as Spaargaren puts it: "although emphasizing agency in transition processes, a practice-based approach does not build primarily on conscious decisions by individuals (…) our daily life is constituted by sets of routine behaviours which are enacted by human agents without always considering the reasons" (Spaargaren and Oosterveer 2010, 9). We thus arrive at a conceptualisation as in figure 3.2:
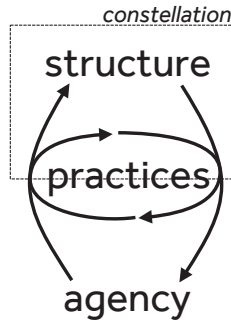
Figure 3.2 Constructing the SCP triplet, step 2

As discussed, within Transition Studies, there is fierce criticism of the underemphasising of practices in describing, explaining, and steering transitions (see §2.1.5). The adding of a 'practice' element would at least require paying some attention to practices in constellations[11].

Can we add culture?

From a more sociological-philosophical point of view, much can be said against the descriptive framework for constellations including 'culture'. Or as Raymond Williams opened his infamous book 'keywords': "Culture is one of the two or three most complicated words in the English language (…) mainly because it has now come to be used for important concepts in several distinct intellectual disciplines and in several distinct and incompatible systems of thought." (Williams 1985, 87). Not only is culture a notoriously complicated concept, it is also commonly used as an all-encompassing concept: "everything is culture!" which "open[s] up an almost unlimited field" (Harrouel 2001). Harrouel also notes that 'structure' and 'culture' in this sense are competing terms for such an all-encompassing notion of what influences individuals. Even physical structures are not necessarily outside of the scope of culture (as culture can also be used interchangeably with 'civilisation' in some approaches). Specifically on the relation between structure, culture, and agency, Hays (1994) has argued feverously against using culture as a separate category or a subcategory of structure.

Verhees (Geels and Verhees 2011; Verhees 2011), has studied the cultural dimension of transitions, cultural legitimacy, in depth and provided a framework for analysis of cultural legitimacy in transitions. However, he "acknowledges that to fully explain exactly how innovation journeys play out, other dimensions such as power relations, markets,

(sunk) investments, politics etc. have to be taken into account. But the trade-off of this dissertation's sophisticated conceptualization of cultural legitimation (which stems from its interest in societal embedding) is that its conceptualization of these other dimensions is underdeveloped" (p. 282), pointing again to the problem of combining more cultural and material approaches in a single framework.

On the other hand, a structure-culture has found its way into many other scientific fields. This varies from the field of military science, for example in a study into cultural and structural decision factors in conflict (de)escalation (Legro 1994), to the field of literature science, in distinguishing cultural factors (interest in the 'frontier') and structural factors (specific copyright circumstances) in the rise of 'the Western' (McGill 2007). And from studies into the participation into medical research (Giuliano and Mokuau 2000) to a structural-cultural framework in explaining education paths (Pearce 2006), and from a structural-cultural model for describing accident prevention (Lund and Aarø 2004), to a model of organisational learning in public organisations (Moynihan and Landuyt 2009).

How can we interpret this difference in appraisal of a culture-structure distinction? A cynical interpretation might be that many of these more applied fields of science use a pre-Tylorian (Tylor 1871; cited in Harrouel 2001) narrow notion of culture; ignorant of the well-established problems with a humanistic conception of culture. However, another interpretation might be that the more applied nature of these theories, relative to sociology, allows this distinction.

Culture as used in Transition Management, seems to refer to the more 'soft' less 'tangible' elements of a constellation, e.g. its values, its norms and its paradigms. Culture in TM appears to refer to those elements that might be very persuasive for people but in the end they are not absolute or physical constraints (van Raak 2008).

From a sociological point of view, such a dichotomy between 'hard' and 'soft' norms and structures is highly questionable. Violating cultural norms might have severe consequences such as shame, social expulsion, and reputation damage. Such consequences in their turn have very 'material' consequences such as loss of livelihood, market share or formal powers. Similarly, conforming to cultural elements will have material benefits. The danger is that by limiting culture to certain aspects, other aspects are seen of in an absolute nature and not open to debate. Structural elements might be not as clear-cut and absolute constraints. For example, economical resources would usually be considered to be part of structure, but most modern money exists by the virtue of the trust people put in, without underlying intrinsic value (a fiat currency). Other examples are laws, in principle these would be structural and not cultural constraints, but from a sociology of law point of view, laws depend critically on some level of popular support to be enforced.

In (very) applied fields, such debates at the level of the society are less relevant. For example, it does not matter in everyday life if money is a social construct or not, as long

as an overwhelming part of society accepts it as real. For single offenders or small group of offenders, it does not matter if the law 'is the law' or the will of the majority. In an applied field, one is thus willing to accept a set of more 'absolute' structures, which give authority (or force to) 'structural' elements within a studied system.

Are Transition Studies, or more specifically regime shift dynamics such an applied theory? Transition Studies are positioned as a 'middle-range theory' (Geels 2007). Transition Studies could therefore accommodate a perspective in which some societal structures are 'givens', as Transition Studies is mainly concerned with the change of a specific system within that society and not with change at the level of that society (thus relativizing all societal structures). One good reason to explicitly use culture as a concept to describe constellations is to ensure that those aspects, which a cultural perspective draws more attention to, are not forgotten. Or as Verhees observes (citing Wolff): "social practices research often deliberately enlarges the cultural aspects of everyday life, because it considers these aspects to '(…) have been rendered secondary to economic, material, structural factors' (Wolff 1999, 16)" (Verhees 2011, 24). Verhees' research demonstrates the rich and important dynamics around processes of giving meaning to system innovation. Such underemphasis is not a mere hypothetical risk. Shove (2003) reflects on the profound impacts of collective conventions such as comfort and cleanliness on transition paths (to sustainability). The fact that these conventions are easily "taken for granted" by a casual observer is a clear warning. Moreover, as we will discuss in chapter 6 and 7, adding culture to the description of transitions, also allows for a better connection between Transition Management and transition dynamics perspectives.

I would therefore propose to include the 'culture' concept as distinct from 'structure' in the description of a constellation; but in a continuum to structure instead of in a dichotomy, In empirical description, especially in more in-depth application, the 'grey area' between structure and culture would be of special interest, as reframing of what is absolute and what is relative could be part of the 'opening up' (Grin 2010) of the regime. One such grey area might be 'pushing the legal limit'[11], for the civil disobedience in some countries in resisting a ban on smoking, or the civil disobedience surrounding matters of life and death (euthanasia, abortion). Another grey area might be the role of unequivocal knowledge, that might be debated and strategically framed within a societal system, for example if homeopathy can be unequivocally stated to have no therapeutic effect beyond a placebo effect or that conventional medicine and homeopathy each have their own cultural paradigms on evidence.

This treatment of culture, as a more limited category than the dominant anthropological and sociological approach to culture, is also in line with reflections of authors on the cultural (or structural) element in transitions. The aforementioned Spaargaren framework distinguishes a separate socio-cultural dimension, juxtaposed to a more socio-technological dimension. Geels (2011, 30) distinguishes between two theoretical 'perspectives' the MLP is bridging: "it aims to bridge the social science divide between 'materialist' and 'idealist' theories. From evolutionary economics it includes materia-

list aspects (such as prices, capital stocks, investments, resources, competition, market selection, and struggle for survival) and from STS it includes idealist aspects (such as interpretations, visions, beliefs, networks, framing struggles, debate).'

The idealist categories come close to our 'cultural' categories and the materialist aspects comes close to our 'structural' perspective. Similarly Avelino (2011) discusses the difference between 'discourse' and physical materialisation, which beyond physical structures also include: "possession and profit", "institutional arrangements" and "resources" (Avelino 2011, 271). De Haan distinguishes a 'reflective' part of a system, which he considers to be akin to culture, referring to Geertz (1973). Kern (2010) and Meadowcroft (2011) discuss 'ideas' and 'interests' as different factors in shaping transitions, which again is close to the materialist-idealist distinction. Kern refers to Hay (2002, 208) in noting a "complex interaction of material and ideational factors."

Figure 3.3 depicts the conceptualisation of the structure, culture, and practice triplet. To summarise: constellations are conceived to be the structuring elements in societal systems, consisting of a continuum between structure and culture. Constellations and agency are mutually exclusive and continuously shaping each other through practices. Practices are thus on the boundary of the regime, but routines typical for the constellation are also included in the description of a constellation.
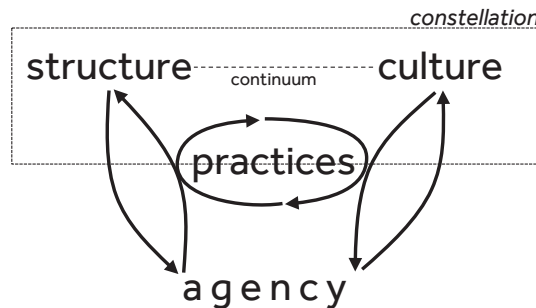
Figure 3.3 Constructing the SCP triplet, step 3

Material and cultural (legitimacy) production of a constellation

In describing De Haan's approach to constellations in §3.1, we also mentioned 'functioning' as part of a constellation. His definition of functioning is closely related to his definition power: "Let the power of a constellation be the proportion of the total functioning that can be attributed to a constellation." (2010, II.27). The exact nature of functioning depends on the societal system under study in De Haan's approach. For societal systems providing goods, resources, or services, which are the types of systems studied in this thesis, the relevant description is that: "systems appear around products, their production, distribution, and consumption" (2010, II.10). For service systems, "societal needs are met by delivering services, rather than products" (2010, II.11).

This production is an interplay between all elements, but directly connected to the actual practices (actions) transforming resources and knowledge into goods and services. Such a material production would thus more be associated with the structural side of the constellation (left in the diagrams), and we might even distinguish typical practices associated with material production, such as physical and financial processes. On the other hand De Haan states:

> "Another angle towards societal systems and their functioning is also very well possible, that of the meaning that is attributed to them (and also by them, since societal systems are social systems and as such human systems). If this attributed meaning is interpreted as `sense-making' then this might be referred to as the `cultural' side of functioning."

Similarly, Verhees (2011), by building on literature from cultural sociology, proposes analysis on different levels of the production of cultural legitimacy, distinguishing between macro-level constraining cultural structures and micro-level agency and practices. This is very similar to the right side of our diagrams.

I would propose that a constellation actively produces (or propagates) a meaning into the wider system and society in general. In some cases this might be done through attributing meaning to the material goods or other observable phenomena produced by the system, for example, the symbolic meaning of a smoke blowing chimney or a car/train whooshing by (both originally a positive and later a negative connotation with industrial production). A very clear example for healthcare is 'white coats' (physicians) explaining the importance of healthcare to the general public.
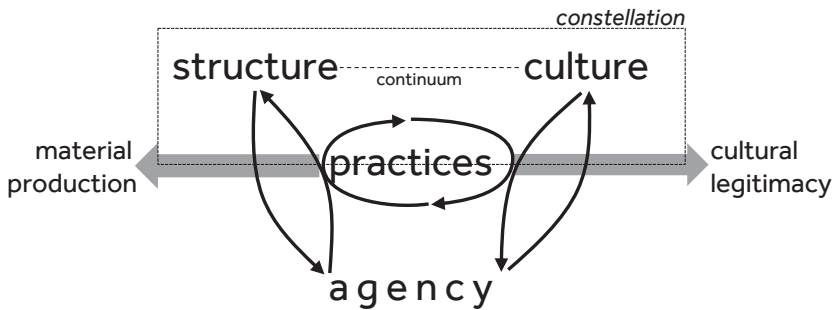
Figure 3.4 Production of legitimacy (or meaning) and material products and services by a constellation

Figure 3.4 depicts our final conceptualisation, in which material production and cultural legitimacy are incorporated. Figure 3.5 illustrates this material and symbolic production, as well as the rest of the concepts, by giving examples from healthcare. Note that organisations are listed as actors under agency, but depending on the analysis might also be considered structural elements.
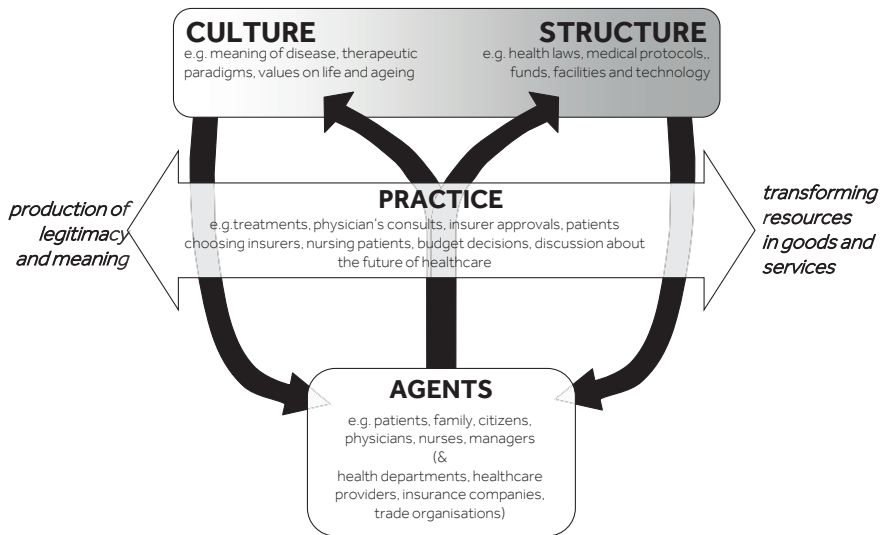
Figure 3.5 Examples from healthcare for various elements. Collective agents are put between brackets as it is context dependent if they are interpreted as structural or agency elements.

We can now also give a slightly revised definition of structure, culture and practice of a constellation:

- Culture: the paradigms, norms, values and other immaterial elements or aspects structuring behaviour in practices of a system.
- Structure: the physical structures and resources, enforced regulations and legal rights, economic resources and other material elements or aspects structuring the behaviour in practices.
- Practices: (typical) routines shaped by both agency, structure and culture of a system and shaping.

And definition of three closely related notions:

- Agency: the autonomous choices of individuals and possible collective agents in relation to the constellations, where one individual or collective agents can be associated with many constellations.
- Function(ing): the way in which the constellation or system as a whole fulfils a (perceived) societal aim
- Power: the share of a constellation in the total functioning of the societal system

Whilst noting:

- The nature of the 'elements or aspects' would need to be defined for the specific context.
- Agency is thus not part of a constellation, but agency does shape structure and culture (and vice versa) through practices (thus positioning practices at the boundary between the constellation and agency).
- Structures are material elements or aspects which are distinguished from cultural elements/aspects by being either physical conditions or non-physical conditions directly bound to physical power: typically from the rule of law (and ultimately

the state's monopoly on physical force) such as legal possession, contracts and regulation; between structure and culture exists a grey area.

- Culture are thus the non-physical elements or aspects that are not directly backed by the rule of law or force, but these might include norms and values whose violation will have severe social or professional consequences.
- Functioning occurs through both material production of goods and services and cultural production of meaning and legitimacy. This latter can be implicitly, related to the goods and services (for example through rituals, symbols etc.) or can be explicit statements and dialogues.

3.2.2 A methodology for describing the dynamics of constellations and the systems they constitute

In this subsection, we will first use our new interpretation of the structure, culture, and practice to formulate the building blocks of a new way of empirically describing interactions between constellations. After that we will introduce a broader methodology that can be applied to past transitions with more rigour than previous methods, and allows for exploring and discussing future dynamics.

Building blocks: description of change pattern – description of constellation substance

The patterns of De Haan (or the traditional MLP) address how change occurs. The structure, culture, practice triplet can describe what changes. Each answer to the question 'what changed' needs to be accompanied by a description of how it changed. In other words, a description of a changed constellation needs to be supported by a description of the pattern that changed it.

In the multi-pillar approach of De Haan, instead of classifying constellations as niche or regime a priori, constellations have a certain ´power´ or certain share in the total functioning of the system. In the previous section we linked this functioning to the cultural and material production of the constellation. We thus need to add an additional property to the constellation of ´power´, which in contrast to culture, structure, and practice is an emergent or interrelation property as a result of the interplay between all constellations. In a pseudo-formula we could summarize the relation between structure, culture, practice, and power on one hand and transitional patterns of change on the other hand as follows:

$$(s,c,p,power)_t \xrightarrow{\textit{pattern of change for } \Delta t} (s,c,p,power)_{t+\Delta t}$$

Note that in the previous section we defined power to include the cultural legitimacy generated and maintained by the constellation. Thus some constellations may be quite strong, even if in any material measure (market share, budget share, number of patients) the constellation is small.

Methodological steps in retrospective analysis of transitions

Our approach to explain transitions from constellation dynamics encompasses four steps, each consisting of sub steps and iterations (see figure 3.6):

- Demarcate, especially in function and time, the societal system broadly based upon the research interest.
- Describe the constellations over the course of the demarcated period, in order to understand what changes.
- Describe how the constellations change, which entails decomposing the histories of the constellations in terms of typical patterns.
- Reconstruct the overall transition in terms of the changes in the constellations and aggregate these constellation-level dynamics to system-level dynamics.
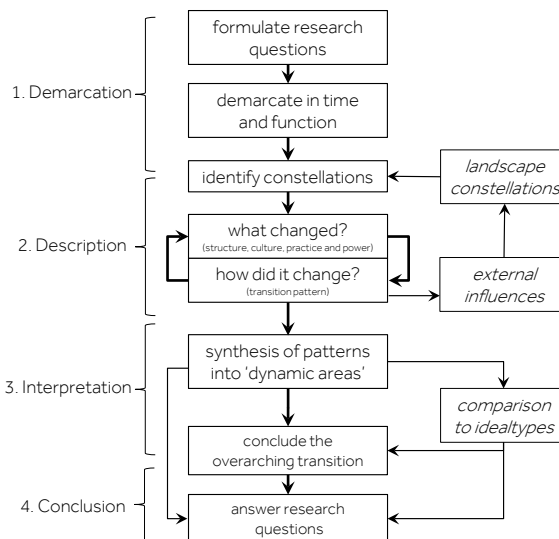
Figure 3.6 Schematic depiction of the methodology of describing system and subsystem dynamics

Step 1: Demarcation

A first step is to define the research interest. From the usual interest in Transition Studies, understanding a transition, the research interest is the expected transition. On a more operational level, typical research questions might include:
- When did the transition start and end?
- Which change in dominant constellation occurred? Which change in dominating structure, culture, and practice occurred?
- Which pattern of change occurred as a result of which conditions?
- Which phases can be distinguished in the transition?
- Which periods and localised patterns warrant further in-depth study?

For policy purposes, these questions all support the more overarching research question (1) what we can learn from history about the fundamental characteristics of present systems and (2) what we can learn about how the system evolved for forward-looking for present and future dynamics. More specifically we might ask:

- Can we trace the roots of current persistent problems and contestation in past dynamics?: We know systems can experience a strong lock-in effect (Arthur 1989; Merle 2013). This lock-in effect is directly related to the persistency of the problems: because the system is locked-in, it cannot simply adapt to address problems that challenge its fundaments. By understanding the events that led to these lock-ins, we might better understand these lock-ins and thus identify leverage points for change.
- Can we learn from the past about specific transition paths hypothesized or advocated for the future?: transitions are one-off events: success and failure factors in one transition in a societal system will typically not have the same effect in subsequent transitions. Yet, as we will see in the case study, not all struggles and tensions are resolved in a transition, and can carry over into the next transition. We can thus learn from the successes and foundering of past transitions for future transitions.

But, of course, depending on the transition policy argument at hand these questions could be made more specific or other questions might be raised.

Initial demarcation in time, space, and function should be done on initial observations and common sense such that the scope of study can reasonably be expected to be sufficient to answer one's research questions. As common sense might be considered as "the collection of prejudices acquired by the age of eighteen"[12], such demarcations in function, space, and time need to be transparent, and thus open for discussion, and need to be revised with the findings in the next steps. Given the discussed criticism of ignoring demand-side, lifestyle, and citizens/consumers in general, this perspective should be included where possibly relevant. The constellation concept can help in explicating what is and what is not being investigated (see step 2). Iterations will lead to the exclusion of elements that turn out to be irrelevant, but not necessarily to the inclusion of relevant elements initially excluded. The demarcation should therefore be broader than the expected extent of the transition dynamics. This is especially relevant for transitions, which are characterized by long predevelopment and stabilization phases that might not be immediately visible.

Step 2: Identifying and describing constellations

Given the system boundaries, a set of constellations to be studied is identified, which is revised upon further study. The choice for a limited number of constellations should be made such that:

- Each constellation can be treated as single unit of analysis. For example, in our case, our initial constellation of "doctor" had to be split into "specialist" and "general practitioner", as these has different paradigms, structures, and routines.
- Constellations are defined on the same level of abstraction, and in such a way,

that secondary literature is available. For example, we discarded the idea of using care, cure, and prevention constellations, because no literature at such levels was available.

- Constellations that significantly influenced the development of others are included; for this reason we included the "financing" constellation. Constellations of specific research interest are included. For example, as for future research themes such as integrative care and initiatives from civil society are taken in account, we take "Cross Work" and "public health" constellations into account.

The subsequent description of the constellations can be done by periodizing each constellation into periods of change and of relative stability. Each period of stability is characterised by structure, culture, practice, and power, and each period of change is characterised by a pattern of change (and if possible by identifying the driving conditions for this pattern of change). The change in structure, culture, and practice between two stable periods already provides some indication of the patterns (see also table 3.2):

- If the power increases, or if two constellations merge, this is likely an empowerment pattern
- If the structure, culture and/or practice change significantly, likely an adaptation has occurred
- However, if power or the structure/culture/practice changes, this can also be the result of a top-down intervention

	change by the constellation	top-down intervention
change in power	empowerment	reconstellation
change in structure, culture and/or practice	adaptation	

Table 3.2 Change in constellation as indication for pattern of change

The previous chapter discussed at length the relationship between the landscape and the system and already demonstrated how a patchwork approach to boundary and demarcation dynamics of the regime with adjacent regimes could be described and visualised. Other regimes that are relevant for the development of the system at hand can only be determined by the effect and relationship they have with the constellations within the system. However, once identified they too can be described as constellations.

A few further remarks can be made on such empirical description:

- Different patterns of change can occur within the same constellation at the same time and periods within constellations sometimes overlap with other periods[13].
- Interactions between constellations have directionality: if constellation A gains power at the expense of constellation B, we will classify this as that constellation A is empowered (by its own strength or under landscape pressures). One could say that constellation B is 'depowered'.
- In most cases, classification is quite straightforward, but in complex interactions, discerning patterns of change can be more complicated, we will give some examples of this.
- In many typical accounts, niches are empowered or thrust into power by recon-

stellation, and the regime constellation subsequently adapts. However, this sequence of patterns is not by definition, and our case study shows different combinations.

- For practical reasons, instead of first describing an event or development and then classifying it, one might also use the pattern terms directly for brevity (e.g. 'constellation A is empowered').

Step 3: Interpretation (analysis) and Step 4: Conclusion

When the results of the previous step are plotted on a single timeline, a detailed, systematic overview emerges. However, as many separate patterns are identified, this needs to be simplified into a few overall developments. This step also allows inducing the transition as a whole by answering the following questions: (1) During which period did major change occur and which pattern (or patterns) dominated? (2) Which structural, cultural, and practical changes occurred in many constellations and how did the total power of the constellations change? and (3) In which constellations does this new structure, practice, and culture manifest itself the strongest? With the answers to these questions and the previous results, the research questions can be answered (step 4).

3.3 Case: Dutch Healthcare 1800 – 2000

In this section, our method for describing transition dynamics will be applied to a historic case in Dutch healthcare. A more extensive version, with less focus on the application of structure, culture and practice can be found in Van Raak and De Haan (2016) and a version with a strong emphasis of the underlying formal model in De Haan (2010). The case is based on secondary and tertiary historical literature, largely from the medical history library of the Free University. It also builds upon an earlier preliminary analysis of the healthcare system of the Netherlands and its evolution (van Raak 2005). We follow the steps as outlined in the previous section.

3.3.1 Step 1: Demarcation

We took the profound changes in Dutch healthcare from the 19th into the 20th century as the scope of the case. This was, as we will elaborate, a period in which the old surgeons guild and the new medical academics melded together in a single, universal 'physician', advocating prevention. In this period, prevention became crucial and then diffused out of the healthcare system to make way for the curative specialist, who went into a symbiotic relation with the hospital. Also in this period, more public and grassroots community initiatives rose to power and dwindled again. This occurred against a backdrop of the rise of modern medicine and science (and within science the emergence of the modern scientific method), industrialisation, and the forming of a modern democratic, more centralised state.

In this thesis, we explore transition policy arguments in general, with a specific interest in (Dutch) healthcare, but there is not a specific transition policy argument to be developed or analysed. So we will use the 'how did the system come about?' and 'what are the fundamental characteristics of the system?' research questions and the two other in section 3.2 suggested typical research questions: can we trace the roots of current persistent problems and contestation in the past dynamics?; and can we learn from the past about specific transitions paths hypothesized or advocated for the future?

From our research interest we chose to limit ourselves to healthcare within the Netherlands. Healthcare is a distinct societal system, but it overlaps with many other societal systems in society, varying from sanitary engineering and social security to politics and nutrition. These sectors are described as part of the landscape (see also §2.4 for a description of boundary dynamics). Regarding the temporal demarcation, the most profound changes apparently took place between 1865 and 1965. As outlined in §3.2, we demarcate broader than the transition we expect to find. The preliminary demarcation was thus broadly chosen to begin in 1800 with the 'French period' (the French military and political presence in the Netherlands) and ending in the 1990s when a new transition appears to be starting.

3.3.2 Step 2a: Identifying constellations

Following the guideline described in §3.2.2, we identified the following constellations in the Dutch healthcare system:
- The «surgeon» (till 1865): constellation around using traditional skills to physically/mechanically intervene in patients bodies. The «surgeon» represents the 'old' skill-based approach to healthcare. The «surgeon» constellation was one of the two constituting constellations of the «physician» constellation which has been a dominant factor in the transition.
- The (academic) «doctor» (till 1865): constellation around using academic knowledge to interpret symptoms of patients in practice. The «doctor» was the other constituting factor of the «physician» constellation. The doctor constellation in the Netherlands was crucial for incorporating the landscape trend of increasing societal relevance of academics and science into the healthcare system.
- «physician» [14] (1865-1930): transient constellation around near-universal practice of medicine and counselling. This constellation was dominant at the turn of the twentieth century and pivotal in uniting different approaches to healthcare.
- «specialist» (from 1900): constellation around providing specialized medicine for severe illness and/or specific treatments. As the name suggests, the «specialist» was a reflection of, and a driving force towards, a more specialized, technical healthcare system.
- «general practitioner» (from 1900): constellation concerned with gate keeping and practicing medicine for non-specific and mild illnesses. It is the direct successor of the «physician» constellation, although much less dominant.
- «Hospitals and nursing» [15] (entire period): constellation around the nursing of and providing for the sick (and weak in general) that later would transform into a supporting role for curative therapies of «specialist» healthcare. This constellation was included because of the emblematic present role of the «hospital» in healthcare and the pivotal role the «hospital» played in transforming the universal «physician» into highly specialized professions.
- «Financing» (from 1900): constellation around distributing the costs for healthcare for an individual over a larger group, as means for risk spreading and for solidarity. Originally, most developments in healthcare were driven by direct payments from the middle and upper classes. However, late in the transition, financing arrangements became crucial to fund «specialist» healthcare, which even the rich could not afford.
- «Cross Work» (from 1900): constellation around providing healthcare at the district level with a pro-active involvement of the citizens of the district.
- «Public health» services (from 1920): constellation around the practice of healthcare in a public and collective way, rather than private and individual, typically through direct government involvement.
- «Mental healthcare» (entire period): constellation around care and treatment for those with a psychological condition, behavioural illness, or other mental disorder. This constellation was included because of its significant power. Additionally, it allows an analysis of conformation to the somatic regime.

Note that we label a number of constellations with a profession (e.g. physician). This should not be confused with actors or other individuals practising such profession. To clearly denote constellations and avoid such confusion we will put them between chevrons («»).The same goes for labels which could be practices (e.g. «financing»), these are also short-hands to refer to the associated constellation, not the practice.

It is at least as important to explicate which constellations in the end were not included. We excluded many paramedical approaches, such as «midwifery», «physiotherapy» and «dieticians», since they did not appear to have had a significant role in the coming about of the current or transitional regimes. For the same reason, we excluded «homeopathy». Homeopathy does not appear to have had a major material or cultural magnitude within, or impact on, the healthcare system.

Moreover, we excluded «civil engineering». Undoubtedly water and sanitation infrastructure has improved the health of people tremendously. However, our framework is established from what appeared to have been the institutional, social-constructed boundaries of the healthcare system, not the objective determinants of health. Engineering works have been more part of engineering and public works, than the healthcare system. We have thus positioned this outside the healthcare system; the shifting boundary between public engineering and healthcare was described in §2.4, where we also noted that during one period in the 19th century sanitary engineering was seen as part of the healthcare system.

We furthermore excluded the modern «well-being» or social services welzijn). There is a blurry distinction between health-related well-being and general well-being. We addressed this partially by describing the influence of poor care. Multiple regimes thus appear to have played an important role in solving the 19th century persistent health problems. However, healthcare can still be seen as the pivotal system in improving health (including diffusion of health ideas to other societal systems). We can thus focus our dynamical analysis on a single regime. We will describe the multi-regime dynamics between healthcare and poor care separately.

3.3.3 Step 2b: Describing the constellations (including landscape and co-regimes)

This section describes the constellations and the landscape and corresponds to step 2 of our method. This includes classifying events and developments into patterns of transitional change.

The medical practitioners

We will start with the medical practitioners[16] constellations. These are distinct constellations but they are related through splits and mergers as displayed in figure 3.7.

```
doctor ↘                      ↗ specialist
          physician ⟨
surgeon ↗                      ↘ general practitioner

        1865       1930
```
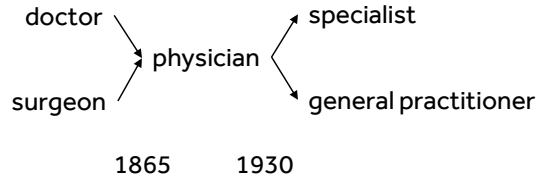
Figure 3.7 The merger and split of the medical practitioner constellations

The «surgeon» constellation (1800-1840)

The abolishment of the guild system of surgeons during the French period (see later in this section) led to a vacuum that would only slowly be filled over the next decades. This process of change was driven from the landscape level (the European geopolitical turmoil), thus we classify it as a reconstellation pattern. As local and regional licensing was ineffective, government was reluctantly conavinced to establish state 'clinical schools'. By 1840 the «surgeon» constellation was aan important healthcare approach, but unorganized, lacking theoretical education and lacking methods to control infection after surgery. The surgeon constellation thus moved from a structure and culture rooted into the guild system to an unregulated profession, whilst the practices did not change.

The academic «doctor» and «physician»

Around 1800 disease was still largely attributed to divine will. Scientific explanations were slowly gaining ground, but only around 1840 science itself was becoming similar to modern science. This development on the landscape level boosted the cultural power of the «doctor» constellation: specifically the paradigm that disease was being caused by specific sources (e.g. bad odours) and thus could be mitigated by intervention. On the structural side, the improved economy created a modest income surplus for the middle class. Over the next decades, governmental poor care and poor care from charity would also reimburse doctors and surgeons for care to the poor. The constellation of «doctor» thus started to improve its status and was beginning to gain a legally exclusive position.

The modern Dutch state started to emerge and enforcement of medical licenses became within its powers, triggering a rivalry between the «doctor» and the «surgeon» in the political arena, resulting in a long turf war over licensing. At the same time an opposite movement started to occur: in 1849 the Dutch Medical Association (NMG[17]) was founded, in which both surgeons and doctors were represented. As a modern professional organization, the NMG was quite different from the old guild structure and culture. Instead of the guild's self-regulation, the NMG would put pressure on the government to adequately regulate and educate; and instead of training on the job in apprenticeships, they advocated formal education and qualification through degrees. In the period 1850-1865

the constellations of surgeons and doctors were framed as complementary, till finally the constellations merged within a single profession, which was labelled as "physician"[18]. The «physician»'s cultural, structural, and practice elements were a combination of the «surgeon» and the «doctor», with the latter dominating. The educational system and general professional attitude was that of the doctor. The incorporated practice of physically examining and intervening in a patient by surgery (and the structural components needed for surgery) were clearly a heritage from the «surgeon». In 1865 a series of medical laws established the boundary between medicine and quackery. The dentists, pharmacists, newly formed physicians, and midwives were the 'winners', all other medical professions (including for instance drug stores) lost out on institutional recognition and many were effectively institutionally labelled as quacks.

From 1860 – 1920 favourable macro conditions furthered the rise of the «physician» as a result of gaining power from outside the healthcare system (in the context of on-going modernization of the Netherlands), but also by gaining power over other constellations. Such other constellations were actively labelled 'quacks', also using their lack of legal status. The use of antiseptics and anaesthetics greatly improved surgery and reduced infections. This structural strengthening went together with an ever-increasing cultural status and legitimacy. From 1880 on, a more socially progressive climate strengthened the «physician»'s role to extend to the general hygiene of society. The physician would also become involved in public sanitary works, food safety, occupational safety, hygiene in public places (notably hospitals), and verifying the sickness of those that sought admittance to hospitals. At the height of the power, the «physician» approach was dominant in every corner of the health system.

The most powerful instruments of physicians remained hygiene and diagnostics. Hygiene led to better survival chances of surgery, but most health was gained when hygiene was applied to non-medical sectors, such as sanitation and food safety. The diagnostic strength is in contrast with the barely increased therapeutic possibilities. Physicians would stress their role as a friend and counsellor to the family and their role during disease mainly as a reassuring and mitigating one.

Table 3.3 provides an overview of the history of this constellation, by characterizing it in terms of structure, culture, practice, and power at moments of relative stability and characterize three, sometimes slightly overlapping, periods of change. For each of the constellations such a table has been made. A selection of these are presented in this chapter.

	Structure	Culture	Practice	Power
1800	Embedded in academic world, but individual practice	Focus on knowledge. Scientific paradigm and remainder of tradtional paradigms	House calls, diagnosing, limited recommendations and reassuring	Lack of authority, lack of market, some power from regulation **(niche)**
1808 – 1830	*reconstellation* state becomes involved in regulation			
1818	Very little structure, ineffective local regulatory committees	Focus on knowledge and scientific paradigm	(unchanged)	Mainly dealing with injury. Surgery is last resort option. No exclusivity (weakened **niche regime**)
1840 – 1865	*reconstellation* scientific worldview gains prestige, diseases become manipulable			
1864	Part of medical community and association, further unchanged	(unchanged)	(unchanged)	An important approach to sickness (large **niche regime**)
1845 – 1910	*empowerment* merges with «surgeon», strong internal organisation, diffuses into other domains (around 1880) *reconstellation* advances in medicine			
1910	(unchanged)	(unchanged)	combination of surgical and 'doctoral' practices	The dominant approach to sickness, injury and prevention (**regime**)

Table 3.3 History of the academic doctor / physician constellation

The «specialist» and «general practitioner» («GP»)

After 1900 the unity of the «physician» constellation started to crack. The mentioned cultural element of 'friend of the family' was at odds with the new paradigm of a more technical, scientific, intervening doctor. The emancipation of specialized doctors over general doctors would again lead to a decades-long turf war, leading to two separate constellations with a shared academic degree, but distinct structure, culture, and practice. The emergence and consolidation of the specialist profession is well described in Juch (1997). The turf war was not only about conflicting paradigms on the cultural side. On the structural side, a labour surplus existed in the late 19th century with many young physicians fighting to establish a practice. This led some physicians towards the end of the nineteenth century to stress that they were 'specialist' in some field, thus cre-

ating a market niche to survive. Often they specialized in the operation of an instrument (such as the eye mirror). They ran policlinics (Greek for city clinics) with ad hoc clients from the lower classes visiting them. Besides the class difference, the use of increasingly larger, and thus immobile, apparatuses confined the specialist to its clinic.

After 1910 the «specialist» constellation was much more than a niche for poor and odd cases of the general physicians, but became a force on its own. The clients of city clinics could easily be used as research and teaching material (see Mooij 1999); specialists would become teaching authorities and the designated physicians for complicated cases. This coincided with the specialists move from private practice to the hospital. The advances in hygiene, presence of qualified nursing staff and the high investment costs of x-ray and other machines drove the specialists into the hospital. A quid pro quo deal with hospitals developed, in which specialists treated admitted patients (also as teaching material), and the hospitals provided support staff (and apparatus) for the specialist's work in their policlinics. In the 1920s the «hospital» constellation became centred on the «specialist» constellation. Nurses would now work under the supervision of the specialist. The structural change had translated itself into a paradigm were that the hospital was not 'a house for the sick' (Dutch: ziekenhuis), where those sick where nursed, but a place for patients to be actively cured.

The rivalry with «general practitioners» intensified with the prospect of a national law on healthcare financing in the early 1910s (which was in the end never enacted). The specialists founded their own association to have their interests better represented. Over the decades the general doctors and specialist doctors would not only battle over ground in financing, but also education, professional registration and so on. The financing of healthcare became more collectivized in the first half of the twentieth century, with the rise of the sick funds. Sick funds operated with a fixed reimbursement per patient (not per treatment) for physicians and pharmacists. The specialists however did not fit into this system, leading to conflicts. The battle ended in the 1930s with a stalemate: specialist care was recognised and per treatment reimbursed, but only on referral by the general physician (Schouwstra 1995). As a whole, general physicians could now control the growth of the specialist constellation by limiting referrals. Each individual general physician, however, had a strong incentive to refer patients as much patients as possible, as he would still be paid his fixed annual amount after referral. The German occupier unexpectedly encoded this stalemate into law during World War II, thus engraining the unlimited funding of specialist care. This created a positive feedback loop on the material side of the constellation, leading to an expansion in power.

	Structure	Culture	Practice	Power
1870 – 1900	City clinic, often centered around apparatus	The 'most scientific' doctor	In-clinic treatment of lower classes, irregular clientage	For interesting cases and urban poor **(niche)**
1900	specialist niche as reaction to surplus of physicians			
1900 – 1920	Clinic within hospital, supported by hospital staff. Larger apparatus. Integration with education. Limited insurance coverage	Specialist and hospital in symbiotic relation.	In-clinic treatment of lower classes, teaching and treatment for impatients,	For interesting cases and urban poor AND hospital inpatients **(niche regime)**
1920 – 1950	empowerment, followed by short reconstellation (WWII) specialist dominant in hospital, financing instutionalised state becomes hesistantly and ineffectively involved, professionalization constellation			
1945	Practices completely integrated in policlinics, support roles for nurse and medicine students. Inpatients under supervsion specialists. Completely covered by insuramce	Specialist central and authority in hospital	In-clinic treatment of refered patients from all classes, teaching and treatments for inpatients	Dominant approach for severe illness and injury, high social status (emerging **regime**)
1945 – 1970	empowerment «GP» reduced to gatekeeper non-curative healthcare is thrusted out of hospitals exponential growth in numbers			
1970	(unchanged)	(unchanged)	(unchanged)	Dominant approach for most illnesses, high social status **(regime)**
1970 – 1990	structural empowering / cultural depowering growth, but authority questioned			
1990	(unchanged)	(unchanged)	(unchanged)	Dominant approach, but referals less automatic, less of a cultural authority and 'hero' **(regime)**

Table 3.4 History of the specialist constellation

In the early 1960s, for the first time more specialists than general practitioners were registered. In the middle of the 1990s, there were three times more specialists than general practitioners (CBS Statline). The explosion of expensive specialist care necessitated collective financing or insurance for virtually everyone. As these two constellations are mutually enforcing each other, we interpret this as an empowerment pattern of both financing and specialist care.

The «specialist» constellation was aided in outcompeting the «GP» constellation by advances in the «hospital» constellation. In the 1920s, the modern hospitals and operating theatres bore no resemblance to the nineteenth century "houses of death". People were now even willing to pay for separate insurance to be able to afford hospitals. After surgery modernized, the invention of antibiotics and similar drugs suddenly led to near miraculous recoveries of sick persons. In the following decades, the specialist care would continuously amaze with pieces de resistance, such as organ transplantation. The odds changed in favour of the scientific knowledge and technical abilities 'brand' of specialists, against the reassuring friend of the family 'brand' of the general physician. With their proven and highly publicized curative powers, the specialist was soon preferred over a friend of the family.

The aforementioned individualization and more critical attitude in society were at odds with the specialist as an authority figure. This would lead to some loss of status. Telltale signs are the appearance of patient's requests for second opinions and popular-media attention for medical mistakes and the exorbitant costs (and salaries) in specialist healthcare. We thus see a stress between the cultural and structural power of the specialist.

The «general practitioner» was the remainder of the physician constellations after the specialist constellation diverged and entered into a symbiotic relationship with the «hospital». The contours of the general practitioner started to appear in the interwar period (Bremer 2006). The earlier emphasis on the ideal of the universal physician, made way for a preference to become a specialisation in their own right. In the second half of the twentieth century, recognition of the 'general physician' (of family physician, Dutch: huisarts) as a separate specialization was sought; a milestone was the 1973 incorporation of this category in the official registers. This is a typical case of an adaptation pattern to the regime, both in structural aspects (the additional education and organization as a specialization) and cultural aspects (the paradigm 'GP's are specialists too', making all physicians seemingly specialist physicians).

The «hospital» and «nursing» constellation

The period 1800 – 1850 (or even 1650 – 1850) is considered as the dark age of hospitals. During the French period, hospitals run by the clergy were repressed. The hospitals that remained became fully part of the poor care. The boundaries between hospitals, madhouses, poor houses, and jails were always ambiguous, and as stated in chapter 2, but now the hospital barely related to healthcare at all. From 1850 to 1950 the «hos-

pital» would undergo a spectacular transformation into an icon of modern healthcare (Houwaart 1996). In 1848 the new Dutch constitution grants equal rights to Catholics and organized Catholic life resurfaces. At the same time a protestant reveille takes place, in which the protestant faith adds to its more rational worldview a more compassionate component. The attitude on poverty shifted from a natural phenomenon, to be addressed by pity and alms, to an avoidable condition of bad morale. Unconditional support, such as in hospitals, was prohibited by the poor law of 1853, except for the care for the sick. Suddenly the hospitals were thus, by reconstellation of their structure, specific places for the sick, placing them firmly into the medical realm.

Nursing as a medical profession did not exist prior to 1850 and the lay staff in hospitals were barely trained. The only people trained in nursing were the nuns from medical orders. The protestant reveille, created the predecessor to the modern nurse. In Germany, deaconess hospitals incorporated female volunteers from the protestant (upper) middle classes. From Dutch hospitals initially these new professionals were met with scepticism and it was felt hospitals and available accommodation was not suited for educated women. Nevertheless, they entered the Dutch system through the progressive niche of «Cross Work» (as discussed further on in this section). These organisations were interested in the new profession as ´district nurses´ who would make house visits. In an structural adaptation pattern, hospitals slowly improved their standard of care, incorporating nurses trained by «Cross Work» organizations (Knoop and Schuiringa 1998). Combined with new hygienic insights, hospitals changed from exceptionally filthy to exceptionally clean environments. The function of the «hospital» constellation had shifted from material refuge, to a clean and caring environment for the sick.

Previously, we discussed the combination of «hospitals» and «specialists» as an icon of the curative ideal. However hospitals also hosted chronic patients, with no curative prospect. After the Second World War, these patients were perceived to occupy hospital beds that could be used for patients that were "treatable". The practice of admitting them no longer matched the new curative cultural paradigm. For the original function of hospitals, the new constellation of «nursing homes» (or more broadly "care") emerged. This constellation grew further as they became financed by collective insurance in 1965, rather than by municipal budgets. This pattern is clearly an empowerment of a new niche of nursing homes, but somewhat contradictory with the clear intent of this change to lessen the resources put into nursing.

	Structure	Culture	Practice	Power
1800	Large buildings, sometimes still connected to churches and monastries, some secular institutions, clergy with on-the-job-trainig and know-how from their order	Some remains of pity and mercy culture. Place of rest and spirituality. But also public order instrument.	Providing basic necessities and religious care, including medical care	Severly weakened and not specific for sick, but still last resot for many sick **(niche)**
1800 – 1830	reconstellations: **e**nd of guild system, impoverished nation, end of role religious orders			
1830 – 1850	Depending on municipal / civic support. Untrained staff.	No spirituality, keeping troublemakers off the street and prevent unrest	Providing basic necessities to the needy, including crude medical care	Constellation has little to do with healthcare **(niche)**
1850 – 1880	reconstellation hospitals exclusively for the sick, protestant reveille, return of catholic public life			
1880	Wards with ward maids, contracted physicians, organised	A disciplined place for the sick	Non-medical care for patients	Constellation part of healthcare again, but only as last resort for lower class sick **(niche)**
1880 – 1900	adaptation incorporation of modern nurses and hygiene			
1900	Wards led by nurses, contracted physicians to care, government as gatekeeper	unchanged, but reappreciation of medical know-how	Medical care for patients	Constellation acceptable for more classes **(niche regime)**
1900 – 1920	adaptation specialists become resident **empowerment** appeal to all classes			
1920	Wards still dominated by nurses, inhouse physicians treating inpatients running outpatient practice. Apparatuses.	(unchanged)	Medical care for inpatients + curative care for outpatients + teaching	Place for all classes to recover from severe illness (large **niche regime**)
1920 – 1950	**empowerment, followed by short reconstellation (WWII)** **specialist dominant in hospital, financing instutionalised** state becomes hesistantly and ineffectively involved, professionalization constellation			
1950	Specialist dominant, nurse is assistant. Still care patients in wards. Complicated apparatuses. Universal coverage	Hospital as place for curative treatment	(unchanged)	modern hospital as place for all classses for treatment of and recovery from severe illnesses **(interwoven specialist-hospital regime)**
1950 – 1975	empowerment specialist hospital becomes dominant approach for mild to severe illness, increase in beds			
1975	(unchanged)	Hospital as a place for sophisticated curative treatment	Curative care for patients for short durations	Modern hospital as place for all classses to undergo treatment for most illnesses **(interwoven specialist-hospital regime)**
1975 – 1990	budget-ceilings, hospital stays reduced, beds reduced, emancipation of nurses			

Table 3.5 History of the nursing and hospital constellation

«Financing»

Around 1800 one had to pay one's healthcare costs directly to the healthcare provider. Even though typical costs were low, many lacked discretionary income and needed to apply to their local poor care, often organised from churches. Some guilds had a limited system of sick funds to spread costs. But during the French period, regulations to supress guilds and organized labour, briefly applied to sick funds, leading to their demise. The period of economic decline from 1820 – 1840 impeded any re-emergence. From 1840 to 1880 many different initiatives resurfaced; varying from funds organized by commercial insurers, the predecessors of welfare work (nutsfondsen), and mutual funds. As curative therapy was rarely an option, many of these insurances were mostly concerned with funeral costs and compensation for lost wages. Although from very different organisations (from highly commercial firms, to mutual solidarity, and from a 'membership to the doctor' model, to employer-based care), these niches provided insurance to a small group through a similar structure and similar practices. In the period 1880 – 1920, large-scale manufacturing changed this landscape by creating large groups of (organized) workers. Moreover, fewer and fewer people could pay for long hospital stays, use of expensive apparatuses, and advanced surgery. As noted earlier, cost spreading arrangements and advanced medicine reinforced each other. Steadily, more and more people became insured.

These arrangements remained civic, voluntary initiatives as debates on government regulation stalemated for decades, resulting from GP - specialist conflicts and GP's aiming trying to shield their private middleclass clientele from less lucrative collective arrangements. This lack of political consensus, did not hamper growth, but did introduce inconsistencies in the institutionalisation of sick funds during the 1930s and 1940s. First, income support was institutionalized. Many sick funds already separated income support from medical expenses, as medical expenses required a more specialized reimbursement system. In 1930, income support was separately legislated, being seen as less complicated and less controversial. From 1940 to 1945 Germany occupied the Netherlands. The German administration froze the conflicts over reimbursement of medical care. Sick funds became compulsory for all workers up to a certain wage level. Although most of the concerned workers were already covered voluntarily, this was still an irreversible breakthrough in institutionalization.

Until the Second World War, healthcare for the poor was part of poor care in general. The 1930s poor care approach still featured compulsory hard manual labour for the unemployed, leading to strong societal resentment. This contributed to the paradigm shift to the modern welfare state, in the 1950s when poor care was transformed into governmental social security (and thus a right instead of a gift). This paradigm shift would spill over into healthcare financing. Over the next decades all low-income groups would be added to the sick funds. The private insurance market was regulated to conform its reimbursement policy to the sick funds. This harmonization of the financing arrangement for curative care was finalized in the early 2000s by a universal and compulsory "basic healthcare insurance" for all. The original community and liberal market

initiatives had, to a large extent, become structured into an implementation instrument of government law and policy.

Efforts were made after 1973 to curb expenses. The post-war economic boom had ended and the steadily shrinking welfare state could no longer facilitated the rapid growing healthcare system. The number of hospital beds was reduced and 'budget ceilings' introduced. In the next decades, the system was 'tinkered' with, which, at best, reduced the growth rate of expenses temporarily.

«Cross Work»

«Cross Work» ('Kruiswerk') is a typically Dutch phenomenon that occurred from roughly 1875 to 1980. These cross-organizations were civic initiatives for healthcare that started out as organizations to prepare and prevent epidemics (as a 'Red Cross during peacetime', hence the cross reference). They developed into comprehensive neighbourhood-oriented healthcare organizations and further developed into present day homecare providers (Knoop and Schuiringa 1998).

The original Cross Organizations prepared for an epidemic that in the end never came, ironically partly as the fruit of their preventative, hygienic programme. As a response «Cross Work» underwent an adaptation pattern when the organizational scope was broadened to general healthcare. It grew into a broader movement and a source of local pride especially in rural communities, where municipal health services were absent. This demonstrates the typical sequence of an adaptation allowing for an empowerment pattern. Upscaling of their organizations, led to a further empowerment pattern. In the 1920s they outcompeted the municipal health services of the «Public Health» constellation in a liberal-confessional political climate. However, inconsistencies between culture and structure were introduced. «Cross Work» had a bottom-up paradigm, but de facto became partly a 'top-down' implementer of public health tasks. Moreover, cross-organisations were no longer neutral, but each came to belong to an ideological faction ('zuil'). Originally, this was a strength as they could embed their organizations in a larger societal structure. But in the 1960s Dutch society individualized and the factions lost their relevance. Individualization also led to a decrease in volunteer work. People regarded their membership as a subscription on homecare, not as part of a 'caring community'. All these factors weakened the cross organizations, forcing them to accept more government funding. In the 1980s they were integrated into the care (financing) constellation as providers of homecare.

«Public health»

Through most of the nineteenth century, government became more involved in the funding of poor care organizations that provided healthcare, but refrained from other involvement in healthcare. Social matters were a municipal responsibility in the new 'decentralized unity' state. Municipalities had little affinity with social matters, such as healthcare. After 1890, the role of government grew, especially as large cities started to

bear more and more of the costs for poor care, including healthcare. To manage costs, they wanted to verify the necessity of expenses by employing physicians in government positions. These physicians started rudimentary quality regulation of the institutions they controlled.

A new generation of physicians - the so-called hygienists movement - in the «physician constellation» argued that in the new political era, liberalism should include extensive provision of health infrastructure and health services by the government. Moreover, health regulation of food, building, and working conditions was successfully argued for. This required an ever increasing number of government physicians and biologists.

The Netherlands changed from an early industrial society (with dispersed industrial production) to a full industrial society (with concentrated production in large factories in industrial districts). This brought along crowding, poor living conditions, and industrial accidents. This required pest and disease control, emergency aid, school physicians, etc. These types of activities were very difficult to provide for by commercial and charitable parties, especially as some would require intruding into the private sphere (Querido 1965). The structure and culture of public health services was better fitted for these tasks, even if a strong public service itself was deemed politically undesirable, providing an emblematic example of a classical niche fulfilling a small void left by the regime.

In the 1920s, the large cities started to merge their various medical services into single public health services. These public health services became involved in providing healthcare directly, especially to the poor. Still, the constellation only filled the void left by other constellations in the largest cities for those clients that could not afford private practice physicians, and problems that required government authority. Throughout the studied period, proposals were launched to expand this marginal role to a more comprehensive public health service in at least five attempts. At some points laws for a strong public service were passed, but subsequently were either diluted or retracted, and in the end forced public health to remain in a niche role.

« Mental Health»

Initially, mental healthcare was restricted to locking up the insane in madhouses or prisons if they were a burden to society (on grounds of public order).The French Revolution introduced the paradigm that an insane person was mentally ill and ought to be treated as a patient. This led to legislation that organized mental healthcare around the asylum (Schut 1970). The practice remained institutionalization, but culturally the insane gained recognition as patients.

In the second half of the nineteenth century, the somatic approach from «hospitals» became prevalent in mental institutions (Vijselaar 1982) in a typical adaptation pattern. The mentally ill are being treated similarly to patients with a physical illness, e.g. in beds. From the beginning of the twentieth century, the more traditional, conversational

relation with the mental resurfaced under the influence of the work of Freud and Breuer, a process which is sometimes referred to as re-psychologization (Dankers and van der Linden 1996). From the 1920s mental healthcare goes through patterns of adaptation and empowerment leading to a medicalization of mental healthcare. New mental illnesses were diagnosed (notably schizophrenia) and the increased availability of medication led to a depopulation of the asylums. The joint rise of clinical psychology and social psychology led to the process of deinstitutionalization. From the 1950s the WHO began to recognise mental disorders as diseases. After the Second World War, social welfare became important, leading to several (public) institutions for mental healthcare like the RIAGGs[19] and arrangements under the collective financing for long-term care in 1980.

Landscape developments

From the histories of the individual constellations, we can infer the landscape developments that have influenced the dynamics of the Dutch healthcare system by forcing reconstellation, but also by influencing shifts of power within the system and thus facilitating empowerment patterns.

Medicine and philosophy of science: The French period accelerated the enlightenment in the Netherlands and gave primacy to modern scientific explanations. From 1850, with an increase in pace in 1900, inventions such as antiseptics, anaesthetics, therapeutic pharmaceuticals and diagnostic equipment occurred.

Religion and society: Initially, the Netherlands was dominated by a Protestant morale with hard-hearted tendency. From 1850 onward, this rational Protestantism was complemented by a more compassionate Protestantism that aimed to elevate the less fortunate. The repression of Catholics ended allowing their healthcare institutions to resurface, but from 1900 to 1950 the Dutch society became denominationally segregated (Dutch: verzuiling) between protestants, Catholics and socialists. This ended which ended in the late 1960s and early 1970s, when individualization became the predominant cultural trend.

State and politics: The nineteenth century was a struggle for democracy. No single ideology dominated in the resulting democratic political system after 1850. Until 1900, power shifted back-and-forth between conservatives and liberals and from 1900 to 1990 the confessionals entered into different coalitions, often with liberals. Aggregated over the decades, this favoured combinations of publicly funded civil organisations (which aligned with confessional parties) and private insurance and practice (which aligned with liberal ideology). The Dutch state itself slowly built an apparatus of civil servants and legal authority capable of intervening in previously local matters, such as healthcare.

Economy: In the early nineteenth century, the Netherlands was impoverished after a century of wars and internal strife. The late medieval system of guilds gave way abruptly to a more liberal market shortly after the French dominated the Netherlands

and introduced their 'enlightened' ideas. This created a void in areas such as regulation and education, which stagnated the transition in until healthcare about 1850. In the late nineteenth century, industrialization introduced large scale manufacturing, leading to safety and crowding related health issues. The first half of the 20th century was characterized by economic ups and downs, followed by a post-war economic boom from the 1950s, allowing for comprehensive, compulsory, national arrangements instead of the previous fragmented, voluntary, municipal budget financing arrangements.

Poor care co-evolution

Around 1800, poor care was largely a matter of the churches, although towns and cities seemed already involved in some municipal care for those poor that were not provided for by the church. The municipal systems were quite independently organized with 'district masters' that could give the population access to healthcare. The religious poor care was integrated into the general 'pastoral care' organized within church communities. Originally, giving to the poor (alms) was done unconditionally. However, over time it had become coupled to religious service, the poor should attended church services and be open to 'spiritual care' if they wanted to receive material care.

Civic initiatives arose alongside and within religious poor care. These started to play a role in charity since the rise of the middle class after the Middle Ages, as financial contributors but also gaining influence and administrative positions in return. In many cases the middle class also considered it their 'civic duty' to be active in a church (poor) administration or municipal administration. The contrast between the rich administrators and poor workers would make these administrations often unpopular among the workers.

In the 18th century, the framing of poverty changed. The poor themselves were blamed for their economic situation throughout the 19th century. They were attributed a lifestyle without moderation or work ethos. In the 19th century, conservative liberals thought that no able man should receive charity, as this would morally corrupt him. Part of the early legislating on the matter of the poor aimed to limit care to the poor.

Besides repression, the 19th century also saw attempts to moralize and educate the poor and put them to work. Sick funds were considered exemplary of how the poor should self-discipline and self-organize. The practices through which such education would take place differed. In many cases the idea of middle class educating the lower class was extended by placing a small number of poor families under the supervision of one middle class man, who would 're-educate' them. In an even harsher approach, forced labour as morale-enhancing activity was done in 'work institutions'.

The original poor laws of the early 19th century were aimed at settling the question if the municipality of birth or the municipality of residence was responsible for the poor. To prevent drifting and deporting of poor, the primary responsibility was assigned to the municipality of birth, or the municipality in which the poor person had lived for

more than four years. Progressive liberals attempted to reorganize poor care in the 1850s, however they were met with fierce religious opposition. The underlying debate of whether poverty was a moral or economic condition would not be won by the latter position until the 1950's (and perhaps to again be started in recent history).

The poor law of 1854 thus mainly reconfirmed the primary role of the churches and civic initiatives. The middle and upper class should not be forced to give more than they were willing to give. Some municipalities even seem to have paid their poor care from taxes on typical poor products (bread and beer) to uphold this principle.

The religious parties, especially the protestant, had established the principle of 'autonomy in own community'. However this did not necessarily constitute financial autonomy. The first half of the 19th century made it impossible for virtually any poor administration to be self-sufficient in financial means. Municipalities would start to make significant grants to religious charity. Governments seemed to prefer this to a direct public service, because religious and other charity organisations had access to 'cheap labour' (nuns, volunteers). Many municipalities, in line with the 1854 poor law, performed some limited supervision on expenses and provided care. This also included the hospitals. Some of the most inhumane and filthy situations were ended as a result.

Over the next 100 years a pattern of increasing government funding, subsequently followed by regulation and forced reorganization slowly emerged. At first, financial support would be modest or simply a fair pay for provided public services. In the early 20th century, local governments would bear up to 80% of the costs of these organizations. Municipalities started to demand more control and influence. As mentioned, this was one of the reasons larger cities organized a municipal health service to control admission to, and duration of stay, in hospitals.

The national government became slowly involved, starting to support municipalities and their care for the poor and unemployed in the crisis of the 1930s. Eventually, paid professionals replaced the middle class volunteer administrators. In the interwar period, the new poor law of 1912 aimed at more coordination between sometimes dozens of poor organisations working in the same municipality. Especially in the largest cities 'poor councils' (councils to deal with the poor, not of the poor) helped in coordinating and merging organisations. However, thousands of separate organisations would continue to exist in the Netherlands until after World War II.

After World War II, the Labour-Catholic government and parliament would end most of the system of poor care in two decades. Shortly after WWII, the government started to include all low income groups in the sick funds arrangements. Besides healthcare costs, income loss also became completely covered by governmental regulation. In 1965, even those who were long-time unemployed (or never had a job at all) were included and long-term care was financed through a specific tax. The level of benefits was set to a concept of 'social minimum': the needs of the poor were now thought to extend beyond biological need. The poor care organizations had to adapt to this new situation. Munici-

pal services would become 'social services', and became involved in the implementation and administration of the many new social security arrangements.

The religious and civic poor care organisations found themselves in an awkward situation. For centuries they were faced with many needy to care for, and limited means to do so. For centuries the material support they provided had been leverage for moral education. The churches bound people by the promise of care in difficult times. The paradigm the poor care had developed was that care should be limited and part of educating (or re-educating) people. This patronizing attitude had alienated them from many developments. Labour unions, who considered unemployment an economic instead of a moral problem, detested the blaming of individual workers for their situation, and blocked these organizations out of a new social security system. Many of these organisations, relieved of their previous duties, sought new meaningful activities. Often they became active in community and welfare work (Dutch: welzijn), again overlapping with the healthcare system, leading, in the present day, to frictions and overlaps with for example mental healthcare.

Thus, at a number of points in time, the poor care system shaped the healthcare system, confirming the theoretical conceptualisation of regime-regime interactions through boundary dynamics. Early in the transition, it redefined the hospital as a place for the sick, instead of the needy in general. In the middle of the transition it initiated municipal health services, as inspectors of the quality and gatekeepers to these hospitals and other institutions. Late in the transition, it was pivotal in transforming healthcare financing from voluntarily to compulsory, public arrangements.

3.3.4 Step 3. Interpretation

The previous subsection gave an account of the histories of the individual constellations. Constellations interact and experience similar outside influences, leading to an overall pattern and direction (but not without significant amounts of 'noise'). The interpretation of this overall pattern is done in two transparent steps: from patterns to dynamic areas and from dynamic areas to overall conclusions. Table 3.5 lists in its upper half lists the patterns described in the previous subsection over time for each constellation. We propose to aggregate those patterns into the following areas, as listed in the lower half of table 3.5, and elaborated on hereafter.

Growth of many alternatives under reconstellation (1840 – 1875/1940)

Around 1840-1850 the Netherlands entered into a new era. Protestantism moved to an uplifting attitude and Catholic public life and institutions resurfaced, creating new cultural elements in many constellations. The economy picked up, creating income surpluses, thus allowing for constellations to gain power and further develop their structure. A liberal political climate replaced the absolute monarchy for an early democracy. The state became stronger, but at the same time left most policy areas to the local and

regional governments. The combination of new religious and liberal attitudes limited poor care to the disabled and sick, medicalizing the hospital, pushing it firmly into the medical system. Around 1880 to about 1920 a second wave of changes took place. Besides innovations in medicine, this was again driven by a changing Dutch society. At the beginning of the nineteenth century the Netherlands was quite urbanized but at a small pre-industrial scale. Around the turn of the century, large-scale industrialization and urbanization took place. At the same time dominational segregation began. This allowed initiatives, such as «Cross Work», to become funded by public means, without becoming public themselves. These developments all created a tremendous potential for growth of the healthcare system. Many constellations were initiated or gained power. Overall, the constellations reinforced each other. A prime example of this is the adaptation by the hospitals of the 'nurse' as trained professional from «Cross Work».

Empowerment of the physician (as simple regime) as a result of the merger of surgeon and doctor from 1840 – 1900/1940

Within the process of growth and reinforcement of the different alternatives, one constellation gained an early lead over the others and would become the dominant approach to healthcare. Especially around 1900, the culture, structure, and practice of the general physician were the focal point of the health system. To the middle and upper classes they were not just a medical authority, but also a 'friend of the family'. Besides practising medicine, they advised and promoted health in many other domains.

The main constituent, the old 'doctor' constellation, combined a strong past with a strong image of the future. With the fall of the guild system and decline of religious rule over secular life, the academic system was one of the few remaining esteemed institutions in which a medical occupation could be embedded. At the same time, the sciences gained in academic and societal prestige, making the physician the promising approach for the future. The merger with surgeons provided practical, surgical skills to the constellation. The merger transformed the rivalry between the surgical and academic approach into a combined approach of highly educated and skilled medical professionals. Collective financing became a significant but still voluntarily approach. The regime seemed to have a firm focus on prevention, but this focus turned out to be transient in nature.

Table (upper half): Overview of patterns in each constellation over time.

	1800-1820	1820-1840	1840-1860	1860-1880	1880-1900	1900-1920	1920-1940	1940-1960	1960-1975	1975-1990
mental healthcare	recon-stellation				adaptation	adaptation	adaptation	adaptation	adaptation	recon-stellation
hospitals and nursing				recon-stellation	recon-stellation	adapt. & empow.	adapt. & empow.	adapt. & empow.		
specialist										depower-ment
surgeon		recon-stellation	empower-ment							
Physican/GP				empow. & reconst.	recon-stellation	depower-ment	recon-stellation			empower-ment
doctor		recon-stellation								
financing	recon-stellation		recon-stellation		recon-stellation	recon-stellation	adaptation	reconst. & empow.	empower-ment	recon-stellation
crosswork	recon-stellation		empow. & reconst.			empower-ment	empow. & adapt.		reconst. & depow.	
public health				empower-ment	recon-stellation	recon-stellation	depower-ment	depower-ment	depower-ment	recon-stellation

Table (lower half): Aggregation into areas of dynamics.

	1800-1820	1820-1840	1840-1860	1860-1880	1880-1900	1900-1920	1920-1940	1940-1960	1960-1975	1975-1990
mental healthcare	breakdown by reconstellation	void	reconstellation and empowerment			adaptation to regime				stability (and early dynamics of possible transition)
hospitals and nursing										
specialist					first simple regime		empowerment of final compound regime			
surgeon										
Physican/GP							original regime as niche within final regime			
doctor							empowerment of final compound regime			
financing										
crosswork							depowerment of alternatives			
public health										

Table 3.6 Overview of patterns in each constellation over time (upper half) and aggregation into areas of dynamics (lower half).

Empowerment of the physician, the hospital, the specialist, and healthcare financing (into a compound regime) from 1930 to 1970

This hegemony of the physician constellation did not last. The focal point of healthcare shifted to the combination of the individually practicing specialist and the larger scale hospital. In a long process of co-evolution the hospital (and its nurses) became subservient to the specialist's practice. The original 'physician' constellation lived on as the general practitioner. On one hand, the GP was the very opposite of specialist medicine. GPs had lasting relationships with their clients. They practiced individual care in the vicinity of their patients. On the other hand, they were pivotal in the specialist system as the central referrer. Even for the confidant role, patients were more and more referred to psychotherapists.

Financing arrangements originally aimed to provide access to healthcare for the poor. In the twentieth century, the financing arrangements grew to the extent that all patients of any constellation needed some form of cost spreading. These financing arrangements now started to shape healthcare. The emancipation of specialists took place through changes in sick funds regulations. Healthcare financing became an industry on its own, fuelled by the growing need for coverage of new costly medical possibilities. In the second half of the 20th century, the sick funds changed from voluntarily risk pooling, to a public instrument (and right) of solidarity. Chronic care was separated from the normal budget. This removed many limits on growth within the early financing system, primarily for specialist healthcare.

In this period the core of the healthcare system takes its dominant culture, structure, practice. and shapes the power relationships between constellations The state becomes heavily involved, financing arrangements become compulsory, and the focus shifts from prevention to curation and from the ideal of a universally educated 'general doctor' to specialist healthcare. The hospital completes its transformation from a last-resort facility in healthcare to 'medical centres' for treatment.

Conforming to the regime by adaptation, split-off and merger («Mental healthcare», «Cross Work») between 1860 and 1990

The constellations not part of the new compound regime went into an adaptation pattern and so conformed to the regime. The «hospital» incorporated the specialists and even split off its traditional nursing task to a new constellation (of nursing and caring).

Mental healthcare imitated the somatic hospital, physician, and specialist. In the nineteenth century it adopted the practice of putting people in beds from hospitals. Twentieth century psychotherapy was partly a turn away from medical paradigms, but the ambulatory type of practicing was taken from developments in somatic care. The twentieth century ambulatory care centres (RIAGG) show resemblance to the organization of hospitals. Highly individual psychotherapy is often practiced from large semi-public institutions. This is remarkable, as the reasons for somatic therapy to embed themselves

in larger institutions, such as hygiene, large apparatus and nurses, have no equivalent in psychotherapy. What remains of the original «Cross Work» has also adopted the paradigm of delivering specific care to the individual, as replacement for a collective, neighbourhood-approach. In this area there is thus a conformation of other constellations to the culture, structure, and practice of the regime (constellations).

Depowerment of «Cross Work«, «public health» and «general practitioner» from 1925/1950 to 1970/1980

The difference between the 1865 – 1900 period and the 1910 – 1990 period is that power shifts occurred between the constellations, instead of power shifts from the environment to the constellations. This can be seen in table 3.5 by the occurrence of more empowerment patterns and much fewer reconstellation patterns. Power was not gained from the environment, but shifted within the system. Thus, although the healthcare system as a whole expanded, the dynamics started to resemble that of a 'zero sum game' with some constellations gaining at the expense of others. Examples are the interactions of the gaining of the specialists (and specialist hospital) at the expense of the power of nursing, public health, and the 'general doctor', but also the early gaining of «Cross Work» at the expense of public health.

Overall changes in structure, culture, and practice

We can now describe the trends in structure, culture, and practice at the level of the system. These findings are summarized in table 3.6. We find that the structure of the primary process has remained unchanged, whereas the financing and regulation has up-scaled. We further note a tendency towards specialization. We find that the know-how has shifted from traditional, by holistic means, to scientific sources. This is accompanied by a shift in attention to very specific causes. Interesting, we note that two important paradigm shift occurred: care (nursing, alleviating), shifted to prevention (sanitation, hygiene) in combination with the 'caring' physician, but with the rise of the specialist and therapeutic hospitals the paradigm shifted in the end to 'curing'. This illustrates how whimsical transitions can be. Practices have changed from typical routines focused on permanent institutionalization to routines that try to efficiently route patients in, through, and out of the healthcare system.

The boundaries of the system not only first emerged, but also shifted considerably in the studied period. First, in the late nineteenth century healthcare expanded to infrastructure, nutrition, etc. and diffused the hygienist approach in these sectors, but these fields would, in the end, not become part of healthcare themselves. Second, healthcare was original mainly reserved for serious illness, and later expanded to minor ailments (for example slight depression, light allergies). Third, healthcare has expanded by means of mental healthcare to large parts of what previously was the 'state of the soul' or 'happiness' or even 'public order'.

With regard to the structural and cultural changes in (and from) macro-level constel-

lations, we see both structural and cultural factors playing a role. Important structural macro-factors were the economic up- and downturns, the industrialisation and urbanisation; typical cultural factors were the rise of paradigms of modern science and medicine and the progressive confessional-liberal political climate. Mostly these influences reinforce each other. For example modernization formed both a structural and cultural factor in shaping the transition. At times, these influences were not in sync: for example the first half of the 19th century in which the structural conditions hampered initiatives to re-establish healthcare. Or the early second of the 19th century in which options on preventively intervene, met cultural resistance owing to the hesitation to intervene in citizen's private lives.

element		from	via	to
structure	organisation of primary process	individual practices and larger institutions		individual practices and larger institutions
	specialisation	some specialization	some specialization	highly specialized
	organisation of financing and regulation	individual voluntarily	collective individually and municipal budgets	national & compulsory
culture	knowledge and know-how	philosophy & craft	holistic, romantic science	reductionist, scientific method (evidence based)
	cause of disease	divine will	environment	specific causes
	paradigm	care	prevention / care	cure
practice: process of treatment		complaint -> diagnosis -> institutionalisation & complaint -> diagnosis (-> treatment)	complaint -> entry check -> diagnosis -> institutionalisation (·> release) & and complaint -> entry check -> diagnosis -> treatment	complaint -> initial diagnosis and referral –> specialist diagnosis –> specialist treatment
power (of system within society)		limited for minor ailments and last resort	system for prevention and curing of somatic disease and serious mental illness,	iconic, authorative, and resource rich for *treatment* of virtually all diseases and

Table 3.7 Overall changes in structure, culture and practice

Comparison to ideal type pathways in literature

Now that we have established an empirical path of a transition as a combination of patterns, we can compare this path against ideal type path(way)s in Transition Studies. De Haan defines (2010, p II.67), four 'families' of ideal type paths: top-down (reconstellation dominated), bottom-up (empowerment dominated), transformation (adaptation dominated), and lastly a combined path of 'squeeze' (reconstellation and empowerment dominated). The ideal paths are thus defined by a dominating pattern, but not by a longitudinal shift.

Although they employ different types of patterns, the pathways of Geels and Schot (2007) could be interpreted as a pathway in which empowerment dominates in the

predevelopment phase, and adaptation dominates during the take-off and stabilisation phase. Exceptions to this are paths P3 (in which the opening up of the regime is forced by a shock similar to reconstellation) and path P2 in which the regime breaks down before any predevelopment occurs and a path similar to De Haan's squeeze develops (but only for a short period, after which it focuses on adaptation again). The longitudinal shifts in pattern are depicted in figure 3.8 by arrows.

If we roughly map our case in this diagram, we see that our empirical case is far from any ideal type and more diffuse than all ideal types. Still we could see a mild shift in patterns from empowerment driven to adaptation (and during take-off and acceleration some crucial reconstellation patterns). This is not unlike the typical longitudinal pathways of Geels and Schot, except for the continued adaptation pattern.
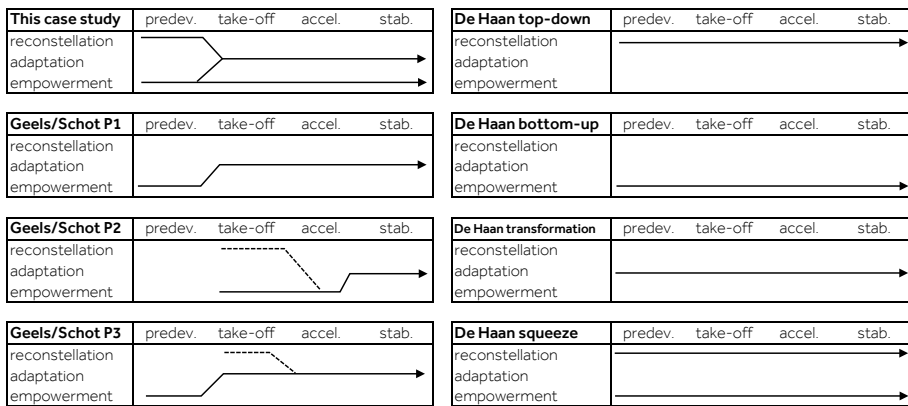
Figure 3.8 comparison of ideal type paths in literature and observed patterns

3.3.5 Step. 4 Conclusion: answering the research questions

How did the present system come about?

We can conclude that the present regime, characterized by a focus on curing, came about in two dynamic phases between 1820 and 1970 after the vulnerable old regime was destroyed by French influences and impoverishment. First, many different alternatives reinforced each other and competed to fill the void. From this period, the physician, as a merger of the classical surgeon and academic doctor, emerged as simple regime. The focus shifted to prevention. This particular professional approach of the physician gained dominance because it was a strong combination of the practical surgeon and theoretical doctor in society with a belief in science, which was confirmed by a series of medical innovations. This and the abundance of physicians, however also led to the rise of the specialist. Subsequently, power shifted, dynamics internalized and a compound regime of the specialist, hospital and compulsory financing arrangement emerged with a firm focus on curative therapies. Dedicated financial arrangements allowed for the spectacular growth of specialist healthcare. Other approaches, such as «Cross Work»

and public health became marginalized, also due to an individualizing society, or had to adopt elements from the approach of this specialist-hospital-financing combination. Healthcare became more sharply demarcated and much broader than it once was, including approaches for minor ailments and mental health.

What can we learn about the fundamental characteristics of the present system?

In the previous subsection we described the changes in culture, structure and practice in depth. We could summarize these features as:

- The culture is dominated by a curative paradigm: although fighting infectious diseases requires both prevention and curative interventions, prevention diffused into other societal systems, whereas curative healthcare became dominant throughout the healthcare system even for the type of healthcare that are not necessarily well suited for such an approach.
- This curative structure is highly specialised: healthcare was mid-transition aimed at integral, universal approaches, but in the end became specialised, both between professionals but also in for example financing structures. This specialisation does not only occur in typical somatic, curative care, but influences other fields (for example mental healthcare with chronic tendencies) as well.
- The curative practice is complaint-diagnose-treatment: the curative routine expects the patient to come forward with pains, discomforts or other worries, after which a full diagnosis will be made and treatment started and the patient will be cured. Next to this model, a model of chronic care (institutionalisation or homecare) also still exists, but is far less powerful.

Power is held by the specialist-constellation and the financing-constellation who would reinforce each other. Although 'care' is comparable in size, they have much more patients to care for and their cultural power is a lot less.

Can we find the roots of current persistency and contestation of the regime?

The current regime is a compound regime of different constellations and is a compromise between centralization and individualization. The financing is collective and centralized[20]; the practice (and culture) of healthcare is highly individualized (the specialist treating the patient). Some awkward combinations express this, for example many specialists work as small private commercial firms, within large not-for-profit private foundations (hospitals) that provide a public service that is delegated, financed, and 'inspected' by the public government. This stress was built-in by the 1930's reimbursement of specialists and later compulsory sick funds. This removed the traditional checks-and-balances that kept costs in line with affordable costs by workers. This allowed healthcare to enter into a spiral of more expensive treatments and a growing financing constellation. It is thus not surprising that this stress resurfaced after the post-war economic boom.

Furthermore, the regime is a 'child of its time'. The major changes occurred in a time when society was dealing with infectious diseases, against a backdrop of an impoverished lower class and an urbanizing and industrializing society. The authorative role of the physician and hierarchically organized institutions were moulded to the late nineteenth and early twentieth century organizational and cultural ideals. This might explain why the current health system has fundamental difficulties in addressing late 20th - early 21st century problems, such as lifestyle, social health and comorbidity issues.

These health problems are often in between the curable and incurable and thus in between curative care, palliative care and chronic care, with also an important role for preventive care (to prevent and mitigate chronic disease). In the current healthcare system the curative care holds most status and power: moreover there is a dichotomy of chronic (or nursing) care and curative (or highly medical) care, which give the current system a tendency to not combine approaches, but to pigeon hole health problems into either curative care or chronic, nursing care.

Why and where did alternatives founder?

We can reframe this question to: why did the Cross Work and public health constellations decline and in the end became marginalized?

«Cross Work's» history has been closely interwoven with landscape developments. It was the Reveille and appreciation for civic initiative that led to its inception and growth. It successfully adopted a new approach when its original aim, fighting epidemics, was no longer necessary. It survived societal tensions over segregation, by becoming itself segmented into different ideologies. Its position within the healthcare system was strong: it redefined nursing in hospitals through its education programs and it acquired 'public functions' such as vaccination at the expense of the public health. «Cross Work» thus had considerable power within the health system. But the strong decline is much more related to a changing world after the Second World War. Society individualized and was less willing to work for free or low pay. People started to interpret «Cross Work» as a subscription service instead of a community-based initiative. «Cross Work» adapted towards more central public financing, but this would introduce stress with its decentralised, diversified organization.

A similar story can be told for the 'direct public health' approach. It has been a 'logical next step' for over one and a half century, owing to either the public nature of health or the heavy government-involvement in financing. However, being a 'logical step' was never sufficient. In most of the nineteenth century public health initiatives failed, because of a misfit with a very limited domain for the (central) government. In the first half of the twentieth century, public health services started to develop, but did not align with the segregation of society. After the Second World War this segregation was too strong to allow the NHS example of the UK to be taken over. The 1970s progressive left

climate did not last long enough for cost and fragmentation concerns to be addressed by «public health» instead of cuts and liberalization.

The histories of direct «public health» and «Cross Work» demonstrate the decisive influence financial arrangements can have. Arrangements which are sometimes changed by politics, but mostly frozen in time, as changing the status quo seems to require much more force than maintaining the status quo. This also points to the necessity of relatively long, stable political climates to achieve change.

What are areas of interest for further study?

From the findings of this case study, many specific periods and events are in need of a more in-depth analysis. Sometimes these small scale dynamics are already described with vivid and rigor such as: (1) the uniting of doctors and surgeons in the middle of the nineteenth century, which is already described in more detail by Houwaert (1991); and (2) the emancipation of specialists through the reimbursement war in the period 1920 – 1940 by Juch (1997). In other instances, this high-level case study might identify areas of interest for lower level case studies such as: (1) The 'choice' of general physician's community to become themselves 'a specialization', instead of maintaining the idea of the universal physician; (2) the introduction of nurses into the hospital constellation, from the Cross Work organizations as a typical example of innovation arising in niches; (3) the failure of a more encompassing public health service in the period 1970 – 1980 and more generally, the forming of early awareness that the current regime might not be sustainable (the latter is described in Chapter 2); and (4) the choices and deliberations within the Cross Work organizations to accept government funding, even if seemingly against their core value of communal autonomy. The identification of key moments to be studied in detail may be another application of the framework presented in this chapter.

<u>3.4</u> Conclusion on the system-subsystem relationship

This chapter presented a new method for describing transitions, based on De Haan's formal model of transitions. This method separates the explanandum (that to be explained) and explanans (the explanation). The explanandum was expressed in terms such as the beginning and end of the transition, the phases of the transition, and change in dominating structure, culture, and practice. These aggregated phenomena, are explained by, and studied through, underlying mechanisms of interacting constellations within a societal system (under the influence of the landscape) that through three types of change patterns gain or lose power and adapt their individual structure, culture and practices (the explanans).

Added value of the approach and method

This method allows a more transparent demarcation, classification, and interpretation than hitherto and so opening up transition analyses for critical review and debate. Besides an improvement in methodology, however, we arrived at quite a different perspective on a transition. The dominant approach is that of transition journey[21], which, to extend the metaphor, is often described as a winding, almost romantic, road for a certain niche, technology, or development to go through. We found from a more distanced bird's eye view on a transition, there is not a single journey, but more of a complicated 'spaghetti' of intertwined developments, in which different approaches to healthcare sometimes behave largely autonomously and sometimes interact intensively. Different dynamic patterns are simultaneously going on in different areas of the system. From this perspective it seems indeed challenging to a priori pick a single transition journey of a single constellation to describe and explain the transition. On the other hand, from our 'spaghetti' view one can still isolate a single innovation journey, in sense there is the 'correspondence' we sought.

Change at the level of the system also features major turns and twists, for example, the development of the system towards prevention and universal medical knowledge and then shifting to a path to curing and specialisation. Another interesting finding on transition is that first a single regime (being associated to a single constellation) and next a 'compound' regime of multiple, mutual reinforcing constellations emerged. A compound regimes consisting of somewhat incompatible constellations that lead to stress in the regime. This might offer a way to study regime instability and inner regime dynamics. It also demonstrates that the regime, besides an emergent, system-wide phenomenon, can also be rooted in multiple constellations, which together are dominant towards other constellations.

One important empirical finding with theoretical implications is the relevance of interactions with other societal systems with a size (or power) of the same order of magnitude, for this specific case the poor care (later social security). These type of 'horizontal' interaction of the societal system, does not fit in the typical 'vertical' orientation of the MLP and most other adaptations of the MLP and independent models; which all consi-

der dynamics on lower levels than the regime (or system at hand) and higher level, but not the interaction with neighbouring regimes. This also touches upon the multi-regime dynamic discussion in chapter 2.

One the main aims of particularly this thesis within the larger joint research effort, was to strengthen the methodology to describe constellations (and the system level) by structure, culture and practice. The method we developed in §3.2 worked well, not only for the medical practitioner constellations, but also for the financing and public health constellation, which are of a different nature. Of course, conclusions cannot be drawn on a single case and a single topic, but these results are promising.

In addition, the alternating between the 'what' of structure, culture, practice and the 'how' of multi-pillar patterns worked very well. With this combined method we could establish a series of snapshots ('what') and transitional change in between these ('how'). This allows tracking change as it diffuses throughout the system.

Limitations on depth and key events for further study

Not all criticism identified in the first section could be addressed. A serious disadvantage of the method presented here is that, in some respects, it is only scratching the surface of history. The wide perspective makes in-depth analysis difficult. This approach allows even less than the conventional MLP for studying primary sources or extensive research into specific events and specific agency. Thus the role of individuals for example has barely been visible in this study. One solution is to combine the explorative, wide analysis with more in-depth analysis on specific key events and developments (which the wide approach helps to identify).

A new perspective for Transition Management

For developing and analysing transition policy this new methodology provides a method to better describe the on-going dynamics, but the new perspective has implications for Transition Management beyond transition policy arguments. Although the existing winding road perspective might be appropriate for an entrepreneur or pressure group focusing on a single alternative, the helicopter view of complex interacting alternatives might be more suitable for governmental policymakers, trade associations, or broad societal movements. In adopting such a perspective it puts focus on strategically stimulating many alternatives and their interactions, over fostering one 'winner', who might be impossible to identify in advance. The perspective thus underlines some of these key principles of Transition Management. In later chapters (4, 5 and 6), we will reaffirm and elaborate on the crucial role in Transition Management for constituting and influencing of transition networks. It should be noted that in TM as steering philosophy and the reflection on insights from complexity science already describe a complex interaction of many different elements (Rotmans and Loorbach 2009), this methodology and case study illustrates such a complex ' mesh' of developments with both a general direction and many (semi-)autonomous processes.

Points of attention

Summarizing: we have identified in analysing and/or developing a transition policy argument these main points of attention: (1) the transition policy argument should preferable be based on a broad analysis of the dynamic state of the system which the policy aims to influence (inferred from past dynamics) as part of a 'given environment' without bias towards a specific alternative or solutions; (2) if the policy aim is a broad, public interest, a broad strategy would be consistent which such an aim, if a single alternative or path is aimed for, the motivation for this selection should be critically examined; and (3) a complete analysis of the system at hand describes structure, culture, and practice aspects of the systems (even though not necessarily in those terms) and allows local dynamics in the system to be different from 'global' system dynamics. As a supportive lens we have provided a new methodology for describing transitions consistent with these two points of attention.

Characterizing the state of the transition for policy-making

To recap, at the level of the explanandum we can describe the dynamic state of a transition by:
- The phase of the transition: pre-development, take-off, acceleration, or stabilisation. From the case in this chapter, it should be realised these phases are a high level concept, and turbulence can differ greatly between constellations.
- The path the transition is taking (as a result of patterns at the constellation level): especially an adaptation, top-down or bottom-up pattern dominated path.
- The power of the regime (relative to the whole system).

In addition to the 'how', we can also describe the structure, culture, and practice of the regime (as a system-wide phenomenon, instead of a specific constellation) and describe alternative structures, cultures, and practices developing. At the level of the explanans we find:
- The 'global' conditions for change in the system: stress (within the regime), pressure (from the niches), tension (between regime and landscape), which can affect constellations differently, as each niche constellation will align differently to regime and landscape forces, and between larger and smaller niches, pressure-like conditions can also develop.
- The specific on-going patterns between specific constellations, for example constellation X adapting to constellation Y.
- The power of each constellations relative to the system as a whole.

At this level the 'what' can be described by the structure, culture, and practice of the constellations. These characteristics of individual constellations at the level of the explanans are easier to determine in an on-going transition, as the end point of the transition does not need to be known in advance.

*recap of substantive findings and implications for
healthcare transition policy making*

Expected from theory and confirmed, illustrated or deepened by the case study

- *(Collective) agency matters:* the role of individual and collective agency at crucial points in the history of Dutch healthcare is clear: in for example uniting physicians and academic doctors, or bringing about the revolution in prevention by the hygienists.

- *In a time of many competing alternatives, it is difficult to impossible to a priori pick winners:* the crosswork constellation appeared to have everything in it to become the new regime, yet it did not, as it mismatched unexpected macro-developments. This underlines the need to keep options open in Transition Management.

- *Alignment to landscape and regime developments is crucial:* niches do not grow and get empowerment only on their merits. The specialist-hospital combination has objective benefits (curative capabilities) but also fitted dominant political and societal developments better.

- *Regime is a child of its time:* many elements of the current health system we might take for granted, have a 19th or early 20th century rationale behind them, mainly to fight infectious diseases and accidents. It will be challenging, but necessary, to revise these elements for the challenges of 21st century, whilst not losing the still relevant qualities of the present system.

Major new insights which may also be crucial for other transitions:

- *Co-evolution with other societal systems is crucial:* this relates to poor care / social security in the case, but healthcare overlaps with many other societal systems (ch. 2), which could also bring about co-evolutionary patterns.

- *The regime is compound:* it is not a single constellation, but the relationship between financing, specialists and the hospital (nursing).

- *There are old tensions in the system from the previous transition which might shape the next transition:* especially individual and collective elements are at odds which each other.

Insights specifically for healthcare transitions

- *Financing matters and the devil is in the details:* cultural paradigms determine success and failure of healthcare and shape financing. But crucial details in financing arrangements can have a lasting impact on a transition, such as the early choice to reimburse specialists per treatment.

- *Healthcare transitions require extreme political stamina:* one political term is usually not enough to significantly alter the structure of healthcare, previously long confessional-liberal dominance was required. In recent history a market-liberal dominance made large changes possible. In the current highly fragmented political system, a long term ideological dominance appears unlikely.

- *A curable-incurable dichotomy exists:* whilst many health problems in reality have an ambiguous nature.

- *Can government limit is involvement?:* historically, once government accept some ('safety net') responsibilities, it acquires an interest in all aspects of healthcare.

- *Why would this time be different for community-driven care?:* from the history of Dutch homecare we can learn that individualization, an ever more complex healthcare and state involvement doomed community-driven healthcare. Are witnessing such a drastic societal shift back to community-values and a retreat of the state? Or should we focus on citizens caring for those very close to them, for example intra-family care (mantelzorg)?

Notes

1. See Rogers (Rogers 1962, 2010). Although both the transition curve and innovation diffusion curve are S-shaped, the underlying mechanisms are quite different.

2. Note this model has moved beyond three fixed levels, and only typically using 3 or 4 levels: "In principle a societal system could have subdivided itself in any number of constellations, contributing to its functioning anything from negligibly little to fully dominating it. It is, however, convenient to distinguish three ideal types of constellations [excluding the landscape, RvR] of different power." (de Haan and Rotmans 2011, 93)

3. Hoogma (2002) states: "the SNM approach does include picking a set of technologies for experiments, so an assessment ex-ante of the potential of new technologies is necessary (...) SNM tries to answer the question: which technologies might form a pathway towards a more sustainable technological regime"

4. Another advantage in starting with a historical application is to explore 'correspondence' (in the sense of Bohr 1920; Radder 1991): an historic application will allow to easily compare this method to the 'conventional' method of analysis through the MLP. Ideally, from the correspondence principle, the very first application of the method would be to a familiar case in Transition Studies, to next move forward to applying it to a non-technology centred case. Unfortunately, owing to limitations in time and resources, this was not feasible.

5. In the sense of Hempel and Oppenheim (1948), although it should be stressed we do not introduce the full deductive-nomological model or address the question of casuality versus pre- & postdiction, it is simply proposed that systematically distinguishing between the 'what' and 'why' or to distinguish between phenomena and the underlying factors is crucial for analyzing and/or developing transition policy arguments. It should thus not be interpreted as a choice for verificationism, a falsificationist position is also compatible with distinguishing explanans and explanandum (and more in line with the modest ambition with such distinction in this thesis).

6. They juxtapose their approach against 'variance theory' based on Poole's (2000) apparent dichotomy of process theory versus variance theory. In Poole's and their interpretation variance theory appears to be some kind of simple statistical independent-dependant correlation approach. However, much of the noted limitations of the 'Variance Approach', such as linearity, mono-causal focus, lack of layered explanation, lack of dynamic behaviour, dependence on 'statistical generalisation among many cases' do not apply to system (dynamic) models and theories. Ironically, Geel's external shock -> regime change approach is actually quite close to a 'variance theory' being the single input variable – response model they and Poole agitate against.

7. See also their figure 1.6.1 quite clearly depicts a preference for an approach in which all events, activities and choices are part of the same 'pattern'.

8. For example, Schot and Geels, in their part on dynamics in the Routledge series on transitions, state: "we define such transitions as shifts from one socio-technical system to another" (Geels and Schot 2010, 12), directly followed by four characteristics they "consider" transitions to have in which already niche-aspects, such as embedding of new technology, are described, thus mixing explanans and explanandum. This is not to say we can with the conventional MLP make some distinction: niches and especially landscape developments for example are more part of the explanandum , regime change more the explanans. One might also argue, if one finds a teleological explanation acceptable that the unsustainability (or move towards sustainability is the explanans and the whole transition is the explanandum. See chapter 8 for recommendations on future research on this.

9. For example: are "individual actors" or even collective actors a structure? Does not even the grammar of 'consumption' suggest this is a practice, what is 'production' as a structure in relation to production routine as a practice? Are flows a structure, especially if they are dynamic flows? If rules are a structure, can norms then be part of culture?

10. Although the description of 'typical practices' within a constellation would by no means be the full and rich description of practices as advocated by Shove and Walker (2007). Also this conceptualisation of practice does not necessarily put a focus on 'ordinary citizen/consumer' life; this would more a point of attention in boundary demarcation (see chapter 2).

11. Pushing the legal limits is also not unknown to socio-technical innovation. For example, in the role of technology pushing legal boundaries in opening up the Bell-monopoly, see Hush-a-Phone versus United States Case in the D.C. Circuit Court of Appeals (DoC CoA 1956, no. 266-1956), and the Carterfone FCC ruling (FCC 1968, no's 68-661 and 420-1968).

12. Attributed to Albert Einstein in Bell (1951) 'Mathematics, Queen and Servant of the Sciences' (1952) by Eric Temple Bell

13. In the application to the case, some change patterns in some constellations in time thus overlap with a subsequent change pattern. This complicates a simple periodization of the histories of constellations. We have addressed this by grouping multiple change patterns in a single period of change where two patterns mostly overlapped and otherwise addressed it by allowing the time periods of description to partially overlap.

14. Dutch: Arts. Note that for such specific Dutch terms for medical practitioners, there is often no direct equivalent in English. In such instances, we will use the closest term available in English.

15. Nursing could also be interpreted as an independent component, first coupled to the Cross Work constellation, later the hospital constellation and finally of course also the 'nursing and care' sector.

16. Professions are translated to their closest English equivalent, nevertheless their meaning will slightly differ from that in the English or American context. Especially 'surgeon' (Dutch: chirurgijn) should be understood as the guild-based profession, not the modern medical profession (Dutch: chirurg).

17. Dutch "Nederland Medisch Genootschap", later the association was granted royal status and became known as "Koninklijk Nederland Medisch Genootschap"

18. Physician ("Arts") was not a new notion, but before the 1860s its occurrence was sporadic WNT.

19. Regionale Instelling voor Ambulante Geestelijke Gezondheidszorg – literally: Regional Institute for Ambulatory Mental Healthcare

20. Of course, the curative sick funds and insurers have never been nationalized or centralized. However they are so heavily regulated and institutionally embedded, de facto the system comes close to a national health insurance.

21. For example the concept of 'innovation journeys' (Schot and Geels 2008; Geels et al. 2008).

4. From systems to governance: addressing the regime adaptation paradox

This chapter explores the relationship between governance dynamics and the regime shift dynamics discussed in previous chapters. From the start of Transition Studies, the intentional steering of regime shift dynamics as a way to accelerate (or redirect) transitions has been a continuous research theme. In the first section of this chapter we will reflect on these various approaches and the insights they provide for connections between transition governance and transition dynamics within transition policy arguments.

In this reflection we will identify the relationship between transition governance and an adaptation pattern of regime shift dynamics as a key point of attention (see chapter 3 for a discussion of the adaptation pattern). In §4.2 we will hypothesise that a regime is susceptible for adaptation if the regime persistently experiences a serious problem, as identified from its own paradigms. We will elaborate on how such windows of opportunity might open and close.

As transition dynamics in Dutch healthcare at the time of the empirical phase of this research were limited, we present a case study in water management (§4.3), featuring the actively interfacing a shadow (niche) track and mainstream (regime) governance process. In section 4.4 we reflect on possible signs of adaptation patterns in long-term healthcare during the initial phase of the transition programme in long-term care (which will be elaborated on in chapter 6). Lastly, we draw conclusions in section 4.5.

The case research for section 4.3 was done jointly with Van der Brugge's dissertation research into different types of governance processes in relation to transitions (van der Brugge 2009). A preliminary version of the conceptualisation and reflection can be found in Van Raak and Van der Brugge (2007). The dominant sequence of discovery was from the case to the reflection to the conceptualisation.
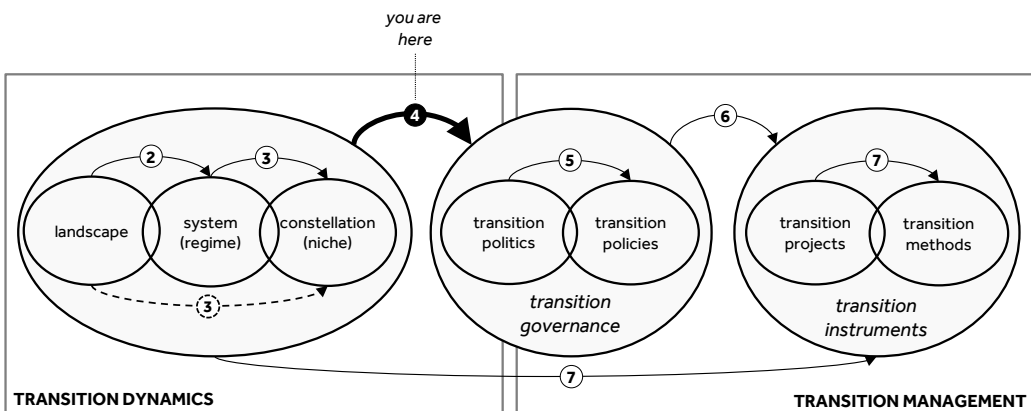
4.1 Theoretical reflection: patterns in dynamics and governance

In this section, we will first discuss some significant transition governance approaches that have emerged over the last decade, after which we will reflect on their relationships with transition dynamics concepts and frameworks. In the framework of this thesis, governance dynamics are nested within transition dynamics. The governance of a societal system is thus not external to the dynamics of regime shifts, but a specific subset of them (we will discuss some other conceptualisations further on).

4.1.1 Transition Governance as an emerging subfield of Transition Studies.

General high-level models and concepts of transition dynamics are too abstract to distinguish between the intentional and the unintentional and between the coordinated and the uncoordinated[1], thus specific models and concepts are used for transition governance. A transition governance research subfield appears to be emerging in transition studies, partly building on (or reacting against) Transition Management (and SNM), and partly as a parallel strand of research within Transition Studies.

Grin defines (2010, 58) governance as: "shaping the market and society into a desired direction (Pierre and Peters 2000, 1)," noting: "practices of governance (…) can neither be located exclusively in nor be solely directed by political-administrative institutions (…), but essentially involves interaction between state, market and society." Grin and others (Grin 2006, 2012; Hendriks and Grin 2007) have developed a 'reflexive governance' approach to transitions. Grin starts from Latour's reflection on modernisation (Latour 2003), whilst recognizing 'we might never have been modern' (Latour 1993). Modernization involved blind spots to risks, social equity, and ecological externalities. Following Beck (1997; also taking notion of the critique of Latour 2003), Grin observes and predicts an increasing attention for such serious 'side effects' of modernization. Modernization must and will thus become 'reflexive modernisation'. Grin adapts Pierre and Peters' (2000) three realms. He adds the realm of 'science', uses 'civil society' instead of society, and in recognition of the more networked position of the state, adds the state itself as a realm. The resulting four interacting realms (state, civil society, science, and business) shape each other, generating overarching societal development patterns that also influence the realms.

Grin adopts Giddens (1984) view on the duality of structure and agency, leading him to consider the process of transition governance to be a process of "essentially (…) a matter of (1) redirecting the co-evolution of structure and agency towards (2) an orientation which goes beyond the control-mode orientation, which first guides modernity and takes sustainable development as a normative orientation, (3) amidst the turbulence of a variety of exogenous trends." This can be achieved by modes of reflexive governance: (1) structural adaptation (which Grin associated with regime adaptation/

change and includes visioning), and (2) innovative practices. Grin stresses the need of 'recursive moments' in order to stimulate 're-structuration' by agents, which involves:

> "the self-critical and self-conscious reflection on processes of modernity, in which actors reflect on and confront not only the self-induced problems of modernity, but also the approaches, structures and systems that reproduce them."
>
> (Bos and Grin 2010, 2)

Grin identifies two leverage points for agency in governance for transitions to foster alignments of re-structuring practices in the state, science, civil society, and the market (Grin 2010, 265): (1) governance activities that aim at regime change (planning through structural adaptation) and (2) planning through reflexive design in experiments with novel approaches. Grin states that the first leverage point is similar to TM and the second to SNM[2]. Grin stresses the importance of intermediary activities aimed at connecting these two approaches, drawing a comparison to dual track governance (Benhabib 2002).

Brown, Bos and others (Meene et al. 2011; Bos and Brown 2012) frame transition governance as a combination of market, network, and hierarchical steering. Similar to Grin, Bos and Brown find novel practices a crucial factor informing regime governance processes, but Bos and Brown propose a governance arrangement in which such experimentations are much more tightly integrated in the regime. They have developed a governance model in which the broadening, deepening, and scaling-up of transition experiments (Raven et al. 2010; Bosch and Rotmans 2008; Van den Bosch 2010) is combined with the Transition Management cycle phases.

Meadowcroft (2009, 2011) notes Transition Studies offer "a convenient political and policy frame to approach societal movement towards sustainability", but Meadowcroft emphasizes the politics in all aspects of transitions:

> "Politics is the constant companion of socio-technical transitions, serving alternatively (and often simultaneously) as context, arena, obstacle, enabler, arbiter, and manager of repercussions (…) At the landscape level it influences the general economic climate (…), the orientation of innovation and the ways technologies are deployed (…). At the regime level, legal structures and regulatory initiatives support (or sometimes undercut) dominant regimes; states are dependent on revenues drawn from prevailing economic practices; and political and economic actors become entangled. At the niche level, specific government programs can protect or expose niches and encourage or discourage innovation. Choices among alternative technological pathways involve struggles among rival commercial groups, and this spills over into conflicts over regulation and property rights."
>
> (Meadowcroft 2011, 71)

Meadowcroft offers a more cynical (or realistic) view on transition governance noting environmental governance in general often lacks political engagement; as other political priorities and established interests overwhelm and stifle political momentum for sustainability. Meadowcroft stresses that, in the end, struggles for sustainability transitions are decided in political practice, where science's role is to reflect on, and offer theoretical insights to, these political practices. He proposes to understand transition governance from the perspective of interests, institutions, and ideas, making the politics behind the policies visible:

- **Interest:** a redefining of social interests, entailing the building of reform coalitions, but also to buy off, compensate, or isolate resistance. Such processes will involve not only traditional political actors, but also the social movements and practitioners engaged in transitions. Meadowcroft reckons these processes take many iterations over many years, as political actors need an understanding of, and an ability to construct linkages between, social, economic and ecological reform agendas.
- **Institutions (organisations):** framing political interactions, a 'sedimentation' of existing norms, practices and power relations, but at the same time potentially enablers of reform, especially where organization aligns with the logic of transitions.
- **Ideas:** influencing the definition of problems and solution spaces. Ideologies from civil society might even challenge the role of the state itself.

Kern (2010) has studied the energy transition project in the Netherlands and Carbon Trust in the UK, addressing how interactive processes of policy construction and communication in institutional contexts shape each other and potentially change institutions and policy practices. In his theoretical framework, he attributes a pivotal role for discursive elements or 'storylines' that interface these institutional contexts and interaction with stakeholders, and are 'invoked to promote policy and institutional change' in a 'struggle over the best story'. Kern and Howlett (2009) address, also using the Dutch energy transition, the issue of incoherence between and within aims and instruments of a 'policy mix'. They argue coherency in policy is anything but trivial and inconsistent policy aims might co-exist ('layering'), or instruments and aims might become misaligned. We will revisit this for Dutch healthcare policy in chapter 8.

Avelino (2011) studied the relationship between social theory perspectives on power and transition (management) both empirically and theoretically. Her 'Power-in-Transition' framework integrates governance and dynamics as Avelino recasts and extends the MLP from a power perspective (see chapter 4). Avelino (2009, 2011) also approached the subject of (em)power(ment) from an organisational psychological perspective, by studying the motivation of individuals in engaging in Transition Management and the role of extrinsic and intrinsic motivating factors therein.

Paredis (2013; Paredis and Block 2013) has applied Kingdon's (1984) three stream model of a policy agenda to understand the incorporation of Transition Management as a governance approach by Flemish Policymakers, as well as the incorporation of

substantive ideas generated in such a process into mainstream policy. Paredis considers Transition Management to be a possible solution, within a stream of solutions. Uptake by policymakers occurs through alignment with the problems and political streams. Paredis affirms the role of TM in creating discursive momentum, but cautions that ideas and enthusiasm generated in a transition arena do not necessarily make it to mainstream policy practice.

4.1.2 Criticism on Transition Management

Work on transition governance builds upon Transition Management, but it also takes a critical stance towards Transition Management (for example Shove and Walker 2007; Kern and Howlett 2009; Smith et al. 2005). In chapters 2 and 3 it was argued that some of these criticisms are, in the end, more directed towards the ideas and models of transition dynamics (which TM builds upon) than TM itself. Also, Transition Management as a philosophy of governance is largely unchallenged. However, the more instrumental approach within TM has been criticized. TM translates academic ideas into an operational model that can be picked up by policymakers, increasing the likeliness of real life implications, including any negative ones. Some scholars even focus on this policy practice instead of the theory (for example Hendriks 2008; Paredis 2013). Some critics question the "straightforward managerial understandings" (Smith and Stirling 2010) of Transition Management theory. Kern (2010, 56; citing Dessler and Parson 2009) notes "politics embraces the processes of argument, negotiation, and struggle over joint actions or decisions." Lawhon and Murphy (2012) suggest that Transition Studies should learn from fields such as political ecology. A particular focus of criticisms is the 'front-runner' concept as a central mechanism in Transition Management. Or as Smith and Stirling (2010) comment:

> "Transition managers appear as a vanguard sitting apart from governance actors within incumbent socio-technical regimes, but nonetheless seeking to intervene and transform (Smith and Stirling 2007). Deliberations over structural transformations of socio-technical regimes affecting the lives of millions of people are seen as led by an elite group of visionary forerunners. Critics interpret this as a highly technocratic vision (Hendriks 2008; Scrase and Smith 2009)."

This is not only a question of legitimacy, but also doubts can be noted if this frontrunner mechanism actually works:

> "How credible is it that a Transition Management process that begins within a vanguard of elite visionary forerunners can really overturn structurally embedded regimes? How realistic is it to expect the pervasive infrastructures of these regimes to be responsive to the more challenging lessons generated in Transition Management?"
>
> (Smith and Stirling 2010, 9).

4.1.3 Dimensions of transition governance

Governance itself is already an ambiguous concept, combining insights from various disciplines, making it much more than a mere grammatical variation on 'government' or "the action or manner of governing"[3]. Governance signifies a shift away from the classic hierarchical governing by the welfare nation state and is often associated with a progressive agenda of addressing the shortcomings of the classic nation-state in a variety of ways (Goetz 2008). Stoker (1998) summarizes in this way:

> "Governance is about new methods and forms in governing and ultimately is about a change in the meaning of government. A governance perspective provides an organizing framework for understanding the changing processes of governing. (….) Governance involves: multi-agency partnerships, a blurring of responsibilities between public and non-public sectors, a power dependence between organizations involved in collective action, the emergence of self-governing networks and the development of new governmental tasks and tools."

Not surprisingly, transition governance approaches, such as those described in the previous subsection, have a considerable diversity at a quite fundamental level. In this subsection, we will try to order these differences to better understand the implications for transition policy arguments. In literature, the only meta-level publication on transition governance theories appears to be Smith and Stirling (2007). The main ordering dimension of Smith and Stirling is the position of governance relative to the system, either 'outside' or 'inside' (cf. Rip 2006):

> "The first ideal-type, called 'governance on the outside', considers governance subjects attaining an objective distance from a discrete, uniquely knowable socio-technical system. The second ideal-type, called 'governance on the inside', is more reflexive and recognizes how framings of the system by different actors, and their inter-subjective negotiation in governance arenas, effectively involves those arenas in the (social) (re)construction of the socio-technical 'system' itself."
>
> (Smith and Stirling 2007, 352)

To pin down the diversity in transition governance to a single dichotomy might, for our purposes, oversimplify the rather complicated interface between dynamics and transition governance theories. Moreover, the scheme appears to be a normatively loaded 'heuristic scheme' of 'good' and 'bad' governance. I would propose to describe the differences between governance approaches to transitions in multi-dimensional, neutral fashion. One such interpretation might be the following seven dimensions (on which we will elaborate subsequently):
- Locus of governance
- (Non)-ideological status of sustainability
- Descriptive and/or prescriptive nature

- Bird's eye view or over the shoulder view
- Level of coordination deemed possible
- Material or idealistic focus (cultural or structural approach)
- Role of ambiguity and demarcation issues

1. Locus of governance in the socio-technical system, in a general political system, or in the whole of society

Smith and Stirling distinguish between governance from the outside and governance from the inside. For highly specialised systems, such as technological systems, healthcare, or defence, one might argue that these systems have, under normal circumstances, an internal focal point of governance, as even the government departments and agencies governing them are 'inside' actors (or institutions). An empirical example is the 'iron triangle' of agriculture institutions in the post-war era in the Netherlands as described by Grin (2010). Some large scale technical systems might also be public themselves, owing to natural monopolies, such as the electricity grid or drinking water supply. In such systems, the locus of governance could also be considered to be in the system, as the government is running the societal system itself[4]. Some would even consider deviant policy practices within the governance of the system (from the regime) to constitute a 'policy niche', for example Van der Brugge and De Graaf's study of a policy in water management (Van der Brugge and De Graaf 2010; De Graaf and Van der Brugge 2010).

In another approach, the locus of steering functional systems in society is still somewhere in the general political-administrative system (e.g. a nation state); even if acknowledging an increasing role for non-state actors, non-formal democratic processes etc. Meadowcroft clearly positions transition governance (more) in the normal political arena, but also Kern stresses the importance of the political (in the narrow sense) in setting policies. Paredis adopted Kingdon's framework to explain the (non)embedding of TM in the administrative-political system.

Lastly, an all-encompassing view on governance, in line with the 'politics is everywhere/everything' paradigm, would consider all of society involved in the politics and policies for transitions. A dialogue with one's neighbour over future energy, or current high gasoline prices, might be as much part of transition governance as a parliamentary debate.

2. Sustainability from a governance perspective, or a new perspective on governance

All transition governance approaches have a particular interest in sustainability and many are motivated by such societal goals. However, how sustainability is treated differs between transition governance scholars. Meadowcroft positions the strive for sustainability as one of the many competing claims founded in competing ideologies in the political arena where struggles over ideas and interests take place, with some specific characteristics, such as the need for stamina and flexibility to persist through

different administrations and other political turmoil. We could see this as a conventional governance perspective on transitions.

In contrast, some argue transition governance should be seen as part of a "new mode of governance" (Loorbach 2007a) for sustainability, or part of larger trends such as networked governance or reflexive modernisation. Loorbach, for example, states that his approach offers: "the starting points for the development of various governance approaches (…) for societal systems and problems in general, also for which no transition is required," (p. 278). Loorbach also descriptively assumes "increasingly diffuse policymaking structures" and "the current practice is increasingly to develop policies in interaction (…) between all sorts of actors in networks," (Loorbach 2010, 161). Or as Hendriks and Grin puts it:

> Dynamism is, of course, an inherent feature of politics, but in contemporary liberal democracies we are witnessing change on many fronts. Actors and institutions are diversifying, rules and values are shifting, and political, market and social forces are evolving (…). With these changes we have seen greater interdependencies between actors and institutions."
>
> (Hendriks and Grin 2007, 333)

Such larger trends in governance can be a backdrop (one might say a landscape influence) or explicitly a governance innovation to be introduced in the system at hand. In such theories there appears to be, whilst acknowledging 'everybody' steers, a class of actors or a single actor that operates in this new mode governance, influencing and convincing others to also adopt this new mode. Such an actor might be a 'transition manager', a 'transition team' (Rotmans and Loorbach), a 'strategic agent' (Grin), or not explicated at all.

3. Descriptive or prescriptive

Related to this last point, transition governance can both be descriptive and prescriptive. Descriptive examples are the observations on governance in historic cases, for example in the aforementioned agriculture case study by Grin. Strategic Niche Management is a clear example of theory developed with a specific prescriptive aim. Often, prescriptive and descriptive components are combined. Most descriptive literature also reflects on how descriptive insights could be used to improve policy practice (e.g. Paredis recommendations for policy in his largely descriptive dissertation). Second, in positioning transition governance of a societal system in the context of a larger trend in governance, it can become unclear if the manifestation of such a trend in the system at hand is descriptive (i.e. largely inevitable) or prescriptive (i.e. something a policymaker should struggle for). Prescriptions also differ between general principles (apparently to all actors engaged in governance) to detailed step-by-step guidelines for a specific transition manager or team.

4. Bird's eye view or over the shoulder view

A bird's eye view on transition governance shows how many actors, in entangled networks, are engaged in long-term policymaking (or other forms of steering) for societal systems. Such a view is consistent with most descriptions of transition governance, as pluricentric governance is a crucial element of these approaches. Other approaches take the perspective of a single steering actor (who might operate in such pluricentric environment). For example, a case study is written from the perspective of a policymaker or actor trying to induce transitional change in networks in which he is engaged.

5. Level of coordination deemed possible

Related to the pluricentric perspective discussed in the previous point, governance approaches appear to differ in the level of coordination deemed possible. At one end, we find approaches such as Berkhout and Smith who attribute some adaptive regimes to have the capability to coordinate an entire transition, or the early work of Rotmans describing the ability to coordinate a transition movement within a system or region (Rotmans 2005). On the other end, we find approaches more similar to usual conceptualisations of the political arena, where alliances in agendas and actions are often opportunistic and thus limited in time to the moments when interests of the involved parties temporarily align. Meadowcroft could be positioned relatively close to the latter position.

6. Material or idealistic focus

Materialistic and idealistic perspectives have been addressed in chapter 3 of this thesis as respectively the structural and cultural view on constellations. Most approaches in Transition Studies will not position themselves in either a materialistic or idealistic perspective but aim to address both perspectives. But a certain focus can be noticed, for example, many discursive analyses exist in Transition Studies, but very few analyses of interests and exercise of power over others. In this sense, transition governance appears to have more of a 'hearts and minds' approach, assuming material change will follow in the wake of discursive change, than a reverse 'if you get them by the balls their hearts and minds will follow'[5] approach. Remarkably, Loorbach and Rotmans take a more materialistic approach to 'regime actors' in transition governance and a more idealistic approach to the building of a network striving for transition, somewhat framing transition governance as a struggle between interests on one side and ideas on the other side.

Idealist or materialist focus in explanation might not only depend on the school of governance, but also on the phase of transition. For example, Kern frames change in institutions and a possible subsequent change in material conditions as a result of a discursive communication frames. Paredis (2014) notes that TM in the Flemish context appears to be unable to gain further momentum as its strength in generating a new discourse is also a weakness in realising more material change. Loorbach (2007a) even

distinguishes the nature of Transition Management activities on the basis of the phase the process is in (cf. van Raak 2008 see also chapter 7).

7. Role of ambiguity (and struggle over demarcation)

All transition governance approaches acknowledge some inherent ambiguity in defining sustainability, the problem, potential directions towards tackling the problem, relevant societal system(s), etc. Sources of ambiguity are limitations in knowledge of the system, the entanglement of the system with other systems, and fundamentally different frames of different actors involved that cannot be merged into a single inter-subjective framework. Approaches do differ in the extent to which they allow this ambiguity in the process of governance. At one extreme, one might even question if the concept of societal, and especially a socio-technical, transition is not merely one viewpoint amongst many in a political arena. None of the discussed approaches takes this extreme position[6], but some (e.g. Shove's or Hendrik's views) are more critical on a fundamental level. At the other end, we find approaches, such as Loorbach and Rotmans, in which at least 'the enlightened' actors, striving for system innovation and/or transitions, might reconcile differences in perceptions that appeared to be irreconcilable at the start of the system and it is possible, through analysis, to at least come to a preliminary demarcation of the system. Some (e.g. Raven 2004) even argue that we might be able identify, through assessment, which specific system innovations to support, such as in Strategic Niche Management.

Other characteristics

These seven dimensions are not exhaustive, specific governance processes have their own specific perspective. One such focus might be bottom-up. For example, Strategic Niche Management and 'broadening, deepening, scaling up' of Van den Bosch's focus on bottom-up processes from niches and experiments. Others utilizing social movement theory also focus, by definition, on bottom-up change (e.g. Seyfang and Smith 2007).

4.1.4 Implication of diversity in transition governance dimensions for policy arguments

How can we relate this diversity in transition governance to the developing and/or analysing of a transition policy argument? Obviously, there is no unified position on what transition governance entails. Scholars differ quite fundamental in their starting points and findings. This implies there is no straightforward, objective way of formulating transition policy on the basis of insights from transition governance. A claim in a transition policy argument can thus not simply be founded by referring to Transition Studies, or transition governance, but must either be accompanied by referring to a specific source in Transition Studies or an explication of the axioms on transition governance one has.

This is of particular importance as these difference governance approaches do have a political-ideological dimension. Even if these academic approaches are by themselves not political in nature, different approaches might align better or worse to particular political ideologies. A clear example would be that sustainability as a special, overarching starting point (at least in the era we live in), might resonate better with green political parties and much less with conservative-liberal parties. An important point of attention in analysing and/or developing transition policy arguments is thus if the ideological dimension of the chosen governance approach is explained.

We can also make some specific reflections. First, for the locus of governance, we would argue that adopting the fundamentals of transition dynamic theories necessitates the position that the system is the main locus of (transition) governance of that system. The transition dynamics in most approaches are explained from large scale outside trends (the landscape) and dynamics within the system. If we position transition governance outside the system, it can only be a landscape factor. This would imply top-down control, which is inconsistent with most transition governance positions. It would also frame governance as autonomous trend, instead of conscious struggle.

Second, assuming that we are in a fundamental shift of governance at all levels (or should be) is non-trivial. Such a trend can convincingly be contested (Goetz 2008) and would appear to be ideological. Of course, one could still make an explicit, ideological choice on sustainability governance in developing a policy argument. For developing or analysing transition policy arguments, the implicit or explicit assumption of a wide shift in governance is thus a point of attention.

Third, in our research framework we already distinguished between a descriptive bird's eye view on transition governance and a prescriptive framework from the point of view of the policy-enacting actor (or coordinated actors). Such a distinction follows from the definition of a transition policy argument containing the elements of the given environment (descriptive, a bird's eye view) and the course of action by the policy enacting actor or coordinated actors.

Fourth, the issue of ambiguity in demarcation and boundary dynamics we extensively addressed in chapter 2. We will further elaborate on demarcation in the synthesis chapter, as one of the 'red threads' or questions that can be asked at each level of the framework.

4.1.5 Dynamic state of the transition and transition governance

Now that we have established how current (diversity in) transition governance theory affects transition policy arguments in general, we can move on to the more specific relationship between governance and the dynamic state. To recap from the previous

chapters, the following are the key characteristics of the dynamic state of a system in transition (see also the recap at the end of chapter 3):

- **Cultural and material factors** (or perspectives): in chapter 3, we explored the structure, culture (and practice) approaches to change, and how these might be incorporated (building also on De Haan's multi-pillar theory).
- **Phase:** one indicator for the dynamic state of a transition is the 'phase' in the multi-phase concept of transitions: transition can be in a predevelopment, take-off, acceleration, or stabilisation phase. As we noted in chapter 3, it might be difficult to estimate the phase of an on-going transition.
- **Pattern (and path):** although paths may be difficult to predict (or even reconstruct) during a transition, patterns are more readily observable and somewhat projectable into the future. These patterns are related to conditions. Conditions describe circumstances under which specific patterns occur; these are "necessary but not necessarily sufficient" (De Haan 2010, II–47) conditions.

These first two aspects are already addressed in the existing Transition Management and governance literature. With regard to structure, culture, practice, most governance approaches address the idealist-materialist dimension and the relationship between structures, practices, and agency that is at the basis of most governance approaches (see chapter 3). More specifically the structure, culture, practice triplet is already connected to respectively operational, tactical, and strategic Transition Management. There are some challenges to connect a more bird's eye view with Transition Management in this respect; this will be the subject of chapters 5 and 6. The multi-phase nature is addressed by Loorbach (Loorbach 2007a). Remaining questions on phase are mostly about the concrete aligning of instruments with the system state. We will revisit this issue in the design of a specific instrument in chapter 7.

The depth of addressing patterns (and conditions) in transition governance literature differs per pattern. In the previous subsection we highlighted that there is well-developed, rich stream of literature on a more bottom-up (niche induced) approach. Little can be found on transition governance for top-down intervention, but an intentionally induced top-down intervention is an atypical pattern[7].

4.1.6 The adaptation paradox

We would expect transition governance oriented towards adaptation patterns to be more common in theory and observation, especially as theory on regime dynamics attribute these patterns an important role. As discussed in chapter 1, in MLP theory there has been a shift from the niche to the regime as the active entity in transitions, the niches are merely 'the seeds' and the regime (under landscape forces) plays a crucial role in determining if these seeds will sprout. Even if 'empowerment' (De Haan) or 'promising technology' (Raven) patterns are possible, these might not always occur. Moreover, as Van Raak and Van der Brugge (2007) point out, transition in systems which are inherently public in nature and their subsystems inherently tightly coupled,

as in healthcare or water management, the breakthrough and acceleration of a transition could very well be dependent on an adaptation pattern. In chapter 3 we observed many adaptation patterns, including indications these were actively pursued by actors.

A possible reason why we find little on regime adaptation, might be that the regime of a societal system is in general not considered to pro-actively adapt, but to resist. Rotmans (Rotmans 2005) describes this contrast as:"the regime paradox: the regime as crucial link and obstruction for societal innovation."

Proposed regime adaptation mechanisms

Several mechanisms have been proposed in Transition Studies to resolve this paradox and explain how regime adaptation through transition governance could occur:
- **Focus on agency in explanation:** starting from Giddens' duality of structure, agents associated to the regime have a (constrained) freedom to change these structures instead of reproducing the regime in practices. Berkhout and Smith have elaborated on this by the concept of membership, exploring difference between core and peripheral memberships. Loorbach and Rotmans distinguish 'enlightened regime actors' from other actors.
- **Recursive moments, visioning, enlightening:** related to the previous mechanisms, some, such as Grin, propose that processes can be steered towards desired transitions by introducing higher order learning reflective moments in policy-learning. Visioning has an important role in opening up paradigms. Rotmans early work appears to suggest a pivotal role of a single arena in at least 'preluding' a change in perspective in the system (Rotmans 2005, 2003).
- **Connecting regime structure and actors to innovation practices:** niche activities are normally seen as related to empowerment i.e. the strengthening of the niche through selective protection. Niches can also allow regime actors to learn. This approach is expressed in Van den Bosch's 'scaling up' mechanisms, elaborated on by Bos and Brown and is one of the two tracks of Grin's dual track governance.
- **Intermediaries, entrepreneurs, etc.:** related to the previous points, agents (especially those operating at the boundary of the regime) might strategically couple and decouple processes, noted amongst others Paredis and Grin. This also relates to the 'articulation of pressures' condition identified by Smith and Berkhout.
- **Internal destabilisation of the regime:** before a material decline, a regime might already be internally destabilised, creating opportunities for transition governance. For example, De Haan postulates once a pressurised regime adopts a few niche-elements, these create internal inconsistencies that might trigger a positive feedback. Raven's '2x2 matrix' (2006) also assumes the regime might experience periods of instability. In chapter 3, we saw that a previous transition might also leave inconsistencies in the regime.
- **The nicheregime:** it has been suggested (Rotmans and Loorbach 2010a; Grin et al. 2011; Haxeltine et al. 2008) to add at least one additional level to the MLP

between the niche and the regime. Such a niche-regime has some characteristics of a regime, for example yielding more power and characteristics of a niche (focus on transformation of the system). Avelino (2011), for example, attributes 'transformative power' to such entities to upscale inventions done in niches. As discussed in chapter 3, an empirical application of De Haan's approach not only allows identifying hybrids between the niche and regime, but also identifies several constellations that together constitute the regime. We will revisit this point in chapter 6 by motivating why a transition programme in healthcare was focused on a specific 'niche-regime' like constellation (long term care).

Limitations to existing proposed mechanisms

One might wonder if these mechanisms are convincing. Lawhon and Murphy (2012) recently argued that although some transition governance scholars have responded to pleas to better address resistance and power issues, these responses are "somewhat thin". Given the resistance attributed to the regime in literature one might wonder if these mechanisms truly address the paradox.

Loorbach and Rotmans attribute an almost personified role to the regime and a tendency to "strike back" (Rotmans and Loorbach 2010a, 218). The very raison d'être for Transition Management is arguably that (some) regimes are locked-in, not adaptive and inward looking. This inward looking feature problematizes much of the suggested mechanisms e.g. from the point of view of a regime, the future of that regime might look brighter than from the outside and 'enlightening' may be an ineffective strategy against an internally consistent paradigm. Of course, if agents come to a higher order of reflexive learning, they might revise their paradigm. Yet we know from political science that such processes are rare in governance, or as Sabatier comments that 'deep core belief' changes are "akin to religious conversion" and even less fundamental 'policy core beliefs' can be very difficult to change (Sabatier and Jenkins-Smith 1999).

The specific application of the windows of opportunity framework of Kingdon to transitions, by Paredis (2013), reveals that in mainstreaming radical ideas, little opportunity is identified in the two longest running transition programmes in Flanders ('DuWoBo' and 'Plan C'). In another early (perhaps the earliest), long running case of the Dutch energy transition, a lack of regime change is also noted. Van der Loo and Loorbach (2010, p 242), in regards to this project, state that: "One could even argue that it has changed energy innovation policies, while mainstream energy policies remain largely unaffected. Nor has the ETP [Energy Transition Programme] been able to challenge the societal energy regime in any fundamental way." Bosman et al. concur on the structural stagnation, but also note for the cultural aspect: "although different regime elements are still in place, such as coal fired power plants, network infrastructure, and energy markets, the discourse with which actors connect these elements and provide meaning and coherence is under stress." (Bosman et al. 2014, 57). Avelino (2011) comes to a

similar conclusion for other Dutch transition programmes: they often fail to "materialise" in an active power.

Grin has conducted extensive research on the transitions in Dutch (and European) agriculture and reflects on transition governance and structural regime change. He offers some compelling examples of intentional influencing of the regime. However, his examples appear to illustrate what from the definitions used in this thesis would be a 'top-down' approach (or reconstellation pattern), dealing with resistance by mobilising power outside the system and finding partners within the regimes on the way. His examples relate the 'resistance by traditional players', the 'bypassing' of incumbent power structures, the 'surprise attack' (Dutch: overval) on the regime, and EU policy reform against the resistance of member countries[8].

The "nicheregime" approach (de Haan and Rotmans 2011; Rotmans and Loorbach 2010a) as a hybrid constellation does offer a novel approach, but one might question if the nicheregime is not a far advanced niche, thus an empowerment pattern driving transition. The position that once a regime starts destabilising, opportunity appears for transition governance appears plausible, however before destabilisation occurs one might question how entrepreneurial activity 'softens' (Paredis 2013) the regime.

It is unsatisfactory that transition literature does not appear to be able to provide a strong base for developing and/or analysing transition policy arguments aimed at regime adaptation. The next sections will aim at a modest contribution to this issue, by proposing a mechanism in which the strength of a regime is also its weakness; specifically applied to the interaction of mainstream governance of the regime of a public system and a transition governance process.

4.2 Conceptualisation: regime frustration and windows-of-opportunity[9]

The aforementioned dissertation of Van der Brugge is used for additional conceptualisation and especially for his double loop concept. In focusing on what I would call the 'policy practices', Van der Brugge theorizes and empirically demonstrates in three cases (among which the joint case with the author discussed in the next section) how policymakers and other key actors engage in 'shadow tracks', and draws parallels to similar findings in socio-ecological system research (Van der Brugge et al. 2007). Van der Brugge answers the 'how' but not does not shed light on the 'why': why do shadow processes come into existence out of mainstream policymaking and why are the results of these processes incorporated into mainstream processes? Van der Brugge seems to resort to the 'enlightened regime actor' as he states:

> "The niche-structure provides an escape for individuals from the formal day-to-day organizational constraints and provides room for individuals to come loose from their role as representative of the organizations and to the opportunity to engage in a reframing process and seek for innovative solutions"

> (Van der Brugge 2009, 96).

For a more satisfactory explanation, we will first discuss a number of starting points, after which we will put forward a hypothesis and discuss the implications of this hypothesis.

4.2.1 Starting points for adaptation processes

We first assume the regime's own internal values, logic etc. are dominant to the values and logic of other constellations. If institutional actors that are involved in processes 'governed' by the regime can fulfil a task (e.g. for water management: writing a policy document, addressing a weak spot in river defences, assessing a (near-flooding) consistent with the regime's structure and culture, we assume that they will do so.

A second assumption found in De Haan and Rotmans (2011) is that even if the regime does not directly adapt to external changes, stress develops within the regime, because the reflective (in this thesis' terms cultural) part of the regime and the interactive (in our this thesis terms' structural) part of the regime become misaligned. This stress can be implicit and largely unknown or ignored by those involved in the constellation. At some point, the 'elephant in the room' can no longer be ignored. A clear example from water management of such stress is the breaking of a dike, which is considered to be 'perfectly safe'. For healthcare it might have been the 'pyjama day' (Dutch:Pyjamadagen) media hype: the en masse reporting of a designated day of the week in nursing homes when elderly were no longer put in daytime clothing, but were supposed to go about their daily activities in their night clothing.

I would hypothesize that these points are the bifurcation points between entering a

'normal' policymaking loop and (in addition) entering an 'alternative' loop, thus incorporating niche elements into the regime constellation.

This is similar to Kemp, Schot and Hoogma (1998), who note that: "some of the actors present in these regimes participate and attempts are made to solve problems identified but not solved within the regime" (p. 184).

4.2.2 Hypothesis on the relationship between transition governance and adaptation

Thus, by taking Van der Brugge's perspective and two basic assumptions from existing literature namely: 1) If a regime can complete a process (step) consistently by using its own methods, values and perceptions it will do so; and 2) Regimes can however contain inconsistencies that lead to openness to incorporate alternatives, we come to the hypothesis that:

> In governance processes that normally conform and reinforce the regime, a window of opportunity for an adaptation pattern occurs only if a persistent phenomenon is perceived from the paradigm of that regime as an unacceptable problem to its own standards, yet cannot be solved by the solution space available from within that paradigm.

The inconsistency can be unambiguous and directly observable, but it can also be more inferred, uncertain, and ambiguous in nature (e.g. climate change predictions, expected government-wide budget cuts, withdrawal of support by local governments for a central government policy, or an ageing population). Especially for the latter type of inconsistencies, there might be room for actually 'creating' the window of opportunity by policy entrepreneurs, by exploiting information or events. In this respect the hypothesis agrees with the 'articulation' argument of Smith and Berkhout (2005).

As many governance processes are iterative (if not more complex), the evident, manifest inability to tackle a problem might be more of an emergent conclusion than a direct policy analytical result. For example: the conclusion that the current healthcare system is not sustainable for an ageing population will not emerge immediately from the policy and political arena(s). First events might be interpreted as incidents, solutions will be proposed in optimization of the current system and future projections and statistics might not seep through.

There are similarities to the Kingdon model (1984); the application of the Kingdon model to shadow processes in water resource management by Olsson et al. (2006); and the application by Paredis (2013) to Transition Management. However Kingdon, Paredis and Olsson assume a matching of problem definition, solutions, and political climate. In this thesis a coincidence of alternative ideas and a persistent frustration of the mainstream process is assumed. Paredis has studied Transition Management on a meta-level as governance 'solution' in the solution stream that aligns with problems.

Resourcing an transition governance process from regime processes

Next to the incorporation of novel ideas generated in the transition governance processes into the regime, another important aspect in the transition governance – regime governance relationship is the provision of resources from regime governance processes to transition governance processes. Initiating and sustaining transition governance activities can be resource intensive, even if they typically only take a fraction of the resources of 'normal' regime governance. A transition governance activity might be as simple as writing an op-ed in a newspaper or even discussing an issue with one's neighbour, which of course do not carry significant costs. The more concerted efforts we will discuss in chapter 6 do. The costs for initiating experiments for the case in chapter 6 cost 25 million Euro; the Dutch energy transition programme costed 40 million Euro per year (PNO 2012)[10]. For such resources, often the most likely candidates are paradoxically the existing regime governance resources: thus a regime constellation empowering a niche constellation.

Our hypothesis for adaptation might also explain the resourcing of Transition Management through regime governance processes. In the case study of the next section and the creation of the transition programme in the long term care discussed in section §4.4, we will discuss examples of resources being diverted from mainstream governance processes to Transition Management (or a process similar to TM) as a result of difficulties to grasp a problem (or start a program) from the normal policy paradigms. Also, the case of chapter 2 (particulate matters) demonstrated a frustration in implementation of infrastructure decisions when the engineering consultancy community found itself more and more between a rock and a hard place, which became the impetus for directing resources to address particulate matter with a Transition Management approach in the Netherlands. Regime governance processes may thus dedicate resources to Transition Management processes if they need the results because the conventional problem addressing heuristics have failed[11].

Specific windows of opportunity for different transition governance types

Transition governance, at least in its more instrumental approaches, features different types of activities that result in different cognitive products. Loorbach (2007), for example, notes visioning (as part of strategic Transition Management) produces an abstract but system-wide framing of a persistent problem, more tactical coalitions gain insight in institutional conditions, and transition experiments generate concrete insights into concrete alternatives, but often with a limited scope. Kern and Howlett (2009) note that the incorporation of radically new policies in mainstream governance, aims, and instruments can be incoherent. Thus, sometimes only more instrumental elements and sometimes more general principles and aims get incorporated from a shadow track into mainstream governance. If this is the case, the cognitive step a mainstream policy process 'gets stuck in' might determine for which type of transition governance activity a window of opportunity opens up. For example:

- If a regime governance process fails to find a framing of the problem at hand, it

might incorporate from a shadow transition governance process, a system's view, problem framing, more reflexive aim, etc.

- If a regime governance process fails to find a solution or alternative to address the problem defined from its own paradigms, it might consider a solution generated in a shadow process, if those solutions potentially contribute to solve the problem as seen by the regime.

In Van Raak and Van der Brugge (2007) this thought has been further developed into a conceptual framework (see figure 4.1 and textbox).
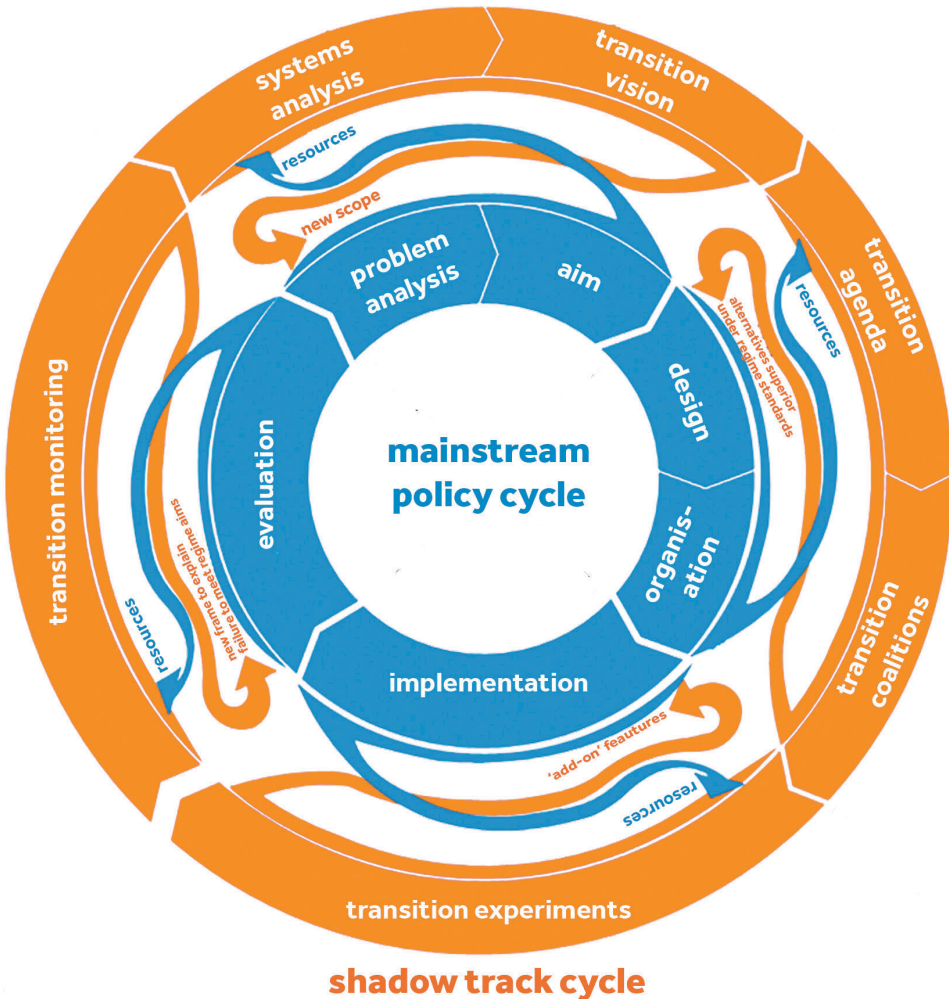

Figure 4.1 Double loop policymaking

aligning mainstream policymaking and Transition Management

Building on the adaptation and empowerment hypotheses, Van der Brugge and Van Raak (2007) have developed a specific tool of the 'double loop' strategic plan as a guide for finding opportunities for creating or exploiting windows of opportunity[12]. As observed, the strategic planning cycle has similarities to the 'Transition Management' cycle, by aligning the four shared phases of (1) problem-structuring (2) operationalization (3) 'execution' and (4) abstraction (see figure 5.1). For each phase the Transition Management and mainstream policymaking approach is assumed under specific conditions, namely:

In the **problem-structuring and aim-setting** phase the problem-at-hand will be structured and high level aims will be set. An interaction will only occur if the normal frames used in the mainstream track are felt to be unable to consistently and satisfactorily interpret problems at hand in the mainstream policy process. Negative evaluations in the previous step can be an important impetus in this.

The **operationalization** phase translates abstract ideas to more concrete options, and organizes resources and planning. In the policy track, this entails negotiating alternatives and choice under operationalised goals on the basis of the more abstract aims. Also, organizational measures might be necessary such as establishing a project organisation, establishing budget approval etc. Alternatives developed in a Transition Management process or niches can be incorporated directly into the main track if they offer clear, demonstrable advantages to more conventional alternatives under the conventional criteria.

The **execution phase** in the main track is that of 'implementation': the quite straight-forward actual fulfilment of plans by concrete measures. Although flexibility can be a virtue in implementation, in general one tries to maintain the original goals and plans. As the alternatives are already quite specified in this phase, the possibilities to incorporate experiments from the shadow track as mainstream implementations are limited. It might however be possible for 'add-ons' that are not considered critical for functioning, e.g. an additional experimental monitoring system to be integrated into a new infrastructure. Resources could become available if the implementations become obstructed. For instance: constant budget overruns, physical failure, strong local protests, or negative court decisions. The particulate matter case of chapter 2 is a typical example.

In the **abstraction** phase, lessons are learned about the experiences with the execution and abstracted to the general frames and aims. This is quite a crucial phase for cross-pollination between tracks as much interpretation takes place. Is a small failure a quirk incident or a tell-tale sign of much greater danger? For example: the mentioned pyjama day in Dutch healthcare was in principle allowed under current quality regulation. The impetus will emerge if even by the standards of the regime, the regime fails to adequately fulfil its function and these failures cannot be interpreted by the methods of the regime.

4.3 **Case: Amstelland vision**

At the time of the empirical phase of this research, Dutch healthcare was not experiencing strong adaptation dynamics. Although from chapter 3, some interesting historic developments could be identified, the research methods preferred for a case study required interviews or observation in action research to understand the subtleties involved in how regime practices incorporate elements from transition governance. We thus chose a general reflection on, and specific case from water management, jointly undertaken with the Ph.D. research of Van der Brugge; in §4.4 we briefly reflect on examples from healthcare.

This section will discuss the case[13] of the 'Amstelland Vision' process, a radical regional water vision with an institutional impact that might very well contribute to an adaptation pattern. First, we describe the persistent problem of Dutch water management, with a focus on the emblematic, arguably unsustainable deep peat polders in the Western part of the Netherlands. Next, we will introduce the specifics of the Amstelland region within Dutch water management and describe the case at hand. After which we will reflect on the extent to which mechanisms in literature can explain the observed policy adaptation dynamics, and to what extent our hypothesis of the previous section can provide an additional explanation. The description of the case has been established on the basis of interviews with the project team and key senior officials who were influenced by the project results, the resulting policy memos and reports, and minutes of meetings.

4.3.1 The water regime and persistent problem14

The Netherlands has a hydrological system, which is a combination of natural and technical systems. Most of the western and northern Netherlands has, over the centuries, been shaped by the Rhine-delta and human interventions. Originally, large parts of the central and western provinces of Holland and Utrecht were swampy areas consisting of dick peat sediments and vegetation, and were considered wild lands without use. In the middle ages, groups of pioneers bought the land from the government and church to bring into cultivation. Ground level was above or around mean sea level (MSL), thus digging canals sufficed as a drainage system. This brought the water table several decimetres below ground level and allowed cultivation of the land for cattle. Over the centuries, however, a persistent problem emerged. As peat soil is exposed to oxygen from the air, it very slowly oxidizes leading to a subsidence of that soil. This requires the additional lowering of the water table, which leads in a vicious circle to further oxidation of deeper sediments and further subsidence. At some point, water can only be removed during low tide, and in later centuries, only by ever more intensive pumping (leading to the famous Dutch windmill landscapes); this is aggravated by natural sea level rise and future man-induced sea level rise. In addition, some lakes were created as peat was used for fuel. Later these lakes were reclaimed, which created very deep polders. At present, the whole of the western Netherlands is an interconnected system

of polders, discharge canals, and a two-tier pumping system. This is an enormous infrastructure with huge sunk investments. At the regional and national level, dedicated institutional arrangements exist, such as the regional water boards. Yet, water quality in these polders up 5-7 meters below sea level, becomes a serious concern, as salts from deeper aquifers seep into the polder.
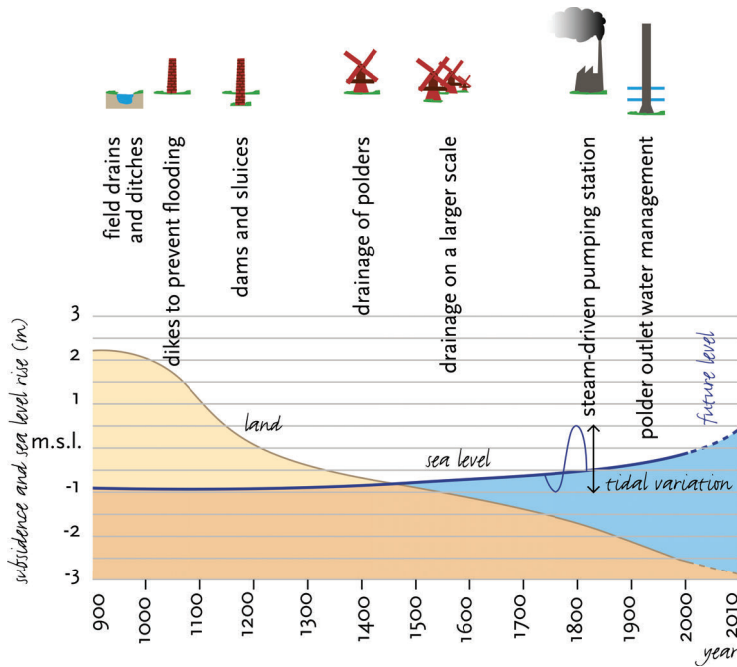

Figure 4.2 Evolution of water management infrastructure in the Netherlands in response to (and causing further) soil decline (taken from Rijkswaterstaat 2011)

From an outsider's perspective, such a vicious circle would be unsustainable in the (very) long term. From a rational point of view, one would at least expect sparsely or barely populated deep polders that experience significant quantitative and qualitative water problems to be converted to water buffers that are part of the larger transition Dutch water management needs to go through. Such conversions are, however, highly controversial and have not taken place to date[15], as they are in conflict with the structure, culture, and practice of Dutch water management on a fundamental level.

Water management is highly culturally loaded and 'fighting against the water' is an important part of the history of the Netherlands. In the twentieth century, major reclamation works and coastal defence works, partly in response to the disastrous 1953 flood, boosted this pride. These strong structural and cultural roots might explain why until the end of the twentieth century the dominant practice has been to optimise the current system (that is to simply pump harder, ignoring the vicious circle). Around 1995, a different discourse slowly started to emerge, partly in response to a series of near floods. New paradigms such 'room for the river' and 'living with instead of fighting against the water' starting to emerge, culminating in the 'water management in the 21st century' policy document. Another significant development was an EU directive (the

Water Framework Directive, WFD) mandating water management on the basis of catchment areas. The case, which we will describe hereafter can be seen as a specific instance on a regional level; as such it could be seen as an adaptation to the landscape developments (EU and national institutional developments, climate change, etc.) of a regional water regime.

4.3.2 Amstelland

EU directives and "21st century water management" national policy provided regional governments with a task to coordinate the development of river basin programs. An important objective of these programs was to assess the water challenge16 and to anticipate the problems that lay ahead as a result of climate change and spatial developments. This vision would be the basis for regional agreements between the relevant actors. The vision was meant to be developed in coalitions of relevant actors and finished in 2002; Amstelland is one of the regions for which such a vision was legally required.

Figure 4.3 Location of the Amstelland region (the two areas in red together constitute the subcatchment area Amstelland, encompassing two waterboards and situated in three provinces)

Amstelland refers to a region in the middle of The Netherlands, with low-lying polders in the west (see figure 4.3). The institutional actors that are relevant for water management are: the two district water boards (together constituting Amstelland), the water policy departments and spatial planning departments of two regional governments, the Ministry for water management, and the municipalities.

Two important circumstances shaped the Amstelland river basin plan from the beginning. The first was a (perceived) pressure on the regional government (provincie) about its added value as a government layer between the national and local. The regional government's coordinating role in the WB21 process was thus seen as an opportunity to secure its role.

Second, a local study carried out a year earlier had already shown that the collaboration between the relevant water actors was insufficient. There seemed to be poor communication between the water expert and the spatial planner because of cultural differences between what the researchers labelled as the 'creative design-oriented spatial planner' and the 'fact-seeking water expert'.

4.3.4 The project

The project group consisted of a supporting project team of about five persons (consultants and regional government staff) and a taskforce of about 10 persons (from the various government agencies). On various occasions the taskforce was invited to participate in brainstorms and discussion sessions of the project team. There was an unusual attention for personal competences. The project leader selected five individuals, at least as much on their personal characteristics as on their organisational position, each individual being 'casted' for a different role: the inspirer, the water expert, the spatial planner, the people manager, and the work horse.

The process started out with formulating the objectives based on an inventory of the current water-related problems. The process could be characterized as a scenario-exercise, but the core of the process was to explore the spatial consequences of these calculations (the water challenge) and whether they fit into existing regional and local plans. The main objectives were to develop strategies to:
- Guarantee safety
- Reduce nuisance due to excess water or shortages
- Prevent soil subsidence as much as possible
- Turn the trend, away from fragmented water management
- Improve water quality
- Deal with droughts
- High quality experience of water

Figure 4.4 shows the central figure of the final document. It is a map of the Amstelland-region in which the water related problems are marked. The most problematic

areas on this map are the deep polders in the west (pink). The water related problems are huge and require structural solutions in terms of land-use change. Five of such areas were appointed on this map (and were labelled "search areas for new wetlands combined with peak-storage"). The red dots refer to less problematic areas, in which additional water peak-storage would be sufficient. Additional measures for urban araes and sloped higher grounds were formulated.

The map implies a large set of measures, including measures that require long times scales such as the transformation of agricultural areas to wetlands. Therefore, the whole set was subdivided into portfolios. The first portfolio of measures consisted of urgent measures for the period of 2002 -2015 that fitted with the current policy line. A second portfolio of measures was developed and was explicitly labelled "transformation portfolio". This portfolio consisted of measures, which were urgent but involved drastic intervention in the area. A third portfolio was developed for the period 2015-2050, for measures that were not too urgent.
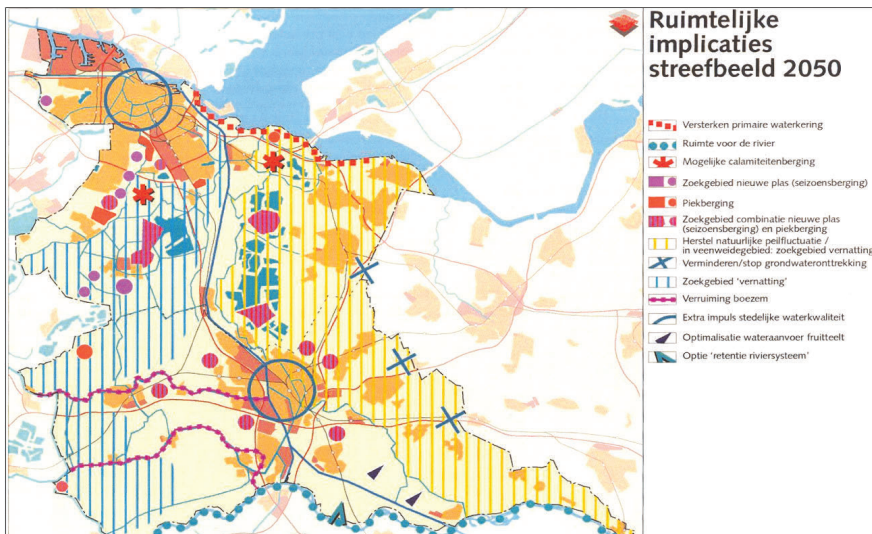
Figure 4.4 Central map of the Amstelland vision (Groot Mijdrecht label added by author

Translating the vision into action revolved around five pillars: (1) anchoring the water challenge into the Region Plan; (2) creating enthusiasm and momentum, (3) organizing financial resources, (4) intensifying cooperation between regional governments and water district boards, and (5) involving municipalities. The project team anticipated that in some of the projects the normal approach would not suffice and required a process-oriented approach, with careful timing. The radical elements in the vision report were politically sensitive and might lead to problems with regard to passing the Province Executive (gedeputeerden staten). Presenting the report as a sector plan in which the desired vision from a water management point of view, toned down the status of the report and framed it as a building block for the regional plan. It would not have to be

attuned to other policy fields, as is the case for official regional water policy plans. The concept of 'building block' was neither routinely used to describe annexes nor formally defined in rules or guidelines, giving it an ambiguous, hard to grasp, status.

Within the regional government of Utrecht, the strategy of a building block succeeded. The river basin plan passed the council of Deputies (comparable to the cabinet of a national government) in 2002 as a building block for the Region plan and the regional water policy plan. It should however be noted that the strategy did not work with the regional government in Noord-Holland. A new Provincie Executive had just been appointed and preferred fine-grained solutions above large-scale water storage. Moreover, they felt that such spatial solutions were subject to political discussion and not to be made in a sector-based water vision. A follow-up report did pass in 2003, but in the end the influence on decision-making seems to have been much less than in the other governments.

4.3.5 Influencing policy, indication for contributing to adaptation pattern

Assessing the impact on the main policy process, two main influences on the policy process can be identified: (1) the changes in the legally binding spatial Region plan of the province of Utrecht and (2) the influence on the decision on the future of one particularly problematic deep polder of Mijdrecht.

The River Basin Plan coincided with the inception phase of the spatial Region plan in Utrecht. An important starting point was using water as a guiding principle. Not coincidentally, one of the project team members was also a team member for the spatial Region plan. His task was to provide the project team with water related input. He was supported by the Amstelland-vision project leader in bilateral communications. In addition, there was a strong lobby from the water district boards that made references to the River basin plan. In the end, the radical new vision became part of the Region plan, albeit as 'building block'.

Besides the influence at regional level decision-making, an additional influence on local policies can be noted for one polder: Groot-Mijdrecht[17]. Polder Groot-Mijdrecht is a deep polder system, 5-6 meter beneath sea-level on average and subtracts water away from its surroundings. There are very high costs involved to maintain this situation for the hundred inhabitants. In addition the situation led to constant problems in water quality, especially salt intrusion (from deeper aquifers). To comply with the Water Framework Directive and national standards, even more expensive measures were necessary. Most parties agreed that spending increasing amounts of money for such a sparsely populated area could not be sustained forever.

Still, only relative minor changes in the polder system were considered. In 1992, in an agreement between 27 governmental and non-governmental parties, the polder was

designated to be half transformed to a (land) nature reserve and half to remain agricultural land. This would only mitigate water quality and quantity problems on the short term. A direct consequence of the Amstelland river basin plan was a decision to re-evaluate the plan 'de Venen'. Many of those involved in the shadow process of the regional Amstelland vision became involved in this process, as they saw it as an opportunity to translate their vision to practice.

Six new strategies were developed, ranging from doing nothing to reverting the polder to a lake (an idea directly taken from the Amstelland vision). Despite strong protests, the authorities took a key decision on a new strategy. This decision excluded the two conservative strategies of Doing Nothing and Plan de Venen; leaving the more radical Growing-along-strategy or the Lake-strategy as options, to be later be decided upon. This could be considered a concrete example of a transition governance process significantly influencing the formal decisions in the main policy processes.

4.3.6 Interpretation

First, it should be noted that none of the induced changes in the mainstream policy process were irreversible (as a matter of fact, many achievements were later diluted or reversed), and a policy paradigm shift does not by itself constitute a transition in a societal system. It might take many more years or even decades before the Amstelland Vision might turn out to be a turning point for the regional water management system (for example, Van der Brugge 2009 found for other water management cases it took 10-20 years for 'shadow processes' to make a lasting change to the system). As of early 2015, the most prominent proposed change of transforming the Mijdrecht polders partly into wetland or a lake was considerably diluted in the mainstream governance process. Although some swampy areas are planned, the sparse housing needs to be protected and surrounding grounds need to be kept dry (www.grootmijdrechtnoord.nl).

Observations that confirm known mechanisms in literature.

The case study confirms the 'enlightened regime players' mechanism, which the project team members, but also some of their managers, certainly were. The attention to individual competences instead of selecting primarily on organisational position can be considered Transition Management avant la lettre and the addition of 'workhorse' as a competence might be added to Loorbach's list of competences (Loorbach 2007a). The observed effects of enthusiasm, momentum in the project team, and personal commitment can also be considered to be in line with existing theory.

The almost playful manoeuvring by the project team is the most remarkable feature of the Amstelland case; key actors had the ability to keep exactly the right 'distance' from mainstream policy process. Close enough to have an influence and to acquire significant resources (e.g. in-depth local hydrological expertise), but apparently distanced enough from the mainstream process to maintain creative independence. Their defence

to administrators that a 'sectorial vision' or 'a building stone' did not fall under the full political responsibility of the main sections of the policy memorandum was remarkably successful. This seems an empirical example of what Loorbach and Van Raak (2006) describe as "loosely coupled" tracks.

Additional explanation from the thesis

Other observations are more difficult to explain from known mechanisms in literature. The involved group had significant, formally committed resources, including manpower and the financial resources for external staff and research, even if the institutional resources at such a regional level are limited. Those persons committing these resources cannot be classified as 'enlightened regime players' and did not dedicate those resources as a shadow track or investment in policy innovation. Many others collaborated in the process of developing the vision, either by deliberating over it in meetings or contributing ideas and information to the process. The process thus had characteristics of a mainstream, regime process. The result of the Transition Management process (or 'shadow process') is a formal document, enacted by the legislative body of the competent authority, even if its exact status was ambiguous. Moreover, the option was subsequently incorporated in formal local policy decisions.

The first unexplained factor, the committing of resources, is fully explained by earlier frustration with integrated catchment plans, the necessary but unfamiliar intensive integration with spatial planning, and the lack of routines and knowledge about a catchment plan in the first place (including the diversity of institutional actors involved).

The second phase, the actual incorporation in regional and local policy, may be explained by the concern for the ability of the existing system to address the problems the water management governance was confronted with. Especially for the polder Groot Mijdrecht (plan 'De Venen'), the existing policy approach was increasingly unable to meet the existing operational goals for water management. Water quantity problems could be managed by simply increasing pumping capacity, but seepage of salts can only be somewhat mitigated to some extent by 'flushing' the polder system with fresh water from other water bodies. These (articulated) limits might have triggered the transition governance process.

Concluding, the Amstelland case was undertaken to empirically study how governance processes can play a role in the regime adapting to a niche. Our findings confirmed the conventional theory of the importance of 'enlightened regime players' and the importance of individual competences. At the same time, the actual incorporation into the regime structure seems to also depend, as hypothesised, on the extent to which the transition governance processes are able to fill a void or frustration in the mainstream governance processes of a regime.

4.4 Cases: Buurtzorg and resourcing a health transition programme

This section will give two possible examples of fruitful transition governance – regime governance interactions. The first example is that the growth of new care concepts in homecare should be seen in the context of the general transition governance dynamics around (long-term) healthcare in the Netherlands around 2005-2010 (as further analysed in chapter 5). The second example of the initiation of the transition programme in long-term care can be seen as a prelude to the case study into this programme (see chapter 6).

4.4.1 Buurtzorg

From the case study in chapter 3 we learned that the healthcare system has a strong curative, specialist focus, with the high-tech hospital as emblematic for the regime and unlimited financing of specialist care and yet, since the late 1970s, an increasing concern for the rising costs of healthcare.

In contrast to this regime, especially for long-term care, a call for more community based and citizen empowerment approaches can be heard. This movement proposes empowerment, community care, and the meaningful contribution to society of those with a chronic medical condition or of old age as values in their own right.

This vision does not match existing governance processes and paradigms about the future of healthcare. The main policy focus has been on budget control. The approach to quality and 'client well-being' was one of medical quality (e.g. infections, medication errors) and secondarily one of 'customer satisfaction' (e.g. 'do the meals served taste good?'). 'Buurtzorg' ('Neighbourhood care') exponentially gained market share as a healthcare provider and method. Suddenly this approach was the subject of parliamentary and election debates by members of parliament across the political spectrum. The Buurtzorg-method is in many respects not unlike the homecare provided by other healthcare providers, but does incorporate better attention to the abilities of the patient and the pro-active encouraging of involvement of those in the environment of the patient. In addition, Buurtzorg employs relatively experienced nurses who are, to a large extent, self-responsible for task division and coordination amongst themselves for an area (such as a neighbourhood, hence the brand name).

I would argue that the explosive growth of Buurtzorg was possible not because of its different paradigm or community focus, but because it was able to outcompete existing methods under the current paradigm. Buurtzorg successfully advocated to score higher customer satisfaction marks for lower costs. Not surprisingly, 'self-care' was more and more propagated in the political arena as a way to curb healthcare expenses, being used in a fashion not unlike the more right-wing liberal 'self-responsibility' concept (which fit the right wing political atmosphere at the time). The savings of the Buurtzorg

approach were even projected by politicians to potentially a multi-billion Euro savings at the level of the whole chronic care field if all healthcare providers would adopt such an approach. In chapter 5, we will offer as an additional explanation of Buurtzorg's success: Buurtzorg resonated well with more broadly felt needs to change to the structure of the regime.

Although not researched, we thus see indications that a new radical vision interacts fruitfully with mainstream policy processes if (and only if) they offer a way to fill a void or smooth a frustration in the mainstream policy process. Or as a healthcare director in an interview on the effect of visions on healthcare stated: "we did not change our paradigm because we wanted to change, but because we needed to change, to avoid staff shortages".

This typical adaptation pattern led to critical comments from those originally involved propagating 'coping by oneself and together' (zelf- en samenredzaamheid[18]), for reframing and simplifying their approach as a solution to rising costs or staff shortages. One might conclude that the notion of self-determination and community based health is becoming window dressing for budget cuts. However, as the cultural paradigm may very well stick into the chronic care constellation, it will be most interesting to see if, as could be predicted from the theory of De Haan, the internal stress of taking up an alien element in the chronic care constellation would lead to additional adaptations.

4.4.2 Initiation of TPLZ

A similar story can be told for the initiation of the transition programme in the chronic care (TPLZ)[19]. TPLZ, on which we will elaborate in chapter 6, originated out of discussions between the department of health and the representatives of the healthcare sector and patient organisations over budget cuts around 2005 (van den Bosch 2010, 186). In these discussions, parties reached an agreement (Dutch:convenant[20]) that, in the long-term, making the existing system more efficient would not be sufficient to keep expenses in control whilst at the same time improving quality, against the backdrop of an ageing, increasingly unhealthy population. The conflict over budget cuts was thus resolved by a compromise: part of the budget cuts 'were given back to the sector' as an innovation fund. Previous innovation funds were distributed in the sector in an egalitarian, non-competitive manner. The methods of granting subsidies boiled to down to a system in which virtually all healthcare providers would be granted some money if they could argue this subsidy would be spent on innovation. Increasingly, it was becoming evident that most of the subsidized activities would have been undertaken anyway and at best the innovation funding plugged some gaps in project and other investment budgets, thus allowing them to continue.

A group of representatives from trade organisations, the department, and patient organisations were determined to distribute the money from the innovation funds in a more meaningful way, in which we recognize again the importance of individuals. The group

found it difficult to formulate criteria for awarding the funds to more fundamental innovations or to give a theoretical justification for a specific distribution. Originally those action researchers playing the role of policy entrepreneurs to introduce Transition Management would cautiously propose to dedicate a small part of the remaining funds to funding transition experiments and the creation of a transition vision. Almost to their own surprise, over a few months their proposal gained such momentum that the whole of the remaining funds were committed to a transition programme. On this specific case Van den Bosch concludes, "stress within the regime can create space for transition experiments." In the creation of the transition programme in the long-term care we thus see again a pattern of frustration in the mainstream policy process, opening up a window of opportunity for interaction with transition governance processes and thus potentially inducing an adaptation pattern of transitional change through the regular governance processes.

4.5 Conclusion on the system-governance relationship

We started this chapter with a theoretical reflection on existing governance approaches and their use in developing and/or analysing a transition policy argument. We conclude that diverse approaches towards transition governance exist. We found important points of attention in developing and/or analysing a transition policy argument to be:

1. Consistency with the system dynamic descriptive assumptions (i.e. the MLP), especially if the locus of governance is not within the system.
2. An explicit positioning with regard governance or reference to the specific governance theory or theories from transition studies used.
3. Awareness of (dis)alignment with political ideologies of the chosen transition governance theory.
4. Reference to at least the current dynamic state of the system, such as the phase, the patterns, and resulting path (& underlying conditions) of the system at hand (and individual constellations) as explicit assumptions.

With regard to this last point, the relation of transition dynamics and governance, we conclude that most dynamic characteristics of systems in transition are addressed in transition governance literature. But there is a paradox between the resistive role of the regime and the adaptation pattern, for which various proposed mechanisms for transition governance to influence regime (governance) adaptation patterns have been formulated, but are unsatisfactory. This chapter formulated the hypothesis of windows of opportunity for cross-pollination between the transition and mainstream governance based on 'regime frustration'.

Our case study into Dutch water management provides some indications that indeed such a mechanism might offer additional explanation, whilst confirming the importance of entrepreneurial activity noted by others (Paredis and Block 2013; Grin 2010). However, the regime adaptation paradox is far from solved. An empirical side-catch, complicating matters, is the apparent reversibility of mainstream policy breakthroughs. However, it is what might be expected if we conceptualise transition policy as a stop-gap

for persistent voids in the regime's internal logic; rejection is a plausible effect once the urgency for the stop-gap has passed, whilst the mechanism of one change leading to further changes is also a plausible mechanism. This warrants further research.

As a side note: one of the most legendary 'regime fights' in healthcare might have shed light on this mechanism: many know the heroic story of how dr. John Snow battled authorities by insisting an 19th century Cholera outbreak was caused by a contaminated water pump (Summers 1989; Snow 1855). This battle was emblematic for the 'miasmatic versus germs' debate. In the end, Snow succeeded in convincing authorities to remove the pump handle (we could say a regime adaptation); even though popular account has Snow single-handedly break off the pump handle. Less known is the fact that once the outbreak was under control, the handle was placed back (Chapelle 2005, 83), as the health authorities were afraid this would create a precedent, and implied a paradigm shift on the origin of disease; illustrating how the regime might not 'convert' but (temporarily) adopts elements to address persistent, embarrassing frustration, thus aimed to strengthen the regime.

This chapter has discussed the general, more abstract relationship between system dynamics from a more descriptive point of view. We will revisit this theme in a more concrete, instrumental way in chapter 7, where we discuss the relationship between the state of the system and the concrete design of transition projects (e.g. a transition arena or a transition experiment).

Endnotes

1. Which is not to say they contain some notion of steering For example Geels and Schot (2010, 28) note: "the MLP is shot through with agency: the trajectories and alignments in the MLP are always enacted by social groups". Especially in their pathway typology (Geels and Schot 2005),regime actors play an active role such as "reorientations by regime actors", or "regime actors use their adaptive capacity to reorient development trajectories." On a theoretical level they note that "rules change indirectly through market selection of product variations", but also through the "social-institutional, where actors directly negotiate about rules in communities".

2. Grin does not address how the TM cycle (iterating experiments and high level activities) is consistent with this observation.

3. OED, entry "Governance", definition 1a.

4. Of course, these two categories overlap: large-scale technical systems are often highly specialised (specialist) systems. Some water management systems in countries where water management is dominated by public infrastructure could be thus characterised.

5. Attributed to Mendel Rivers

6. Perhaps Diepenmaat's 'radical actor these' is such an extreme position (Diepenmaat and Taanman 2009, 20)

7. The case study of the previous chapter demonstrated that reconstellation patterns are unlikely the result of individual or collective deliberate steering, except during circumstances such as suspension of the normal laws of the state during foreign occupation. These circumstances are rare and moreover such moments of command-and-control steering could probably be described by theories on for example crisis management. Dicke (2001) has, for example, described such temporary suspension of formal and informal norms in a societal system of water management.

8. His other two examples of transdisciplinary programmes take place in a backdrop in which only 'remnants of the iron triangle' were left of the original powerful regime and even these are driven from outside forces (both in funding and key players) and are only to some extent accepted by regime actors.

9. This section builds upon the following conference paper: Rutger van der Brugge, Roel van Raak, 2007, The Role of Shadow Networks in Furthering Transitions, CAIWA 2007 (International Conference on Adaptive & Integrated Water Management)

10. In the next chapters, we will discuss how Transition Management is also about managing the interface between activities, but even such activities, such as research and analysis, network management, experiment programme management etc. can easily run into costs of several tens to hundreds of thousands of Euros.

11. One might wonder if such results would be available in a timely fashion to be incorporated in the mainstream process. A Transition Management process takes typically about five years 'to come round' (Loorbach 2007). As we hypothesised the results of a TM process are urgently needed in regime governance processes because of an evident failure to address problems with the regime paradigms. It could thus be the case that in the end ideas developed in earlier TM processes are incorporated in the mainstream governance processes and debates.

12. It should be noted this model has not been tested empirically and assumes that both a single TM and a single dominant policy cycle is quite strictly followed (or at least perceived and constructed to do so) for TM we will relativize this cycle in chapter 5 and we will discuss objections against a too linear (or neatly step-for-step) cycle. We included a description here to demonstrate possible further applications of the formulated hypothesis.

13. The case description has been the result of joint research with Rutger van der Brugge, as part of the NeWater project, who has described the case from his theoretical perspective in his dissertation (van der Brugge 2009).

14. This is only a introduction to the case at hand, not a full-fledged transition analysis.

15. At the time of publication, the Hedwig polder after more than a decade of international and national political struggle may actually be inundated again, a special circumstance is was a legally binding treaty on the with Belgium and binding EU regulation.

16. The water challenge refers to the extra volumes of water the system needs to temporarily accommodate during periods of intense precipitation, as a result of land-use and climate change. This is then translated to the extra m3 required for the purpose of water storage.

17. Initially there were even 13 actions formulated that would entail radical local change. Five of them within the Utrecht borders, the remaining 8 within the Noord-Holland borders. As the Noord-Holland regional government was quite resistant to large-scale water storage, more incremental, fine grained solutions were sought. The five areas of Utrecht were further researched (temporary protected against development by the mentioned regional spatial plan). In three areas it eventually turned out there was no need for large scale water storage. In one polder, it turned out that the cause of the water-related problems were due problems in a neighbouring polder. Leaving one project - the polder 'Groot Mijdrecht' – on the agenda for radical measures

18. Note the translation is difficult to convey the precise meaning and form of the phrase. 'Redden' might have a more positive connotation than 'coping'.

19. TPLZ stands for Transitieprogramma in de Langdurende Zorg

20. ' Convenant' is an agreement within the Dutch governance culture that is semi-formal, most closest to a memorandum of understanding, although it sometimes has characteristics of – a is likened to - a gentleman's agreement. In this thesis, we will use the word 'agreement' for the Dutch convenant.

5. From systems to governance: addressing the regime adaptation paradox

In our framework, we distinguish within 'Transition Governance' between a 'politics' perspective (a descriptive multi-actor bird's eye view) and 'policies' perspective (an over the shoulder view on the action and considerations of an actor). In this chapter, we will reflect upon how we can connect these two governance perspectives by extending the existing Transition Management layers to a bird's eye perspective. We will first reflect on the current TM framework (§5.1), subsequently connect the culture, structure, and practice triplet to the strategic, tactical, and operational management layers of TM and define these three aspects for the 'bird's eye' view on governance (§5.2). In §5.3 we apply this new bird's eye view to a case study of Transition Governance dynamics in Dutch chronic care.

The research in this chapter was not part of any action research or larger programme, but specifically undertaken to place the action research of chapters 6 and 7 (in the Transition Programme in the Long Term Care) retrospectively into context. The sequence of the sections also corresponds to the dominant sequence of discovery.
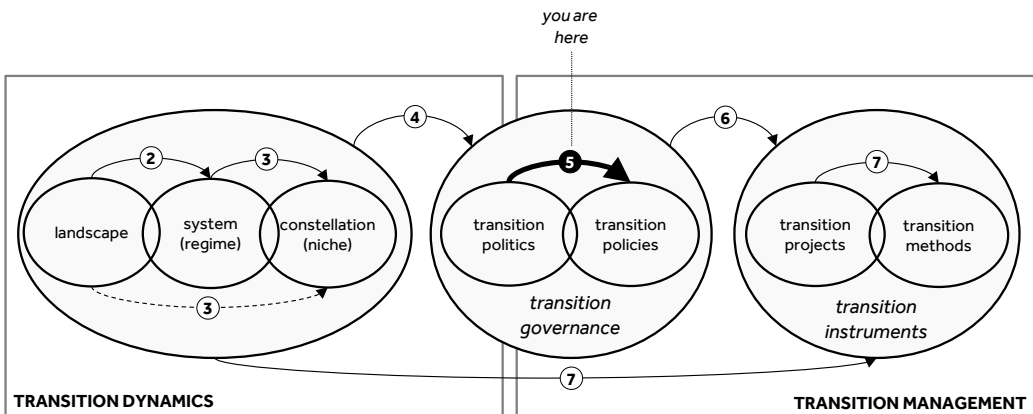
5.1 Theoretical reflection: multi-actor transition governance

In our framework we distinguished between a prescriptive 'over the shoulder' perspective on the one hand and on the other hand a descriptive 'bird's eye' perspective. This distinction is important as these perspectives correspond to different elements of our definition of a transition policy argument. The 'over the shoulder' corresponds to 'courses of action', and on-going, bird's eye view dynamics corresponds to the 'given environment' of a transition policy argument. Although Transition Management itself is mostly an 'over the shoulder' approach, Rotmans and Loorbach (2010a, 150) note from a 'complex systems view' on society that:

> "All societal actors direct, being aware of the opportunities as well as the restrictions and limitations of directing. Through agency and interaction in networks society is shaped as well, to which we conceptually refer as 'governance'."

If everybody steers, this would imply that, before any application of Transition Management by the actor over whose shoulder we look, Transition Governance processes will already have taken place and be ongoing. As discussed in chapter 1, Transition Management does not specify how to take stock of on-going governance processes before intervening in the system, or how multiple, independent Transition Governance efforts might interact, other than the notion that these processes are uncoordinated and TM should coordinate these more (Rotmans 2005). Yet, such questions are highly relevant for developing and/or analysing transition policy arguments as these on-going efforts could be expected to impose specific conditions to the TM process to be initiated. A Transition Management effort can also explicitly aim to influence transition governance dynamics, taking on-going governance dynamics as an opportunity.

This might also help to bridge the timescale of a single TM effort and a transition. In the historical case of chapter 4 we described transformative changes at the system level on a timescale of decades to a century. We positioned Transition Governance processes in our framework on a lower level (thus typically on shorter timescales), but these still can take decades. For example, it took the radical-hygienist movements of the 19th century (see §3.2) 20-30 years to significantly influence the course of the transition in Dutch healthcare. In the Amstelland case we also found that a Transition Management(ish) project of several years was only one link in a long chain of developments around reorienting the Dutch water management regime towards a more sustainable future. Grin (2010) describes how Transition Governance can span decades with respect to the Dutch agricultural system. As Rotmans suggests, the current sustainability challenges are akin to the late nineteenth century social challenges (Rotmans 2005). It is likely that future transition governance processes will require a similar period. Meadowcroft (2009, 2011) even specifically notes that stamina and the ability to outlast normal short-term political dynamics will be an essential political factor in the success or failure of Transition Management.

Such periods of Transition Governance are in contrast with the typical scale of Transition Management policy, project or programme. Loorbach (2007a) mentions five years as a typical period to complete a cycle. Loorbach addresses the difference in time scales by placing individual cycles in series, to form a 'corkscrew' of cycles, building momentum and scale in each cycle and adapting each cycle to the lessons learned and expectations about the coming years. In Loorbach's view, it appears a single TM initiative slowly grows into a large transition movement. We might wonder how likely are policy-induced initiatives (or a series thereof) to last through an entire transition. Moreover, we could if question if the interrelations between one particular TM process and the many other transition governance processes are not as important as the interrelations between activities within that one particular TM process

Structure, culture and practice related to strategic, tactical and operational Transition Management

In chapter 3 we used, within the description of transition dynamics, the triplet of structure, culture and practice to describe the aspects of a constellation. Loorbach and Van Raak (Loorbach 2007a; Loorbach and van Raak 2005) have already proposed to interpret strategic, tactical and operational Transition Management to constitute Transition Management through the respective leverage points of culture, structure and practice of a system. Loorbach (2007a) has defined strategic, tactical and operational Transition Management respectively as:

- "At the strategic level we identify processes of vision development, strategic discussions, long-term goal formulation, collective goal and norm setting and long-term anticipation. In essence, all activities and developments that relate in the first place to the 'culture' of a societal system are included." (p. 104)
- "At the tactical Transition Management level we identify steering activities that are interest driven and relate to the dominant structure or regime of a societal system." (p. 107)
- "Operational Transition Management includes all short term actions and experiments of individuals and organizations that have an innovative potential. At this level the focus is primarily on practices."(p. 109)

Later a fourth 'reflexive layer' of "Reflexive activities related to monitoring, assessments and evaluation of ongoing policies, and ongoing societal change." (Rotmans and Loorbach 2010a; Loorbach 2010) was added. This layer reflects on activities in the other layers and is thus of a more meta-level nature. We can contrast this reflexive layer to the other more active layers.

Transition Management has thus already an explicit relationship with transition dynamics (see table 5.1). Furthermore, in chapter 3 we noted that the structure-culture distinction of the structure, culture and practice triplet resonates well with materialist-idealist distinctions in other Transition Governance approaches. We also remarked that the distinction of Grin (2010) between innovation through structural change and practices is equivalent to our and Loorbach's distinction between governance aimed at

structure and culture on one hand and governance aimed at practices on the other hand.

TM layer		aspect of societal system
strategic Transition Management		the culture of a societal system
tactical Transition Management	*…addresses change of …*	the structure of a societal system
operational Transition Management		the practices in a societal system
reflexive Transition Management		*not applicable*

Table 5.1 Link in literature between structure, culture and practice of a system and TM layers

Thus if we are looking for a way to fill the gap between the system dynamic level and the more instrumental 'over the shoulder' view in many TM applications, a logical option appears to be the extending of strategic, tactical and operational Transition Management into a bird's eye perspective and connecting this bird's eye perspective to the structure, culture and practice triplet of transition dynamics. This is depicted in table 5.2, which we will elaborate on in the next section and section 6.2.

The reflexive layer, that is present in later versions of the model, does not correspond to structure, culture and practice in particular. From a bird's eye perspective, all actors engaged in Transition Governance are also engaged in reflection on that governance. We will revisit the fourth layer in the conclusion section and more extensively in chapter 6. In the next section we will reconceptualise the three other layers Loorbach uses and propose an empirical method to study Transition Governance processes in a societal system from such a viewpoint.

TM layer		Transition Governance layer		aspect of societal system
Strategic Transition Management		Cultural Transition Governance		the culture of a societal system
Tactical Transition Management	*….is a specific instance of…*	Structural Transition Governance	*…is a process addressing regime shift through changing…*	the structure of a societal system
Operational Transition Management		Practical Transition Governance		the practices in a societal system
Reflexive Transition Management		(Reflexive Transition Governance)		not applicable

Table 5.2 Linking Transition Governance, TM layers and activity clusters of the TM cycle

5.2 Conceptualisation: three spheres of transition governance

In this section we will elaborate on how three types of transition governance, dealing with structure, culture and practice respectively, can be distinguished. Subsequently we will outline a methodology to take stock of on-going governance processes.

5.2.1 Reinterpreting Transition Management layers

If we re-apply the layers of Loorbach to a bird's eye perspective, we assume that many different actors undertake activities similar to strategic, tactical and operational Transition Management. Put differently: we assume that the 'everybody directs' adage implies that everybody (or at least many) engage simultaneously in Transition Management (like) efforts.

Loorbach's framework distinguishes these layers as levels: the strategic Transition Management is a higher level activity than the tactical Transition Management and tactical Transition Management is of a higher level than operational Transition Management. This is related to Loorbach choosing respectively the system, the regime and the niche as levels corresponding to the different management layers. This is a problematic choice for the purpose of this thesis. This thesis has used structure, culture and practice to describe each constellation, whereas as Loorbach seems to define the system to be about cultural elements (or at least governance efforts aimed at the system-level to be more abstract and conceptual), the regime consisting of rules, and the niches (or subsystems) consisting of practices. In our application of the TM-layers, we thus consider the layers not of a multi-layer nature, but as parallel processes.

The existing labelling of layers is somewhat misleading for our purpose. Transition Management might be a type of network governance, but the strategic-tactical-operational triplet has a distinct command-and-control connotation to it. As such, it is used in fields such as actual military command (Gray 1999; ADoD 1996) and management[1], disaster management (FEMA 2010), and logistics management (Schmidt and Wilhelm 2000). In all these approaches, a clear hierarchy is the essence of such concepts[2]. As a framework meant to descriptively take stock of ongoing processes, the connotations make these words far from ideal to be labels for the concepts they describe. We thus chose to refer to strategic, tactical and operational Transition Governance as cultural Transition Governance, structural Transition Governance, and practice-oriented Transition Governance respectively:

- Cultural Transition Governance: those ideas, activities, processes, networks and such[3] aimed at changing the culture (the intangible paradigms, norms, values structuring behaviour in practices) of a system.
- Structural Transition Governance: those ideas, activities, processes, networks and the such aimed at changing the structure (the physical structures and resources,

enforced regulations and legal rights, economic resources and other tangibles structuring the behaviour in practices) of a system.
- Practice-oriented Transition Governance: those ideas, activities, processes, networks and such aimed at changing the practices (being shaped by the agency, structure and culture) of a system.

I further propose to conceptualise the descriptive governance framework as streams instead of hierarchic layers (see figure 5.1). Naturally, these streams are in continuous interaction with each other:
- Structural Transition Governance might open up or close resources and possibilities for practices and cultural Transition Governance.
- Cultural Transition Governance processes might inspire or otherwise stimulate efforts to change material conditions through structural Transition Governance or to undertake innovative practices.
- Practical Transition Governance might demonstrate how present structural and cultural conditions are impeding radically innovative, sustainable practices or might provide concrete examples of envisioned future paradigms and organisation of a societal system; or more directly in creating practices, structural and cultural barriers might be broken down or weakened.
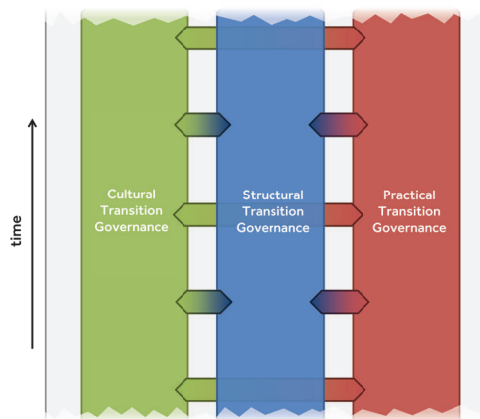
Figure 5.1 Transition governance as three continuous, non-hierarchical interacting streams of processes and activities

5.2.2 Taking stock of on-going governance processes

Given our new conceptualisation of three types of governance and the position of TM therein, how could we connect the bird's eye perspective of on-going governance to an over-the-shoulder perspective of a specific policy? An approach in developing policy arguments might be:
- Take stock of on-going Transition Governance processes i.e. activities and strategies with the aim of influencing transitional change of the societal system at hand, either from within or from outside the system.

- Interpret these on-going processes as cultural, practice-oriented and/or structural Transition Governance
- Study how these on-going governance processes align with the system dynamics, the desired direction of the system, and given the resources, role and other ethics of the initiator of the Transition Management process. And conclude: what options for steering does this imply the initiating actor has?

If we analyse existing policy arguments, we might ask if these questions are answered by the policy at hand. The third question will be addressed in the conclusion of this chapter, and further elaborated on in chapter 7, where we outline the theory behind the design of a transition programme. The remainder of this chapter will deal with the first two questions: how can we take stock of what is already going on and how can we interpret what we find as structural, cultural and practice-oriented Transition Management?

Information sources

The typical time scale and organisational scale of Transition Governance processes is beyond what can be captured by observation through action research or a limited number of interviews. The method open to a researcher would typically be document analysis (news, professional publication, report, policy notes, etc.) and a large number of interviews. These sources will produce a large number of themes, as each actor can be expected to approach the transition and its governance in a different way and with a different agenda.

A major research challenge is thus finding a way to aggregate many snippets of information on Transition Governance in a societal system in a systemic, transparent way that does not a priori bias the analysis towards a particular problem or solution framing (other than is inherent by the initial system demarcation). Such requirements favour the use of a 'grounded theory' approach (Weiss 1995). On the other hand we do have a 'top-down' framework of reference, namely the structural, cultural and practical governance classifications. We therefore propose to combine a more bottom-up qualitative data analysis (QDA) and a more quantitative top-down approach of scoring elements and aggregating these scores.

Bottom-up establishing themes and structures

Similarly to a grounded theory approach, we collect and study excerpts to gradually identify relevant elements, and then structure these elements. However some significant adaptations are made:
- Sources cannot be identified through 'snowballing' as this might bias the top-down analysis towards the starting point of such a snowballing method.
- Any other systemic biases in information gathering are also excluded as much as possible. A particular point of attention in longitudinal analysis is a changing composition of sources over time (as certain documents are only published or available over a limited period).
- Typically in QDA, coding is done as low level as possible, for example para-

graphs, sentences or even phrases or individual words. In our approach, either the coding is done at a somewhat higher level (for example sections, articles, interview questions or higher) or the coding is done at a low level but registering a higher level attribution (e.g. a sentence in an article). This is essential to be able to later correlate these codes to a position in the structural, cultural, practical framework (for which more information is needed).

- Given the somewhat coarser approach, we use the more general concept of themes (or issues), as storylines are not studied in-depth thus we cannot establish narratives or discourses.

Top-down coding pre-defined categories

Subsequently, the units of analysis (e.g. articles, sections) will be categorised to describe instances of structural, cultural or practical Transition Governance. However, empirical material might be too ambiguous for a straightforward classification:

- Simply using three ideal-type categories might lead to extreme pigeon-holing. This would not be acceptable, especially as we considered interaction between the three categories crucial.
- Identified Transition Governance reflections, strategies, actions, opinions etc. might contain more radical and more moderate elements, especially if adaptation patterns are involved. Moreover, grey areas may exist between reports of autonomous dynamics and intentional steering. Again, pigeon-holing might become a problem.
- Lastly, we already noted in chapter 3 that if everybody steers, everybody might have a somewhat different demarcation of what is being steered, or might advocate a higher or lower level of reflection, depending on assumed solution and problem space. For example Transition Governance might be directed at long term care, healthcare in general or the welfare state.

To address the first issue, we can assume a continuum exists in reality between the three ideal types of transition governance (cultural, structural and practice-oriented). As we have three dimensions of governance that together constitute a whole, such a continuum can be captured in a ternary diagram. A ternary diagram can present three-dimensional data in a two dimensional plane. Figure 5.2 depicts the basic approach of a ternary diagram for Transition Governance dimensions.

We distinguish five levels of significance to further operationalise this framework in such a way that positions in the diagram can be coded:

- The Transition Governance phenomenon observed was **not** this governance type.
- The Transition Governance phenomenon observed was **somewhat** this governance type, but not in any significant way
- The Transition Governance phenomenon observed was to a **significant** extent this governance type.

- The Transition Governance phenomenon observed was **largely** this governance type.
- The Transition Governance phenomenon observed was (virtually) **exclusively** of this governance type.

As we have assumed that Transition Governance types complement each other, and we further assume that the distinguished levels for the purpose of a qualitative-quantitative analysis can be added, the sum of the three levels will always be four.

Figure 5.3 depicts the operationalised empirical framework. In this framework excerpts are coded into four categories (on a discrete, natural 0-4 scale) for the extent to which cultural, structural or practical Transition Governance characteristics are observed, whilst keeping the sum over all dimensions at four.

There are fifteen[4] possible combinations of scores on each dimension, which if we use as a rule of thumb for the relationship between number of 'bins' (k) in visual presentation and samples (n), we would typically need several hundreds of samples to have a fair visualisation (with k=15, n=225). In contrast, if we are only interested in determining the focal point (or means on the different dimensions) of the Transition Governance dynamics, we would probably only require several dozens to a hundred samples of Transition Governance descriptions to characterise Transition Governance dynamics (during a certain period)[5]. It should be noted however, that in practice, the systemic bias in source selection and qualitative interpretation during coding probably limits the usefulness of a purely mathematical approach to sampling bias.

To address the grey area between Transition Governance and normal governance or autonomous processes, the significance of Transition Governance as a whole in a unit of analysis will be rated on a four level scale. This allows the ability to filter on the level of significance and to weigh the significance in analysis.

Combined analysis

As the top-down and bottom-up codings are attributed to the same units of analysis, the correlation between structural, cultural and practical governance and the identified themes can be explored. For example, the found themes will be plotted in the ternary diagram, and conversely, the ternary diagram could help further ordering of the found themes.
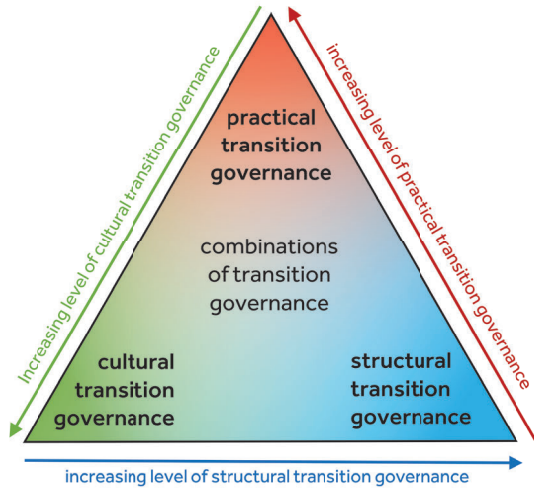
Figure 5.2 Structural, cultural and practical Transition Governance as continuum in ternary diagram
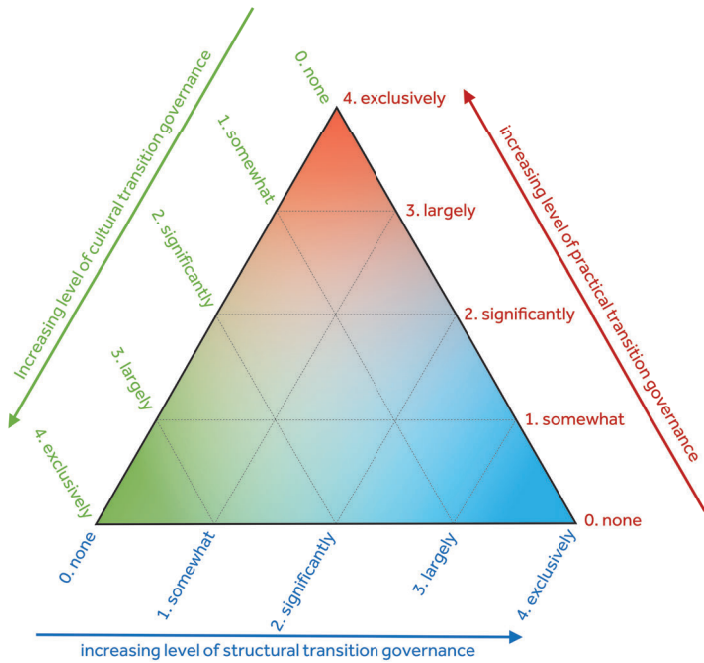

Figure 5.3 Operationalised ternary diagram. Dotted lines are isolines (lines of equal value) for each type of governance (corresponding in colour and angle with axis labels)

5.3 **Case: Transition Governance in long term care**

This section will apply the empirical method of the previous section to the case of recent Transition Governance in the Dutch long term care field, which we already briefly looked at in §4.4. It is positioned in our nested case between the historic analysis of healthcare dynamics (chapter 4) and the transition programme in the long term care (chapter 6). In this section we will consider long term care to be the system at hand, in line with our conclusion in chapter 4 that subsystems often provide better opportunities for both analysis and steering of on-going dynamics. Developments in healthcare in general are thus a landscape backdrop. We will elaborate on the choice for long term care as a constellation to focus policy efforts in chapter 6. Here it suffices to reflect upon the boundary dynamics.

5.3.1 Introduction to the Dutch long term care and boundary dynamics

In Dutch healthcare 'long term care' is a broadly recognised field within healthcare (see for example Handboek Zorg: Boot and Knapen 2005). The Dutch sometimes refer to this sector with the English word 'care', as opposed to 'cure'[6]. There are several ambiguities in the boundaries of the (sub)system:

- The nature of care as e.g. 'chronic', 'long-term' or 'incurable'. This overlaps with legal-financial definitions, which take the 'one-year mark' as a distinguishing feature between short and long term care, however dealing with some chronic diseases by the general practitioner is usually not considered to be part of long term care.
- Sometimes the care covered under the law on the financing of such chronic care is taken as definitional (AWBZ[7]), however the AWBZ law also covered typically short term care (e.g. crutches for a broken leg), resulting from the integration of the homecare/crosswork[8] constellation into this constellation.
- Sometimes the system is defined by the specific type of healthcare providers, often referred to as the 'VVT sector' (for example the members of the two national 'care' and similar healthcare providers), however these healthcare providers also engage in different healthcare types (e.g. perinatal care), and chronic care is provided by other healthcare providers.

The long term care is mostly provided by not-for-profit organisations, these organisations are often the result of decades of mergers of small scale organisations, and vary in size from several hundred to several tens of thousands of employees and patients, with a few thousand being typical. The lump of long term care is provided by the VVT providers. Originally VVT healthcare providers were oriented on either homecare (originating the old Crosswork constellation) or nursing homes (originating from the hospital constellation), but as a result of mentioned mergers many are now mixed providers (even if internally the divisions might not have merged). Next to the VVT providers, care to the disabled (physical disability and/or mental retardation) is taken care of by

specialised organisations. Care for persons with mental disorders (excluding mental retardation) is given by mental healthcare providers, who do not necessarily distinguish between short and long term care. Some facilities of mental healthcare providers are clearly for long term care, for example residential facilities (especially the RIBW or 'protected living'[9] arrangements). But therapy for patients is generally a mix of short and long term care, and financing only became separated from 2008 when treatments for up to one year became slowly part of curative healthcare insurance.

Boundary shifts and debates

The disputes on boundaries are more than a semantic or epistemological debate; these boundaries are to some extent also the subject of struggles in transition politics over long term care. Examples of such boundary dynamics are:

- The decentralisation of care to municipalities and subsequent increased inter-action with other societal systems: due to legislative changes in 2007, aspects of homecare has become a responsibility of municipalities, whilst at the same time 'small scale care' and 'neighbourhood-based' care was propagated. Both this cultural pressure and the ending of structural isolation have led to increased interactions with the 'well-being' sector and other local organisations. Those 'well-being' organisations are the descendants of the old poor care system, whose demise and reorientation we discussed in chapter 4. After half a century of rela-tively isolated development, the dynamics of those two systems appear to have become interwoven again.
- The separation between 'care' and 'housing/living' (Dutch: wonen): most inpa-tients (and even some outpatients in the RIBW facilities) are usually provided housing from their healthcare provider. Legislation changed for those patients receiving lighter care and deemed capable to make their own decisions, making them effectively renters of a home within an institution. This legislation can structurally be seen as financial reorganisation, but are also in line with a cul-tural trend towards patients as 'empowered' and 'self-responsible' citizens. This further blurred the line between the Dutch societal housing system (with a pivotal role for housing associations) and healthcare system.
- 'Demedicalisation' and informal care: long term healthcare came in the studied period under pressure to reduce professional care and increase informal care. By itself this is a shift within the healthcare system, but in combination with libe-ralisation it also opened up competition from other domains, most notably from cleaning firms, offering support in housekeeping previously exclusively dealt with by long term care providers.

As we will describe, these boundary shifts were actively challenged and fought over from various perspectives on the future of long term care, thus being the object of Tran-sition Governance politics.

Demarcation in time

Our research interest is in the period leading up to and including the transition programme described in chapter 6. This is also the period between the present and the analysed period in chapter 4. In demarcation we need to find a balance in analysing a sufficiently long period to uncover some Transition Governance phenomena and gain some insight in their longitudinal development, whilst also keeping the amount of data to be processed within the available time and resources. A choice was made to analyse developments over a five-year period from 2006 up to and including 2011. This period encompasses the programme itself (2007-2010), a short period leading up to the programme and a short period after the programme. As fully coding this period turned out to be too time consuming, the decision was made to limit the analysis to a sample of about a third of the articles in each year, which also resulted in sufficient articles for visualising each year (see 5.3.4).

5.3.2 Application to case and some limitations

The available information sources limited the case study significantly. In the previous section we stated the requirements of (1) no snowballing, (2) longitudinal consistency, and (3) an extensive, encompassing approach. For long term healthcare governance, only one adequate source was identified, namely the 'Zorgvisie' news service and professional magazine. Zorgvisie is a journalistic publication by Reed-Elsevier aimed at policy and management professionals in healthcare, without major overhauls in format or editorial policies during the studied period. Zorgvisie has a relatively large and fine-grained reporting of developments within healthcare, resulting in weekly news updates (much like a newswire and also incorporating relevant information from general news wires) and more in-depth reporting in a monthly magazine (combined with more news updates). The risk on individual bias was limited, as multiple reporters were active during the studied period, even for long term care. But of course implicit and explicit editorial policies will shape the reporting.

Adding articles from other sources to the information base would not preclude any systemic bias already present in the Zorgvisie (as the majority of articles on long term care governance would still originate from Zorgvisie). It would introduce new problems with respect to limited availability in time, non-independent publishers (e.g. trade organisations) and specific angles (e.g. medicine-oriented journals).

Therefore, a choice was made to base the analysis on this single news source. As a case for exploring the applicability of the developed concepts in the previous section, this is not a serious drawback. With respect to substantive findings on the case itself, limitations have to be acknowledged. In essence, this case study describes long term healthcare governance through the eyes of Zorgvisie. Their perspective approaches our preferred bird's eye view arguably better than any other available source, but it cannot be equated to it. We will discuss implications for the findings in the final section of this chapter.

The Zorgvisie archive was accessed through the LexisNexis news service and articles were extracted by a wide sweeping set of keywords to filter those articles dealing with long term care[10] and stored in indexed files. Some articles were filtered out because they did not address long term care or did not contain news reports. Mostly these filtered out items were tables of contents, calendars or personnel announcements. In rare cases articles appeared to have been duplicated verbatim or, in even rarer cases, copyright limitations blocked access to articles. In some other cases copyright issues limited access to an abstract of the article, which was usually sufficient for coding.

5.3.3 Qualitative approach without a priori categories

Overall, one hundred different themes were initially identified and associated to excerpts. These labels were aggregated in major themes for both normal and Transition Governance and in addition some minor significant themes for Transition Governance were identified. The reason to address 'normal' governance themes is that the normal governance processes and Transition Governance are often interwoven.

Major 'normal' governance themes:

The dominant governance theme in the studied period has been the overhaul of the financing of long term care, such as:
- Large revisions of the core legislation (the AWBZ), such as the 2003 reorganisation into functions, the introduction of 'indicatiestelling' (access controlled by a specialised agency assessing the need for long term care), and the reorganisation into 'performance-based' (a bit of a misnomer) budgeting through 'healthcare intensity levels'.
- In 2007 household support to the sick and/or disabled (to be distinguished from medical care) was split off from national healthcare financing legislation and integrated into a new established financing law (WMO – Wet Maatschappelijke Ondersteuning). This confronted many healthcare providers with having to manage and administrate their care in two different financial systems, and municipalities with implementation[11].
- In 2011 the budgeting of the housing component within the system of funding changed from direct financing by the government, to financing building costs through a fixed surcharge on the budget for provided care. Although a highly technical measure, it brought financial turmoil for many healthcare providers with relatively high housing costs, bringing some to (or over) the brink of bankruptcy.

Any (potential) revision casts a long shadow of struggle and uncertainty before being formally decided upon. Moreover, even after becoming law, struggle continued around implementation bylaws, legal interpretations, postponement or gradual introduction, exceptions for special cases, etc. Once laws have become effective, struggle continues

around the question of what the actual effects are (with opponents pointing to examples of vulnerable clients losing access to care) and what mitigating measures might be lobbied for. Implementation also led to many practical issues as administrative systems needed to be adapted. Structural changes to the system are tied into the discussion about the total cost of healthcare and the share of long term care therein. This debate on budget cuts for the long term financial sustainability of the system (or meeting short term EU budget rules) versus the need to maintain universal access to healthcare was another important theme. Barriers to access such as deductibles, better selection of the truly needy, etc. were proposed as solutions and problems in raging debates.

Most of these governance processes were clearly not concerned with furthering or directing a transition in healthcare. However, with short and middle term interests, decisions on healthcare financing systems were often framed in terms of the long term future and fundamental paradigms of long term health. For example, the PGB (persoonsgebonden budget, Personal Budget) law enabling clients to receive money (instead of direct provision) to buy their own healthcare was fiercely defended in the sector as well as in parliament and national media as a method to empower clients, putting their lives in their own hands, and to reduce 'big government' against opponents who pointed to sensitivity to fraud of such systems. In many other instances the consequences of overhauls for specific initiatives (such as the progressive 'Focus Wonen') were involved in the debate and used either to argue against the overhaul or to at least plea for exceptions to 'save' important transition niches from budget cuts.

Mergers and acquisitions
In the first half of the studied period the sector experienced an upscaling of healthcare providers through mergers and take-overs. Zorgvisie ran a monthly and sometimes even weekly recurring news item listing all mergers announced during that period. Although rarely directly affecting the primary process of healthcare provisions or connecting to the transition, it did lead to uncertainty and would strengthen opposition against large, anonymous healthcare providers.

Competition and regulation
The healthcare market is not a natural market. Dutch long term care is characterised by complicated combinations of public and private organisation and legislation. The decentralisation of household support created additional challenges as municipalities acquired considerable discretion in the organisation of either a market or a governmental budgeting system. The benefits and advantages of different tender systems were debated, for example tenders on lowest price versus fixed rates and competition on quality (the 'Zeeuws' model). Healthcare providers struggled to manage the rapid loss and gain of market shares (where previously year-to-year budget changes were limited to a few percent). The national anti-cartel watchdog (the NMA, Nederlandse MededingsAutoriteit, or Dutch Authority on fair markets), shared responsibilities for the Dutch healthcare market with the NZA (Nederlandse ZorgAutoriteit, the Dutch Healthcare regulatory agency). Investigations and prosecutions for healthcare cartels were started against specific healthcare providers and multi-million euro fines imposed and

challenged. This spilled over to a more fundamental discussion on the extent to which healthcare should be a market and the extent to which providers are allowed to divide work amongst them in such a market (see further).

Financial risks, restructuring, demises and bail-outs
The turmoil in financial arrangements lead to serious liquidity issues, aggravated by executive boards of providers either underestimating the liberalisation or overshooting by engaging in high risk 'commercial adventures' with real estate and technological innovations. Matters were worsened by a lack of financial control and insight after periods of mergers, coming from a system of government budget driven organisations with small year-on-year changes in these budgets. As a result a financial crisis occurred, culminating in the demise of 'Meavita', one of the largest healthcare providers with twenty thousand employees and half a billion Euro turnover.

Governance dynamics on this topic revolved around addressing the use of collective means and instruments to guarantee contingency of care. The perceived incompetence of management and commercial adventures fuelled radical protests against 'capitalist' and 'over-commercialised' healthcare providers and significantly influenced the national debate on the public-private boundary for quasi-public goods.

Management and managers
The mergers, financial misery, internal budget-cuts put management of healthcare providers onto the defence with regard to their image in society and towards the professionals. A continuous debate on their salaries further contributed to this. It is noteworthy that even using Zorgvisie as source, which could be considered to be oriented towards managers and policymakers, most reporting focused on debates around 'bad management' and 'bad governance' for both specific cases and codes of conduct and the state of management in healthcare in general. This is contrasted by some reporting on successful management, management philosophies of managers, management methods to cope with change, etc.

Quality regulation
(Lack of) quality and safety plays an important role early in the studied period. This was kicked off in 2003 with hype around 'pyjamas days' in which nursing home residents were allegedly not washed and dressed but left in their night wear to cut costs. In the studied period, two recurring storylines can be found: (1) the establishment of ad-hoc and later more permanent quality, monitoring and public reporting (including debates if these standards do adequately reflect quality); and despite all efforts, (2) a relentless stream of incidents.

Most quality debates take place in the context of the existing fundaments of the healthcare system, and perhaps even strengthen the regime by insisting on guaranteed safety. But the criticism that current quality standards only enforce the status quo by not comprehensively measuring happiness, well-being, and meaningful life, as well as the

debates surrounding fixation in the light of right to autonomy (even if this involves risk), can be seen as forms of structural and cultural Transition Governance.

Labour market, competences and industrial action
Budget-cuts, reorganisations, and the introduction of more 'flexible' employer-employee relations led to considerable tensions in labour relations between unions and trade associations. Tensions occurred as part of typical labour negotiations: over the 'collective agreements' (CAO Collectieve ArbeidsOvereenkomst) governing standard salaries, working hours, annual leave etc. In the studied period, frequent conflicts between unions and providers occurred outside these 'normal' negotiations over the merger of homecare and institutionalised care agreements, workload, and many other issues. Impacts on the primary process remained limited as the Dutch 'poldermodel'[12] of industrial action mitigated the conflict. In general, these collective bargaining dynamics were not connected to transition dynamics in any significant way.

However, labour shortages were frequently discussed, both as an internal problem within healthcare providers (perceived understaffing) and as a general condition of the labour market and in both the short and longer term (the baby boom generation retiring, both reducing supply on the labour market and increasing demand for care).

Debates about needed competences and management structures for healthcare professionals (such as nurses) can be noted. The 'minute-by-minute registration', systems in which professionals had to account for activities up to the minute fuelled protests. Moreover, the introduction of contractor-client relationships as substitutes for employer-employee relationships were contended.

Major Transition Governance themes

One of the dominant themes in transition-oriented governance processes was the organisation of healthcare at the level of the provider. As noted, the mainstream governance was mostly concerned in this respect with mergers and dealing with financial challenges. At the same time, more fundamental themes were tabled, for example initiatives to form new 'coöporaties' (cooperatives), with participation of long term patients as some type of shareholders, as an alternative to ever more commercial oriented healthcare providers. Others, most notably Buurtzorg, refocused organisation around the professional (the nurse) combined with a 'lean-and-mean' approach to overhead.

Re-empowering the professional
Related to these new organisational philosophies, a re-appreciation of the healthcare professional emerged. Actively propagated by politicians and innovative practitioners, the 'empowered professional' was framed as a return to the past in which the healthcare professional was perceived to be less burdened by bureaucracy and micro-management and more able to autonomously apply the best solution for specific clients. Especially the 'district nurse' (wijkverpleegkundige) of the old crosswork constellation

(see chapter 3) was used as a model for a different type of healthcare (combining the empowered professional with the local solution theme).

Reconstituting the market

Next to the short-term discussions on how to organize the market within the current system, debates can also be noted on how to fundamentally change healthcare through reshaping the market. One crucial aspect in those debates is if the 'demand' on the market is articulated (or represented) by insurers, clients or the government. Especially in the second half of the studied period, a three sided struggle developed over the configuration of the market. First, trade organisations (and some patient organisations) strived to focus the market on the individual patient (or consumer), either directly or through insurance (but then again giving the consumer the choice for provider). In this way the client is empowered to handle its own care and as such it ties into several transition themes[13]. A client as a paying customer would be fundamentally different from the 'client as a patient' paradigm prevailing in the long term care. Second, another group (led by the municipalities) took the position that local government should provide care to (almost) all chronic patients by contracting, directly or through tender, healthcare providers (thus the municipality representing demand in the market place) and so allowing better integrating of local social and health services. The last group (led by insurers) argued insurers could be powerful representatives for patients/consumers.

Empowering the client / self-responsibility / tailored solutions

Another major theme in governance processes oriented at transitional change, is the empowerment of the client. One way is by influencing his financial (purchasing) power as discussed before. Two groups of motivations for a stronger role for the patient can be found, which share the idea that a chronic care client often has the best insight into his own care needs, but also have considerable differences. On one hand there is a more cultural interpretation of such a move, pointing to the intrinsic value of clients making their own decisions, and giving meaning to their own life. This motivation can be related to for example 'rehabilitation' approaches in mental healthcare and the 'socialisation' (vermaatschappelijking) of care. This was expressed by the long term care transition arena as 'samenredzaamheid' (roughly translates to 'coping together', see chapter 7). Other arguments in this theme place more emphasis on 'self-responsibility' (eigen verantwoordelijkheid) and can be related to general criticisms on the inefficiency of the welfare state. These motivations place emphasis on the economic incentive for the empowered patient to get the best value for money or to save money. Often a higher personal financial participation of the client (for example through deductibles and compulsory saving mechanisms) is proposed to further increase the incentive. These motivations can have cultural fundaments (e.g. an aversion against big government), but also more down-to-earth budget constraints.

Local, small-scale solutions

The decentralisation of long term care tasks to the municipalities can on one hand simply be interpreted to constitute a process of mainstream governance in which, like other welfare arrangements, the roles of the national and local level of government are

redefined. On the other hand, the motivation behind the decentralisation is strongly based on the ability to deliver better care locally and better integrate chronic care with other local welfare systems. Those advocating such alternatives frequently refer to the decentralisation 'operations' to point out that local solutions are the future. In several ways, Transition Governance processes in the long term care dealt with scaling down the typical large scale organisation of long term healthcare.

First, a smaller scale of elderly homes has been advocated, already prior to the studied period. Even though some criticised the shift to small scale living (arguing this did not necessarily increase the quality of care), in the end the advocates of small scale elderly homes did realise some important structural changes, such as the wavering of some of the hygienic and food codes that apply to large scale nursing homes. Second, a movement towards integrating chronic care with local communities and other professional caregivers and authorities on the district and neighbourhood level is observed. This movement interacts with the plea for small scale provision of healthcare, as small scale solutions are much easier to geographically and socially integrate. Third, a plea for a smaller scale of healthcare organisations themselves can be noted, largely as a countermovement against the upscaling of organisations through mergers and perceived associated increase in management.

Minor Transition Governance themes

Next to these major observed themes, many other minor themes could be noted, of which two related directly to Transition Governance themes. First, remote care solutions are introduced as a means to allow the elderly to remain at home longer and in charge of their own lives. The limited use of such remote care is also used as an example of the lack of innovation (see Rekenkamer 2009). Second, the only significant approach advocating a different cultural paradigm appears to be the 'presentietheorie', (Baart and Van Dijke 2011; Baart 2007). Others argue for empowerment as a way to enable people to give meaning to their own lives and to make a meaningful contribution to society.

The 'Buurtzorg' niche and its fit with governance themes

This chapter provides a bird's eye view on (transition) governance themes, which is distinct from a bird's eye view on transition dynamics such as through (revised versions of) the MLP. As such we did not identify niches such as in chapter 3. However the 'Buurtzorg' niche is of particular interest. As it is the only identified initiative that developed during the studied period upscaled to a significant niche. The Buurtzorg niche fits remarkably well with most of the observed Transition Governance themes and mainstream themes:

- Local solutions: the very (brand)name stresses the neighbourhood component, the organisation has a focal point in local teams that operate at district or village level.
- Professional empowerment: Buurtzorg gives the professional greater autonomy than conventional organisations both in the caregiving (higher qualified professionals deciding with peers how to best give care to patients) and more organisational matters (e.g. scheduling, staffing, etc.).
- Client (and its environment) empowerment: the 'return of care to the neighbourhood' was perceived as also a return to the client. Buurtzorg is also noted to make more use of family and friends, by engaging in organising informal care around the patient.
- Reconstituting the market: although Buurtzorg in the end also competed on price, it did introduce competing on better quality as a realistic option. It also proved that a model which does not focus exclusively on efficiency, but focuses on effectiveness can deliver results.

Buurtzorg did not only align with major transition themes, but perhaps at least as critical to its quick growth, to the mainstream governance debates:

- Mergers and acquisitions: even though Buurtzorg can be seen as a countermovement to the tendency of ever larger institutions, in some respects it aligns well with the upscaling from local and small regional providers to large regional and national providers as it is organised in the end on a national level. Buurtzorg has the ability to provide some counterweight to large insurers, to offer virtual national coverage and to weigh in on national debates.
- Competition and markets: Buurtzorg has a strongly competitive attitude and competitive success stories and a typical success story of the ability of an entrepreneur with a vision to compete on quality and price, in this sense Buurtzorg aligns with a more economic political right view on society, even if in its deliverance of care it has a more harmonic model.
- Labour market: Buurtzorg provides a better prospect for elder nurses and other caregivers, as their experience better offsets their reduced physical stamina in the Buurtzorg concept than in an efficiency focused provider.
- Management: a lean-and-mean organisation with a relatively modestly paid top executive and very little management can be seen as an answer to the societal pressures on management.
- Boundary management: Buurtzorg puts emphasis on close relations with family physicians etc.

5.3.4 Top-down approach

The articles have been coded into four categories (by a discrete 0-4 scale) for the extent to which cultural, structural or practical Transition Governance characteristics are observed, following the methodology we described in the previous section. Coding was done on an increasing sample from each year until all years contained far more than 50 samples (to allow for visualising longitudinal effects) and in total far more than the 225 articles[14] required to allow a detailed visualisation of all cells. The main results are depicted in figure 5.4.

Effect of demarcations and weighing

The bottom two schemes present the article counts for each area in the diagram under two extreme assumptions: the left diagram includes all articles with any relevance to Transition Governance dynamics and long term care without weighing and the second diagram only includes (very) significant Transition Governance dynamics dealing exclusively with long term care. This demonstrates that the results do not change dramatically by the selection scope. As a fine-tuning, we opted for a weighted approach. In this approach we assume that the codes for relevance and significance represent (natural) orders of magnitude, thus each subsequent levels being a factor e ($\approx$2,72) more important.

General results

The results clearly show a dominance of Transition Governance oriented at structure. Many articles exclusively discuss structural change, and virtually all articles discuss structural change to some extent. For example, articles advocating a different paradigm in healthcare can be found, but these give as many words and importance to how such paradigms could be stimulated or facilitated by structural changes. For reports on Transition Governance oriented on change through new practices, some articles can be found that (virtually) exclusively address change through new practices, but again most are related to structural change. For example, an article may mainly deal with how changes in healthcare financing and regulation might affect a niche.

	article is **somewhat** related to transition governance	article is **significantly** related to transition governance	article is **very significantly** related to transition governance	total
article **marginally** adresses long term care	45	22	8	75
article **significantly** adresses long term care	98	44	20	162
article **dominantly** or exclusively addresses long term care	312	220	91	623
total	455	286	119	860

Table 5.3 Coded articles: significance of transition governance and extent to which articles address transition governance
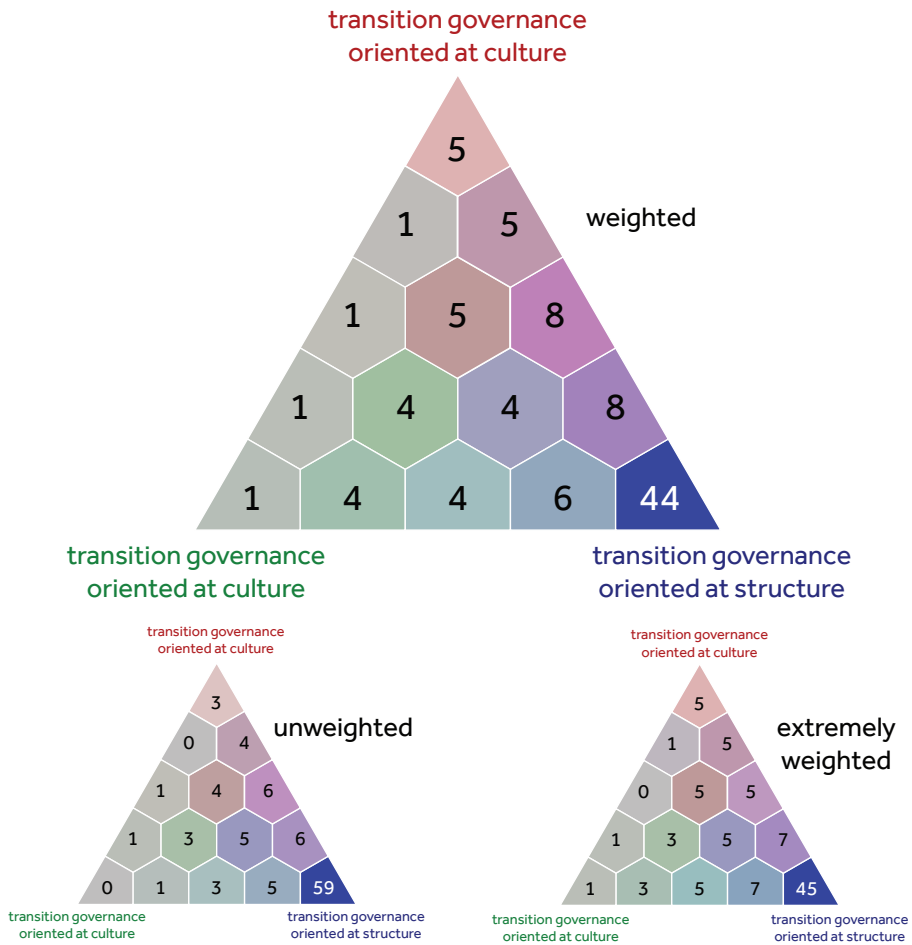
Figure 5.4 Main results of top-down analysis and variations for weighing / selection.
Number are percentage of observations (after weighing), the darker (more saturated)
colors are, the higher the percentage

Longitudinal differences

In our results, the structural dominance is constant over time. Figure 5.5 shows the results split into years within the studied period. These graphs show few if any shifts in focus. The themes of the previous subsection remained also quite constant over the studied period. This confirms the qualitative analysis: issues get slightly reframed, or evolve otherwise, but debates remain remarkably constant. The limitations of our case notwithstanding, this might be illustrating that Transition Governance processes, or at least those visible, are relatively slow developments[15].

Figure 5.5 (Lack of) longitudinal differences in top-down analysis

5.3.5 Combining top-down and bottom-up

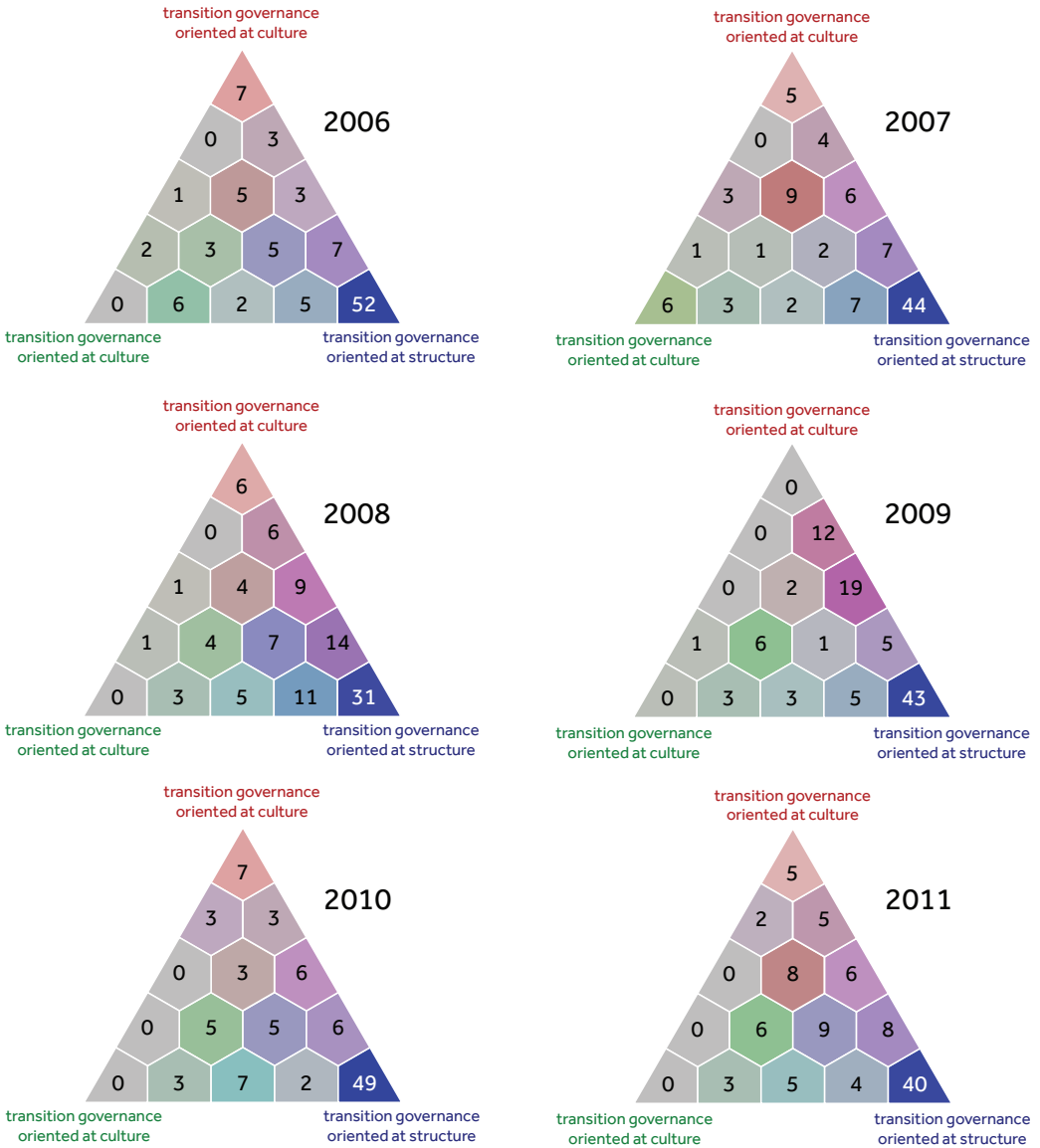We can combine our two approaches to the case study in one visualisation. As each article was both bottom-up coded, as well as coded on structure, culture and practice (with weights for transition, Transition Governance and relevance for long term care), we can calculate for each identified bottom-up theme, its average position (arithmetic mean) on the ternary diagram (weighted for the mentioned factors). We can also indicate in how many articles it was discussed (again weighted). It should be stressed the bottom-up method was primary used for qualitative purposes, and should be, but this a secondary method of processing the information.
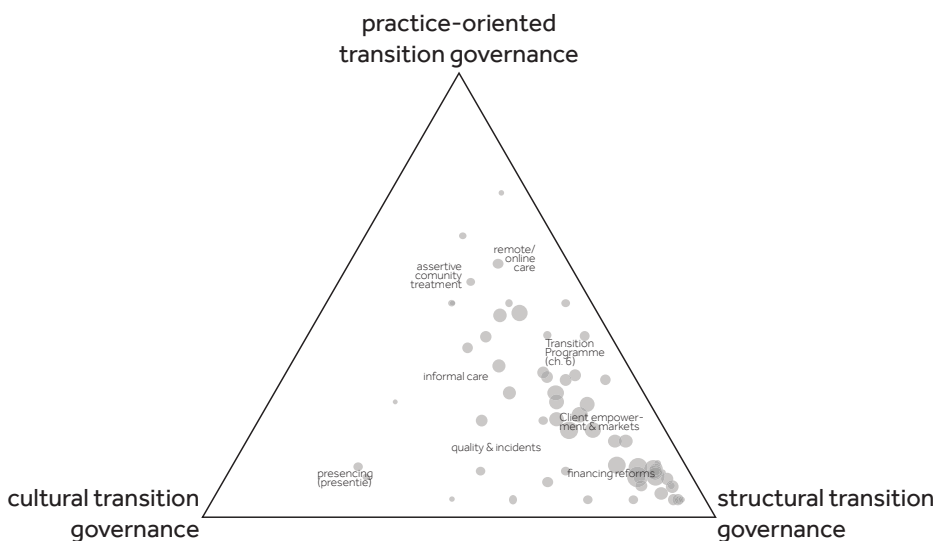
Figure 5.6 Bottom-up identified themes plotted in ternary diagram (weighted, circle size representative for number of articles, multiplied by average weight assigned to article, not all themes are labelled, labels only give a general impression of found themes)

The resulting graph (see figure 5-6) reproduces the information in the previous figure (the distribution of recorded news over structural, cultural and practical Transition Governance), but adds some interesting insights.

We see that themes in number are concentrated in the structural corner of the graph (the many small circles), but the more frequent themes (larger circles) do have some practical and cultural governance aspects[16]. We do see more clearly that differentiation away from structural themes is more toward practice oriented governance (experiments, innovation on the ground, etc.), and less toward cultural governance. Only the 'presencing' theme is clearly in the cultural domain and of some significance.

5.3.6 Conclusion and discussion of case study

We did not observe major longitudinal shifts in Transition Governance processes in Dutch long-term healthcare for the period 2006-2011. We observed very slowly evolving debates on structural transitional change, often in reaction to developments in mainstream governance processes. The Transition Governance processes thus appear geared towards regime adaptation. From the qualitative analysis, we further learned that (transition) governance processes were largely occupied with reacting to larger trends and external forces (demographics shifts) and did not seem very concerned with bottom-up developments or empowerment oriented patterns.

Why do debates on structural change appear to be dominating?
We could question if the structural tendency could not be attributed to the bias of a professional/trade journal. As this was a first explorative application of the method proposed in §5.2, we also have no reference to know where in the structure-culture-practice triangle the Transition Governance processes of a sector would be typically positioned. It can thus not be definitively concluded if the structural adaptation focus is typical for the used source, (long-term) healthcare, or this specific period in the recent history of (long-term) healthcare. The lack of practice-oriented Transition Governance is, however, confirmed by what we know from the transition programme for long term healthcare (see next chapter): (1) the frustration of policymakers to foster 'real' innovations; (2) the active search for initiatives (instead of putting out a call); and (3) the considerable investments within the programme to 'transition' existing initiatives.

Why are few if any longitudinal effects visible?
We can also question why we did not observe longitudinal differences. One explanation might be we missed such effects, because of the discussed limitations to our method. We might be looking at the wrong aspects (culture, structure, practice) to find longitudinal effects, although the studied texts did not provide any indication that other dimensions might exhibit a greater variability. Lastly, an explanation might be that in fact very few longitudinal effects did occur, perhaps because the transition governance dynamics evolve very slowly in an early phase of the transition.

Inability to identify small-scale developments
Small-scale and fringe cases of Transition Governance processes are likely to be overlooked, as they will not be reported. This would imply our method might miss small tell-tale signs of Transition Governance developments. In this sense, our approach complements rather than replaces a more anecdotal approach, as such anecdotes can reveal little cracks in the system, which signal larger changes in complex systems. This might include very small initiatives oriented towards practice and/or culture.

The case study did demonstrate that our conceptualisation and method as developed in the previous section allows the mapping of on-going Transition Governance dynamics and, at the very least, structures discussion on this matter. We will discuss the consequences for Transition Management in the next section.

5.4 Conclusion on politics - policy relationship

In this chapter, we sought to develop a better connection between the two perspectives we distinguished within Transition Governance by conceptualising on-going Transition Governance as three interconnected streams of structure-oriented, culture-oriented, and practice-oriented governance processes. Applying this to the context of the 'chronic care 2006-2011' case in the following chapter gave interesting results, even if the method would require further development and additional information would need to be gathered before the validity of those results is proven.

We have thus, in line with the framework of chapter 1, added a bird's eye governance view in between the system dynamics - Transition Management relationship. We did find in the explorative application that such a fine-grained approach makes clear-cut distinctions more difficult. In the conventional approach, distinguishing between the on-going system dynamics and the initiated Transition Management activities is relatively straightforward owing to the large differences in scale and perspective. In our new approach, it is more difficult to make distinctions between a niche and processes of practice-oriented governance; and between 'mainstream', 'optimisation' or 'regime' governance on the one hand and Transition Governance on the other hand.

Orienting policy arguments towards on-going governance dynamics

With a way of describing on-going governance dynamics, we can now be more specific about the relationship of these on-going dynamics with a transition policy. We could distinguish at least three basic aims of the policy (see figure 5.6):
- To strengthen on-going Transition Governance: a policy with a starting point that takes on-going Transition Governance efforts oriented in the 'right' direction, but needs to gain greater momentum (for example to force a breakthrough in transition dynamics).
- To complement on-going Transition Governance: a policy with a starting point that recognizes on-going Transition Governance efforts overlook (or underemphasize) important aspects of the transition. The policy is therefore oriented towards filling this void in existing efforts.
- To confront on-going Transition Governance: a policy might take as a starting point that the current orientation of transition dynamics is 'wrong' and needs to be redirected, for example an overreliance on regime adaptation, instead of niche empowerment (or the other way around).

We might even consider strategies which radically confront on-going Transition Governance by not only aiming to transform the existing momentum in the desired direction, but even to weaken them (e.g. a destabilising strategy of an environmental NGO towards a Transition Governance movement stimulating a transition to nuclear energy).
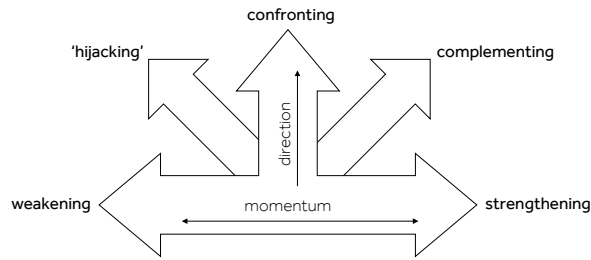
Figure 5.7 Strengthening, complementing or confronting on-going dynamics

In this chapter we have focused on governance oriented at structures, culture or practices. But on-going Transition Governance can be characterised in many other ways, such as the substantive direction (e.g. small-scale humane healthcare versus high-tech breakthroughs), the phase that is perceived or strived for (e.g. the need to move towards a breakthrough), the pattern to be stimulated (e.g. more empowerment), or even the dominant demarcation of the system (including problem perception). A policy might choose a different strategy on different aspects, without being inconsistent.

A choice between these three strategies can be based on various grounds, of which we can give three – non exhaustive - categories. First, it will depend on the alignment between problem and solution space of the owner(s) of the policy on one hand and the dominant perception(s) among those already engaged in Transition Governance on the other hand (see chapter 2). Second, conclusions about the autonomous direction the transition is taking (the higher levels in our framework) are an important factor in deciding which way to influence the governance related to these dynamics. One might for example conclude the dominant transition and governance dynamics are focused on adapting the regime, ignoring the possibility of stimulating the breakthrough of an alternative constellation. Third, ideological preferences may play a role (see chapter 4). For example, ideology might play a role in how feasible and desirable one sees an empowerment pattern (which might better align with a more progressive political agenda) or an adaptation pattern (which might better align with a centre political or 'polder' approach).

Ideally, we would have explored the choice between these three strategies in action research in the subsequent case of the Transition Programme in the Long Term care. Unfortunately, the conceptualisation and insights of this chapter have largely been developed after the action research in this transition programme, but we will use these insights to interpret ex-post some of its dynamics in the next chapters.

Notes

1. "Control process" in Oxford Dictionary of Business and Management (Law 2009).

2. Confusingly, however, the hierarchical ordering of the level varies per field: for example in military science 'operational' is the intermediary between strategy and tactics.

3. The type of entities can be narrowed depending on a more specific concept, model, or framework for Transition Governance used, here we define as broadly as possible.

4. The number of ways four indistinguishable items can be divided over three different categories, can be equated to the combinatorial problem of drawing four times from (with repetition) a set of three different items and thus with $\binom{n+r-1}{r} = (n+r-1)!/r!(n-1)! = (3+4-1)!/4!(3-1)! = 15$ with n=number of categories and r=number of ordinal scale points and sum over all scales.

5. Most mathematical approaches (such as Thompson 1987; Mavridis and Aitken 2009) to estimate required sample sizes for ternary plots, assume each individual sample is exclusively and completely of one dimension (thus in our case either exclusively structural, exclusively cultural or exclusively practical). However, in the field of geology the characterisation of shape (the extent to which particles are spheres, rods or plates on the basis of isotropy and elongation indices) is similar to this method, as each sample is measured on a continuum between the three ideal types. In such a situation, 10-30, with some sources arguing up to 100 samples are sufficient, at least for characterising the mean of the three dimensional distribution (under two degrees of freedom) in the ternary diagram (Bull and Morgan 2006; Bunte and Abt 2001).

6. And sometimes prevention and palliative care are added as resp. a third and fourth mode of healthcare. The term care is often used interchangeably with the term 'Nursing(homes) (verpleging/verpleeghuizen), 'Caring(homes)' (verzorging/verzorgingshuizen) and Homecare (thuiszorg)' or sometimes even with the term 'elderly care', to the largest demographic recipient group (65+ and especially 80+) of such care.

7. AWBZ is an abbreviation of 'Algemene Wet Bijzondere Ziektekosten' or roughly translated as 'General Law on Exceptional [i.e. uninsurable] Healthcare costs', this law was replaced recently with a new chronic care law.

8. Crosswork (Dutch: Kruiswerk) organisation are community based neighbourhoud based preventive and nursing care organisations, later integrated into the newly formed constellation of nursing homes, see chapter 3 for details.

9. RIBW: RijksInstelling voor Beschermd Wonen

10. The full query submitted was: ((thuiszorg OR vvt OR awbz OR wmo OR ciz OR zorgkantoor OR "chronische zorg" OR "langdurende zorg" OR "langdurige zorg" OR "verpleeg- en verzorgingshuizen" OR "gehandicaptenzorg" OR "RIBW" OR "ouderenzorg" OR verzorgingshuis OR verpleeghuis OR verzorgingstehuis OR wijkverpleegkundige OR kruiswerk OR care)) and Date([period start]) and leq([period end]). The date component of the query was later split into blocks of 200 articles to address technical limitations.

11. Similarly mental healthcare providers were confronted with the transfer of curative mental healthcare (i.e. treatments up to one year) to the system of mandated private insurance, which owing to technical difficulties became 'stuck in the middle' between two financial arrangements and thus administrative system for years.

12. The 'poldermodel' is a consenus-based, pragmatic model on socio-economic policy and conflict resolving, prevalent in the Netherlands since the 1980's, it has no direct relation to physical polders.

13. Note that for providers it would potentially remove budget restrictions and thus align with their materials interests

14. For each year, we took a sample from February up to and including june. In retrospect, random sampling might have been better, but given the low level (or absence) of longitudinal differences it is unlikely to affect our conclusions. For 2011 the sample period and entire year were compared, and no significant differences observed between these periods.

15. Note that governance dynamics might still be occurring at a higher pace than the dynamics of the transition at the highest level, especially as the dynamics of the transition as a whole could be expected to be very slow early in a possible transition.

16. A 'regression to the mean' effect might also be in play.

6. From governance (policies) to instruments: an interface perspective on TM programmes

In this chapter we will connect Transition Governance (including the high-level element of a policy) to instruments. The research question addresses how transition policy arguments relate the dynamic state of the system to Transition Management strategies and instruments.

In the previous chapter we discussed how a transition policy argument contains a number of choices in complementing, confronting or reinforcing on-going Transition Governance; for example with respect to an empowerment or adaptation pattern, and a focus on structural, cultural or practice-oriented governance. These high-level components of a policy might be the 'strategies'. These strategies are executed by instruments, which typically will also be described in the policy. As we will discuss further in chapter 7, many specific TM instruments and general policy instruments exist. A single instrument might execute a policy, but as multiple ones are typically envisaged, questions of coordination arise.

This chapter will focus on how these instruments form the "coordinated actions" of our definition of a transition policy argument. We will address how these instruments operate within a wider governance context and are related to each other.

This chapter will first reflect on the existing literature in (§ 6.1), after which we will conceptualise the connections of the different governance stream by adapting Loorbach's TM cycle (§ 6.2). In section 6.3 we discuss the design of the Dutch 'transition in the long-term care' (Transitieprogramma in de Langdurende Zorg, abbreviated TPLZ). The dominant sequence of discovery was from the case to the conceptualisation to the reflection.
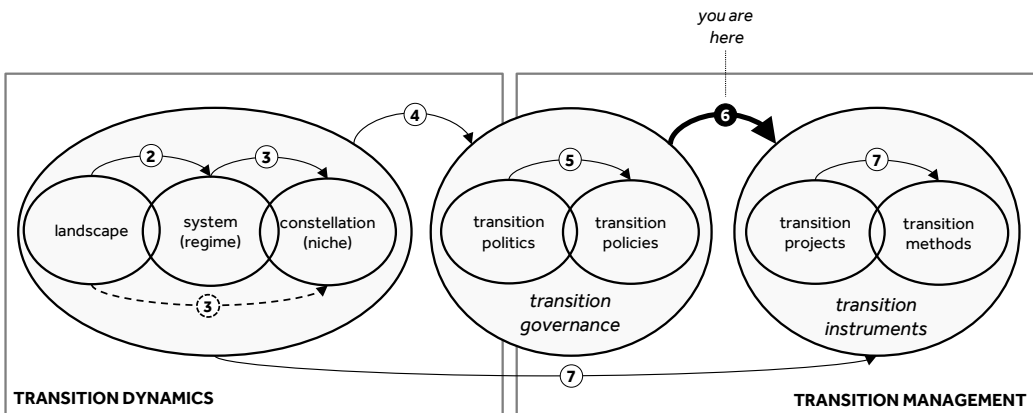
6.1 Theoretical reflection: the TM cycle as cognitive order

In this section, we will reflect upon existing concepts that inter-connect Transition Management instruments. But the relationship between instruments also touches upon the execution of a policy. Formal programmes with specifically-assigned staff are a typical approach to this. The TPLZ programme that we will discuss in this chapter was also a formal programme, which included a board and programme team that was run by consultants and researchers. Other examples are the Dutch energy transition programme, which was supported by the Interdepartmental Directorate for the Energy Transition (Verbong and Loorbach 2012), or the Flemish 'Plan C' and 'DuWoBo' programmes (Paredis 2011,2013, Loorbach 2007a). However, different ways of organizing policy execution are theoretically possible, including through more informal and diffused networks. Moreover, a transition policy argument does not necessary entail the execution of a policy[1].

Transition Management Cycle

The relationship between instruments is described by the Transition Management cycle[2]. This cycle as defined by Loorbach and Rotmans (Loorbach 2007a; Rotmans and Loorbach 2010a; Rotmans 2003) represents four clusters of activity or "systemic instruments (…) captured in a cyclical process model as a basis for operational management of multi-level governance." (Loorbach 2007a, 2002, 2004). The clusters consist of (see also figure 6.1):
- Problem structuring, establishment of the transition arena, and envisioning
- Developing coalitions and transition agendas
- Establishing and carrying out transition experiments, mobilizing the resulting transition networks
- Monitoring, evaluating and learning lessons from the transition experiments, and based on these, adjust the vision, agenda and coalitions.
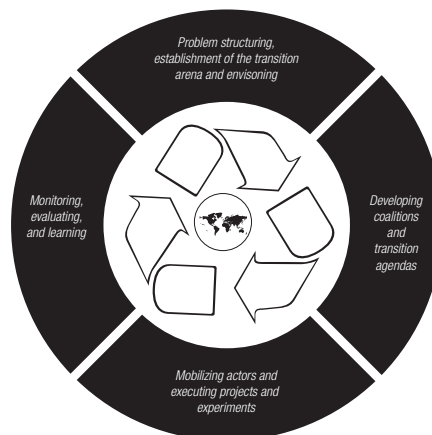

Figure 6.1 Transition Management cycle (Loorbach 2007a)

The Transition Management cycle is iterative, both in the sense of going back- and forth between steps and in the sense of searching for solutions through many cycles (see figure 6.2). Each cycle takes "two to five years, depending on the practical context within which one has to operate" (Loorbach and Rotmans 2006).

Layers of Transition Management

Loorbach (2007) distinguishes between three layers of Transition Management (later four), as discussed and reinterpreted in the previous chapter. There is a clear relationship between layers and the steps of the TM cycle (see figure 6.2). With the addition of the fourth reflexive layer, each step corresponds in one-to-one way to a layer. The description of steps and layers is also highly similar, with elements being distinguished by objects of reflection (system, subsystem, and niche) and type of activities (visioning, coalition building, experimenting, and reflecting). Although not framed as such by Loorbach, I would argue these layers thus constitute a more generalised model of the TM cycle and the TM cycle thus a more specific model of the layers model.
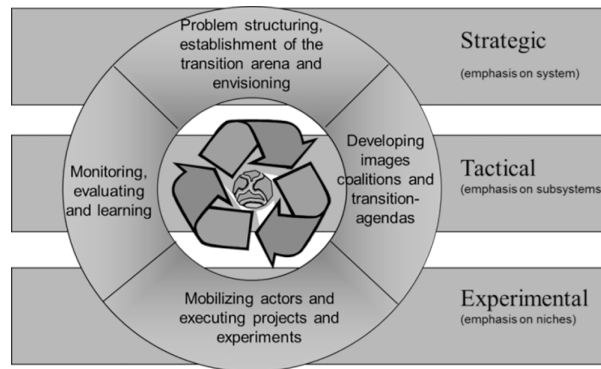
Figure 6.2 Layers of Transition Management imposed upon Transition Management cycle (taken from presentation by Loorbach)

Cognitive sequence

If we interpret the relationship between the cycle and layers in such a way, the cycle is more specific in the sense that it provides a sequence of clusters of activities. These clusters are recognised in literature not be fully sequential: "In operational terms, the activity clusters can be designed as process-phases, but we need to realize that the activities always intertwine, are carried out simultaneously and cannot always be distinguished from each other." (Loorbach 2007a). This appears to be especially the case in practice: "in practice, however, there is no fixed sequence of steps in Transition Management, and the steps can differ in importance in each cycle. In the real world, the Transition Management activities are carried out partially and completely in sequence, in parallel and in a random sequence." (Rotmans and Loorbach 2009). This parallel

nature might also explain why the whole cycle is described as lasting 2-5 years, which is roughly equal to the duration of each typical instrument in the cycle (see for example Van den Bosch (2010) on the duration of transition experiments, or see chapter 7 for the duration of a full arena process).

This difference between theory and apparent practice could be simply because the cycle is an idealtype which only roughly approximates practice, but as activities "always" fundamentally differ in sequence from the cycle, we could question if the cycle is an ideal type of an activity sequence. Rotmans and Loorbach note that "it serves mainly as a communication vehicle." (Rotmans and Loorbach 2010a, 155). The Transition Management cycle might thus describe a cognitive ordering of lessons and findings; with insights to be presented in a comprehensible way that is different from the actual process that generated these findings. We can also reinterpret what the 2-5 year period of a TM cycle constitutes. It may very well be the typical period in which the focal point of an initiative (such as a policy or programme) shifts from the active layers (strategic, tactical, and operational) to the reflexive layer and back. This periodic shift in focal point could be explained by both external factors (typical funding periods, periods key persons will hold a specific position, political terms) and internal factors (the time it will take instruments to deliver significant results, giving rise to a reconsideration of the programme). This does leave the door open to questions of how the activities actually relate to each other throughout the execution of a policy.

Correspondence between activity clusters of the cycle, TM layers, governance aspects and aspect of societal systems

In the previous chapter, we discussed how TM layers, governance aspects, and aspects of the system are related to each other. As the activity clusters of the TM cycle correspond to specific TM layers, we can complete the overview of correspondence from the system level, through the governance and TM layers, to the level of individual instruments. In 6.2 we will elaborate on this and conceptualise the coordination mechanisms and sequence of activities between these instruments.

TM activity clusters (segments of the cycle)		TM layer		Transition Governance layer		aspect of societal system
Problem structuring, arena, envisioning		Strategic Transition Management		Cultural Transition Governance		the culture of a societal system
Coalitions and agendas	..are instruments used in...	Tactical Transition Management	....is a specific instance of...	Structural Transition Governance	...is a process addressing regime shift through changing...	the structure of a societal system
Experiments and mobilising networks		Operational Transition Management		Practical Transition Governance		the practices in a societal system
Monitoring and evaluation		Reflexive Transition Management		(Reflexive Transition Governance)		not applicable

Table 6.1 Linking Transition Governance, TM layers and activity clusters of the TM cycle

6.2 Conceptualisation: managing parallel streams in parallel contexts

In this section we will position the parallel execution of instruments prescribed by a policy in the context of parallel streams of on-going governance (as discussed in chapter 5). We will first outline the general idea, before discussing how instruments act upon their environment and relate to each other through interfaces.

6.2.1 Positioning TM activities within Transition Governance

We described the Transition Governance context of TM as three continuous, interacting streams of processes and/or activities. We can position each of three active 'layers' of Transition Management as activities within each of the three streams of Transition Governance (see table 6.1). We can thus position tactical Transition Management within the context of on-going structural Transition Governance; strategic Transition Management within the context of cultural Transition Governance; and operational Transition Management within the context of Transition Governance oriented at practices. We can thus define these three layers as:

- Strategic Transition Management is the initiation, stimulating and steering of activities oriented towards cultural change (e.g. new paradigms, values, future expectations) in the context of on-going processes of cultural Transition Governance.
- Tactical Transition Management is the initiation, stimulating and steering of activities oriented towards structural change (e.g. rules, resources, etc.) in the context of on-going processes of structural Transition Governance.
- Operational Transition Management is oriented towards cultural and/or structural change through initiation, stimulating and steering of regime-deviating practices in the context of other activities and processes oriented at radically new practices.

In the previous chapter, we questioned if we should establish a fourth, descriptive stream of 'reflexive governance' and concluded that for descriptive, multi-actor purposes distinguishing such a stream would be not very meaningful. In the Transition Management Cycle, 'monitoring', 'evaluation' and 'adapting' are explicit, distinguishable activities (next to learning being part of all activities). This is in line with our observation that the shifting of focus back and forth between active Transition Management and general reflection may be a longitudinal pattern of the TM cycle that can be observed in processes in Transition Management practice. However, for describing how systemic instruments are linked together in sequence and programme organisation, we do need to add a fourth category of activities. We thus arrive at a conceptual model as depicted in figure 6.3: four streams of active and reflective activities of a Transition Management policy. Each of the activity clusters takes place in the context of others undertaking similar type activities.
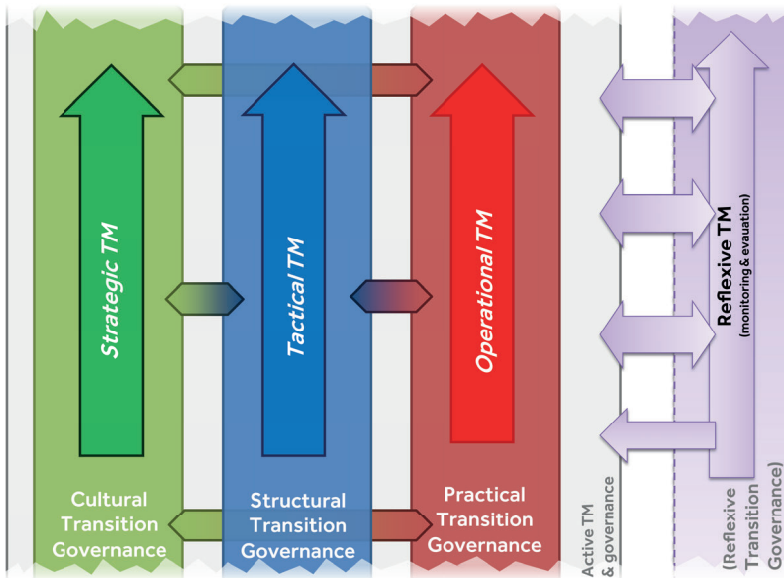
Figure 6.3 Strategic, tactical and practical Transition Management in the context of (and interacting with) streams of respectively cultural, structural and practical Transition Governance; and the addition of fourth category of reflexive Transition Management (which can be contrasted to the other active TM governance streams).

6.2.2 Interfaces

The instruments in the four streams are not isolated. They must have external interfaces to the Transition Governance dynamics or general transition dynamics they aim to influence. As instruments are "coordinated" in our policy definition, instruments can also be expected to have internal interfaces to each other. Transition Management at the intersection of strategy and instruments thus becomes a matter of (see figure 6.4):

- Initiating, facilitating and directing 'instruments' of practical, structural, and cultural Transition Management and monitoring/evaluation.
- Managing the interfaces between these initiated streams of activities, thus stimulating cross-pollination.
- Managing the interface between self-initiated activities and on-going Transition Governance processes (and the system change aimed for).

We will elaborate on these internal and external interfaces.

Figure 6.4 Transition Management programme: internal interfaces, external interfaces and context. We do not depict the time dimension to allow depicting that the environment is constituted by the wider, on-going Transition Governance processes, which affect the societal system in transition.

External interfaces

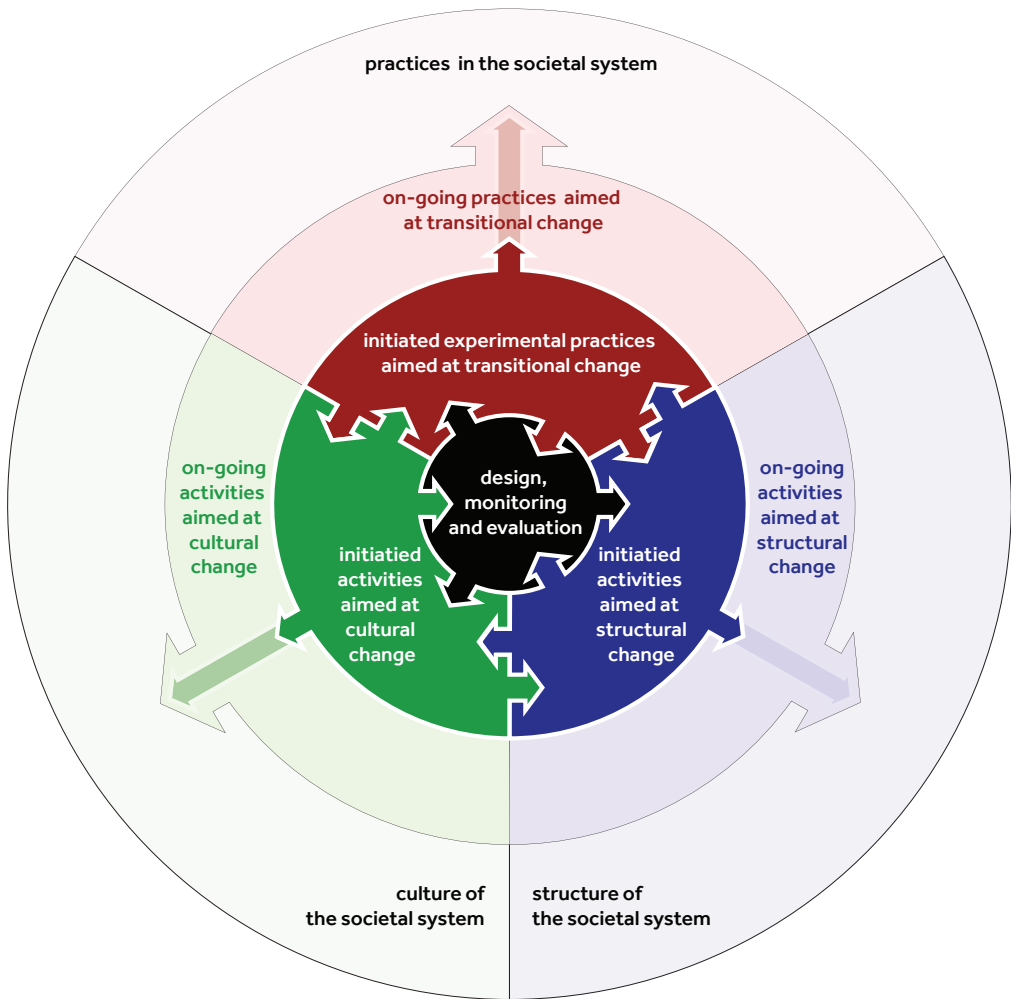The position of the external interface depends on where a programme ends and where the outside world starts. This might not be a trivial demarcation for network governance instruments. For example, a Transition Experiment is a Transition Management instrument and often part of a transition programme. However, if these are experiments based upon existing initiatives, we might question if the experiment itself is part of the policy, or only the specific support from the policy to the experiment is part of the policy. Similarly, for a government organisation executing a policy, we might question if the whole government (department) is part of the programme, or that only a small part (e.g. a project team) is internal to the programme and the rest of the government might be the target of the tactical Transition Management.

Operational external interface

Arguably the most important 'systemic instrument' for operational Transition Management is the transition experiment. A transition experiments is defined as "an innovation project with a societal challenge as a starting point for learning aimed at contributing to a transition" (van den Bosch and Rotmans 2008, 13). At the interface between programme and experiments, there is a flow of support to the experiment, not only as material resources, but also by constituting networks between experiments as a form of empowerment and building learning communities. In addition, the programme frames the experiment in a larger story. Insights into problems and solutions are also gained from practice for the benefit of the programme.

The three main mechanisms in which transition experiments contribute to a transition are (van den Bosch and Rotmans 2008): (1) deepening (a learning process through which actors learn as much as possible about a transition experiment within a specific context), (2) broadening (repeating a transition experiment in different contexts and linking it to other functions or domains), and (3) scaling-up (moving from the experimental to the mainstream).

Tactical external interface

Tactical Transition Management is about "processes of agenda-building, negotiating, networking, coalition building, etc." (Rotmans and Loorbach in Grin et al. 2010, 155). These processes are "interest driven and relate to the dominant structure or regime" (Loorbach 2007a). Tactical Transition Management is concerned with agenda-setting, especially relating to institutional change. Tactical Transition Management thus typically interfaces with resource and regulatory structures and associated actors. If a policy requires significant resources or regulatory space, acquiring these resources or regulatory space might be an early activity in a programme[3].

It would be expected that processes in the tactical Transition Management strengthen, confront or complement wider governance processes aiming to change the structure of

a system. One way of achieving such a wider impact on Transition Governance from a programme could be by creating or joining transition-oriented advocacy coalitions (Sabatier 1999; Loorbach 2007a). The literature finds that interests from the regime tend to creep into programmes (Kemp, Rotmans, et al. 2007; Rotmans 2011), which could be considered part of the Transition Management – structural governance interface, even if the influence is not in the desired direction.

Strategic external interface

This interface involves the flow of cultural elements (such as ideas, solutions, and new paradigms) to and from the programme. For the arena instrument, examples of such input are the interviews and study of existing documents before the start of the arena. Arenas propagate the ideas they develop in various ways, the formal publication is one form, but at least as important are the informal contacts through which the arena participants engage with others. In the literature, it is noted that propagating the vision of the participants to their 'home bases' is difficult (Rotmans 2003), as conventional organisations might not be very open to the developed ideas. However, participants can also spread a new paradigm in the Transition Governance networks they operate in or wait until a window of opportunity opens up in their organisation (see chapter 4). The 'arenas-of-arenas' concept (Loorbach 2007a), or "action arenas" (see chapter 7) are methods to achieve both a wider strategic and a tactical effect (building coalitions).

Internal interfaces

Each of the types of Transition Management operates in its own context (the external interface), but they also interact with each other. As in our reconceptualization, all clusters interact with all other clusters; six bidirectional interfaces exist (instead of the four unidirectional arrows in the cycle):

- Between tactical and operational: typically from the tactical management, resources and other forms of support are directed to experiments, but inversely the experiments can 'probe' the system to learn about structural barriers that need to be addressed. More ad-hoc, tactical activities can clear specific barriers experiments run into[4].
- Between tactical and strategic: moving from strategic to tactical is well described, especially in the context of energy (Kemp and Loorbach 2005, 2006; Kemp, Rotmans, et al. 2007), with a key role for the identification of 'transition paths'. The other way around, insights from tactical Transition Management can also inform strategic Transition Management by providing future images about the structure of the regime and inform the structural aspects of the persistent problem analysis.
- Between strategic and operational: in the Transition Management cycle these clusters are not directly related, but interactions are possible. For example, the strategic ideas generated might directly provide context to the experiments and, the other way around, the experiments might inform and illustrate the vision developed.

- Between reflexive and the three active clusters: the framework for monitoring and reflexive steering (Taanman 2014), influenced by the more philosophical work of Diepenmaat on sustainability (Diepenmaat and Taanman 2009)[5] could be seen as conceptual model for this interface. Taanman and Diepenmaat stress the importance of monitoring and evaluation as an open, learning process instead of a process of holding parties and individuals accountable to a priori fixed objectives.

6.2.4 Conclusion on conceptualisation

In this section we sought to gain some insight in how activities of different categories of Transition Management might be related to each other in sequence and organisation. For this purpose we conceptualised four streams of TM activities in four Transition Governance contexts, interacting with each other and their context. As we will discuss in the next section, this aids in designing and describing transition programmes. The framework can be used to analyse and/or develop other transition policy arguments[6], involving relating different types of TM instruments or activities.

In reflecting on existing theory in relation to these interfaces, we found that demarcation issues might play a role for programmes: Where do we draw the boundary? What is part of a programme (or more in general policy)? What is part of the external developments the programme aims to influence? This is more than an epistemological matter, as it could also relate to how open or closed TM programmes are designed. The demarcation of a policy, and thus the defining of interfaces, is thus a point of attention in analysing and/or developing a transition policy argument.

6.3 Case: design of the transition programme in the long term care

This section will discuss the Transition Programme in the Long Term Care (Transitieprogramma in de Langdurende Zorg, abbreviated TPLZ) that ran from 2006 to 2010. This chapter will focus upon the theme of this chapter: the design of a programme as concurrent streams of activities, the interconnections of these streams, and their connection to on-going Transition Governance dynamics. Other accounts with different foci are available (Neuteboom and van den Bosch 2015; Van den Bosch 2010; Essink 2012), on which this chapter also builds.

After introducing the case and the involvement of the action researcher(s), we will discuss the general design (process) of the programme and describe the actual developments in the programme. In the subsequent reflection we will first reflect on the general dynamics and how programme management addressed these, after which we focus on the management of interfaces.

6.3.1 Introduction to the case

TPLZ was a large transition programme, initiated by transition action researchers, reacting to a stalemate in the development of a classical innovation programme (see §4.4); and subsequently developed in intensive collaboration with them. A window of opportunity had opened up for acquiring resources for a Transition Management process. A window, which was actively exploited by involved researchers, motivated both by the societal relevance and by the explicit assignment from the overarching BSIK[7] programme management to the KSI research programme on transitions.

The choice to act as action researchers upon this window of opportunity was a conscious one, based upon a preliminary version of the transition analysis (Raak 2005)[8]. From this we concluded that: (1) the healthcare regime appears to be the curative care, which is not undergoing transitional change; (2) governance processes of curative care were preoccupied with the biggest insurance overhaul since at least fifty years; (3) the largest niche-regime, most under pressure by landscape forces (but with little visible niches), was the care sector.

We concluded that Transition Management activities for the curative care would neither be feasible nor very fruitful, as the regime governance processes were not susceptible for adaptation, or at least we did not observe tell-tale signs of the opening of a window of opportunity. Especially as both funding and recruitment of staff was not felt as urgent and also not likely to hit hard material limits on the short or medium term (even if for four decades the strong growth of the budget was a political and administrative concern). Budget limitations were very pressing for the long term care. The care sector was never granted unlimited funding, but for years was facing already budget constraints (although the sector did modernize, for example moving from multi-person to

single-person rooms). The shortage of staff owing to the ageing of the population (fewer young people to care for more elderly people) was already felt as vacancies became increasingly difficult to fulfil. For years, the quality and humanity of provided care was questioned in politics and mass media.

The financing law on chronic care (AWBZ) was expected to be revised or at least reconsidered in the next years[2], after in previous years some care tasks we devolved to local government, and further decisions on devolution were expected. In contrast to curative care, a transition programme might generate insights at a moment when the system would still be susceptible for structural change. On the cultural side, the chronic care never medicalised or specialised as much as the curative care. The more humane, integral approach of the chronic care was deemed a promising approach for the entire healthcare. After an orientation phase, the following questions became central in the theoretical input offered by action researchers into the process:

- Could the approach be revised to centre on, and start with, the experiment phase?
- How do we select experiments on transition potential in a relatively short time?
- How do we organise monitoring, evaluation, and learning for the programme?

From trying to answer each question, important theoretical and conceptual contributions to the Transition Management process were made. The first question was the direct motivation to start reinterpreting the conventional TM cycle as discussed in the previous subsection. For the second question, the general criteria for transition experiments were operationalised into an assessment framework for potential transition experiments. The third question led to a two-tier approach. On the individual level experiments were monitored with a specially developed framework to monitor these projects and stimulate learning. Subsequently, researchers analysed those individual monitors to establish bottom-up overview of the portfolio of experiments and in what way the different experiments learned about different future directions of the system. We will discuss at the operational-strategic interface. As noted in the previous sections: experiments and monitoring in TPLZ are addressed more in-depth in the dissertations of respectively Van den Bosch (2010) and Taanman (2014).

The role of the action researchers did not end with reinterpreting theory. Originally, the coalition of 'clients' (the ministry, trade organisations and patient representatives) designated the researchers to a more reflective position: to monitor the implementation of the theoretical design by specialist consultants from healthcare (CC Zorgadviseurs and Ernst & Young Healthcare advisors). In the spirit of pro-active, transdisciplinary action research, the three advising parties (the commercial consultants and researchers) operated in a joint team in the end, each bringing unique expertise into the project team.

The principles of Transition Management were explicitly communicated to programme participants. Some concepts (e.g. the monitoring framework) were compulsory for project leaders to use in their reporting (including material consequences if results would be entirely unsatisfactory); but some concepts (such as the transitions patterns for the arena, see chapter 7) were used more in the background and only in the project team.

Also, the two other advising parties brought in their theories and concepts on managing (healthcare) innovations, leading to adaptations and combinations to the concepts introduced by transition action researchers.

My personal involvement differed greatly over the course and between the activities of the programme. In the design of the programme, I was an action researcher, operating as a 'transition policy analyst', directly working on the programme design together with the programme manager from DRIFT (Jord Neuteboom). I also significantly contributed to the development of the criteria for the second question. For the third question, the monitoring and evaluation framework, I made minor contributions. Next to conceptual contributions, I occasionally joined the project team in hands-on work in for example reviewing and selecting experiments, monitoring etc. I was not directly involved in the tactical and reflective Transition Management (of which the board 'werkgroep Innovatie' was the main locus). As the programme progressed, I became active in the strategic management (i.e. the arena). I was only indirectly involved in the last phase of this arena (the so-called action arenas), with action research in this phase supported by another action researcher (Julia Wittmayer).

6.3.2 Design of the programme

After a more entrepreneurial role of the action researchers (see section 4.4), the action researchers gained themselves a position in the programme (or at the time known as the implementation of the 'Innovatie convenant' between ministry and trade associations).

A first design question was how to change a programme idea conceived with an innovation focus to a programme with a transition focus[10]. A transition programme focuses on more radical innovation, requiring more flexibility, greater attention to (second order) learning, incorporating strategic aspects (visioning) and institutional change (tactical Transition Management), and a longer term time frame. Part of the available funds was already allocated to an innovation implementation programme, specifically oriented towards diffusion of relatively simple innovations. In the programme design, TPLZ was juxtaposed as a shadow track, taking limited resources, oriented towards transition experiments, against the main track of supporting regular, system optimisation innovation (and their adoption). In the plan, a middle category of 'system innovation' projects was envisaged in radicalness between the optimisation and transition experiments (see figure 6.5). This category in the end never materialised, as everybody involved in the programme became enthusiastic about the transition approach to set this programme apart from other innovation programmes in healthcare.
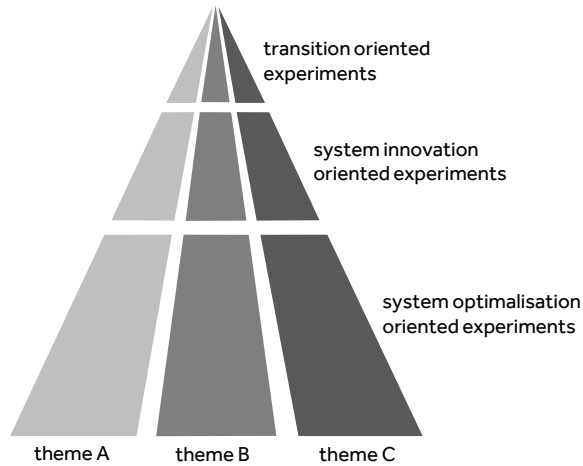
Figure 6.5 The 'innovation pyramid' used in the original project plan of TPLZ, representing that in various themes (3 later 4), next to optimisation and system innovation project, also more radical transition experiments were necessary (translations added for this thesis).

Another heritage was the original programme aim of stimulating innovation in practice, which would become a design limitation as the used funds were earmarked for the actual provision of care. The main committee responsible for implementation, constituted by representatives from all contract parties ('werkgroep Innovatie'), sought a way to foster innovation in a way that would move beyond regime optimisation by practice-oriented Transition Governance. The involved parties also expressed a willingness to learn for their own institutional context about the innovations, but there was less interest for the development of a vision. Or interpreted by the framework of chapter 4: a specific window of opportunity opened up for a commitment of mainstream governance resources to operational Transition Management. The other way around, a window was expected for ideas to be picked up in the mainstream governance processes, which turned out to be difficult, as we will discuss.

This challenged the importance attributed to the transition arena instrument in TM literature, in which the arena is typically the very first step in the cycle. In interaction, the researchers sought a solution for this problem. First, it was concluded that evidence in Transition Studies (and more practical experiences) that the strategic (vision) component is essential to Transition Management was only becoming stronger and it appeared that a long term, guiding vision was exactly what was missing in long term care: the felt urgency to change was dealt with in short term, reactive solutions. Simply omitting strategic Transition Management would thus not be an option, at least not for a transition programme.

However, as detailed in the previous subsection, it was already acknowledged in TM literature that the order of the TM cycle was not essential for the actual order of activities. However, ending with the arena was also not an option. It would be unsatisfactory that none of the experiments would be informed by an overarching vision, and moreover, this would mean the urgently needed vision would need to wait for several

years. This was the practical motivation for the model of parallel streams discussed in the previous section.

Another important change compared to the original ideas, was that those who were originally the 'clients' (for the contract given to the researchers and consultants) would become part of the tactical Transition Governance processes, working on institutional change and creating space for visions and experiments. This new position designated this group a much more active role in the programme.

Figure 6.6 The organisation perspective on the three stream approach in TPLZ, scheme (one of the variations used in practice)

6.3.3 Development of the programme and developments in the programme

In this subsection, we will give an overview of the activities undertaken in the programme and provide some context to deviations from the original plan, focusing on observations relevant for the subject of this chapter. This subsection builds upon the timeline and overviews of events in the evaluation of the programme (de Vries et al. 2010), the overview in the dissertation of van den Bosch (2010) and in Neuteboom and Van den Bosch (2015).

The design and preparation of the programme (September 2006 – February 2007)

As the three advising parties were asked to elaborate on the idea of a transition pro-

gramme in a plan and formal proposal, one important addition by the client was the introduction of four leading themes, previously decided upon by the taskforce: (1) prevention and 'redefining' demand; (2) social support systems; (3) remote care; and (4) logistics (later in addition: small scale care). These themes can be seen as an intermediate between the original narrow focus on efficiency and productivity, and the later transition focus.

The design of the programme took place in this phase, of which the results are described in the previous subsection. It was also a phase of 'mediation' between the window of opportunity for committing resources from mainstream governance processes and the requirements from a transition perspective, for example on independent selection, or spending resources on activities such as communication and visioning. The phase ended in February 2007 when high-level representatives of all involved parties agreed to start the full programme. At this point, however, resources for experiments and especially the arena were not fully and irreversibly committed. This would have a considerable impact throughout the first year of the programme. For example, in the first meeting where all selected experiments met (having already gone through extensive screening), the ministry announced they were only "exploring possible ways for a financial contribution," to the great disappointment (and even anger) of the project leaders of the experiments. After this meeting, project leaders were asked to provide a 'final plan', which had to be "SMART"[11], in stark contrast to the emphasis in transition experiments on 'high yield, high risk' experiments and adaptive learning-by-doing experiments. From the perspective of those involved at the ministry, the programme was still quite an extraordinary example of creating space for radical innovation and pushing the limit of what was institutional feasible.

Hit the ground running: invitation-only call and selection (March 2007 – July 2007)

After the formal approval, the programme team started to get the first 'tranche' of transition experiments running as soon as possible. A choice was made to not put out an open call, but find experiments through informal contacts in the sector (and further 'snowballing'). These experiments were put on a long list, from which specific parties where invited to submit proposals. The first tranche of experiments started with a selection and 'transitioning' process in which programme team members intensively assessed, but also coached, potential projects. In the end, 10 out of 11 submitted proposals were formally recommended to be provided grants and become participants in the transition programme. Within the programme team (and between programme team and task force) this phase also required the further operationalisation of what criteria transition experiments should fulfil. Originally 35 criteria were proposed by the three advising parties, from complementary perspectives of Transition Management (DRIFT), financial and organisational performance (E&Y) and more substantive criteria (CC). These were integrated into an 8 criteria framework, but even during the assessments (and support in revision) of the individual proposals, the programme team continued

further discussions in a joint understanding of what transition experiments should entail and how they should be selected and supported.

Start of a learning community (autumn 2007-2008)

This phase should have started in April 2007, but de facto started with the first 'learning meeting' in August 2007. Even though financing issues continued, in a relative short time period a 'protected space' for learning was created through joint sessions of the projects. For the coming years, different types of sessions, ranging from peer-sharing sessions to master classes were held. Slowly but steadily a network of frontrunners was created, most of whom had not previously been in contact with each other.

Individual guiding, monitoring and analysis of experiments

At the same time, a system of individual coaching and monitoring was set up. From Transition Studies, a new monitoring framework was developed, which combined the broadening, deepening, scaling up of Van den Bosch (2008) with the 'direction, change, sustainability' perspectives of Diepenmaat and Taanman (2009), forcing experiments to think about the short and long term agenda for creating an impact. This was added to the more conventional monitoring instruments of the other advising parties, leading to some participating projects complaining about the complexity of preparing monitoring reports (especially once the support from the programme team was reduced).

Monitoring came under scrutiny after questions were asked in parliament on the accountability and evaluation of public money spent on these innovations. The responsible underminister (staatssecretaris) replied to parliament that a special instrument for monitoring and evaluation was developed for transition experiments, to the apparent satisfaction of the MP's that filed the questions.

Second tranche

From January 2008 onwards, the second (and final) tranche of experiments was selected, this time through an open call, which attracted 42 applications. Although little else changed on the design of the selection process, the wider call had some implications. The larger number of applications meant less resources per applicant were available for assessment. The selection process became more about actual selection and less about 'transitioning' promising proposals. Moreover, the second call apparently recruited a different type of project leaders, which was later partially confirmed by a psychological assessment (Timmermans et. al. 2014). These project leaders appeared to be less radical, but also less single-minded; we could hypothesize they were less 'radical leaders' and more 'radical followers' (see for this distinction van Raak and Loorbach 2014). The second tranche was also checked on both diversity and coherence, as it was felt by the transition researchers that the programme as a whole was sufficiently progressed to take stock if promising solutions were still missing, or specific clusters should be aimed for (Hooijmaijers et al. 2008). This analysis also informed the vision (including problem

and solution analysis) of the arena-process. For the remainder, the process for the first and second tranche, did not differ significantly in both the individual track and the group learning sessions, which were sometimes organised jointly.

Halfway reflective phase and some stagnation in projects

A diffuse, informal phase of reflection was observed about half way to two-thirds in the programme, especially in the project team. In this period, some tension between the transition researchers, other consultants and other involved parties could also be noted. One factor in these tensions might have been that the transition researchers took a strong 'practice what you preach' approach to the programme: they wanted to continuously adapt existing structures to changing circumstances and build upon insights gained in the programme. Others involved in programme-management felt that sometimes transition researchers just kept tabling new ideas, without much consideration to timing, urgency or feasibility.

But perhaps more importantly, once the programme was well under way, first results were harvested and external pressure lessened (including threats of cutting the funding), all involved parties shifted focus from being united in keeping the programme alive, to developing ideas on how to build on the first successes and what would be needed as a next step for the projects or the transition as a whole. These ideas differed so greatly that in the end, specific persons and parties became responsible for specific new activities.

In the practice-oriented track, some disappointments in the experiments also induced some reflection. At the start of the programme, the programme management saw its role as stimulating and positive. Projects were coached and helped to change, instead of being held accountable. From theory on transition experiments, radical innovation inherently involved failure, and these failures could be used to learn from. Also, experiments would need to continuously adapt and figure out their precise plan during the experiment, hence the resistance against the ministry insisting on the 'SMART' approach.

For some projects, within the programme (management) serious doubts began to emerge on employing only a positive approach. Some of the projects progressed painstakingly slow from plans to action. Although the programme was sympathetic towards projects running into external barriers, sometimes the project themselves appeared hesitant to move to practice. Innovation in practice (instead of theoretical exploration) was a cornerstone of the programme for all directly involved in project management and thus getting unnecessarily stuck in preparations and preliminaries was not acceptable. Second, from the beginning of the programme, the commitment of upper management of healthcare providers was deemed essential, for example presence at meetings. For some projects the ample resources provided from the programme did not always appear to be matched in appreciation and support from within the participating organisation. For the remainder of the programme, sometimes a more repressive approach towards projects was employed alongside the more stimulating approach.

Arena impact and interaction with experiments (2009)

The arena, on which we will elaborate in chapter 7, took more time than other parts of the programme to secure resources for. Once funding was secured, scouting and interviewing prospective candidates started. Between March 2008 and May 2009 sessions were held and a vison was developed and presented. Originally, the arena process was isolated from the rest of the programme (except for programme-team members occasionally referring to experiments and incorporating insights in analyses). More interaction occurred towards the end of the main arena process. For example, one of the experiment leaders was invited to discuss and present his project, the results of which, as well as a cross-cut analysis of all experiments, were presented to the arena participants for discussion. Also, the experiment leaders and arena members more often expressed an interest to learn from what was going on at the other side of the programme. Leading up to the presentation of the arena vision document, a special session with many of the project leaders and arena members was organized. At the final presentation, again, many people participating in the experiments were present. The reception of the publication and use in their own context differed greatly between experiments, with some embracing it as guiding principles, and other doing little more than take note of it.

Finalisation of the programme and spin-off

In 2010, the programme entered its last phase. The evaluation held in 2010 was de facto more of an ex post evaluation, than a mid-project evaluation. Although 'normal' operations around supervising and supporting the experiments continued, much energy was invested in the spinoff activities, such as:
- The action-arenas, which can be seen as operating on the intersect of strategic management (deepening and spreading the idea, for example by publications) and tactical management (creating institutional space and support for new approaches), as well as broadening the programme itself.
- The 'societal business cases' (maatschappelijke business cases, MBc), which can be seen as operating on the intersection between operational Transition Management and tactical Transition Management.
- The 'verbredingsprogramma Wijk- en Buurtgericht Werken', (broadening programme District- and Neighbourhood based case) can be seen as broadening the operational TM track, as it involved new experiments and persons on with a different substantive focus, but similar methods, such as the joint sessions for the original experiments.

The last major activity of the programme, was a final conference organised on February 17, 2011, just after the formal programme period, featuring a look back on the programme, and presentations in various forms by the experiments and keynote speakers.

6.3.4 Reflection on general programme dynamics and management of these dynamics

In figure 6-7, the activities as described are mapped out in a very simplified form in the framework we introduced in the previous section for describing such activities. Note that some activities are now also positioned between streams. From this overview and the previous descriptions, we can derive some reflections on the dynamics within the programme and the interaction of the programme with its environment (especially in relation to governance and other dynamic patterns).

Internal dynamics

Activities did run parallel in the three tracks. As originally anticipated, a pendulum movement between periods focused more on action, and periods more focused on (re) design and reflection can be noted. Interestingly, this reflection appeared to have started before the formal evaluation of the programme started. The programme did adapt to changing circumstances, which is especially visible in the new activities and spin-offs in the second part of the programme.
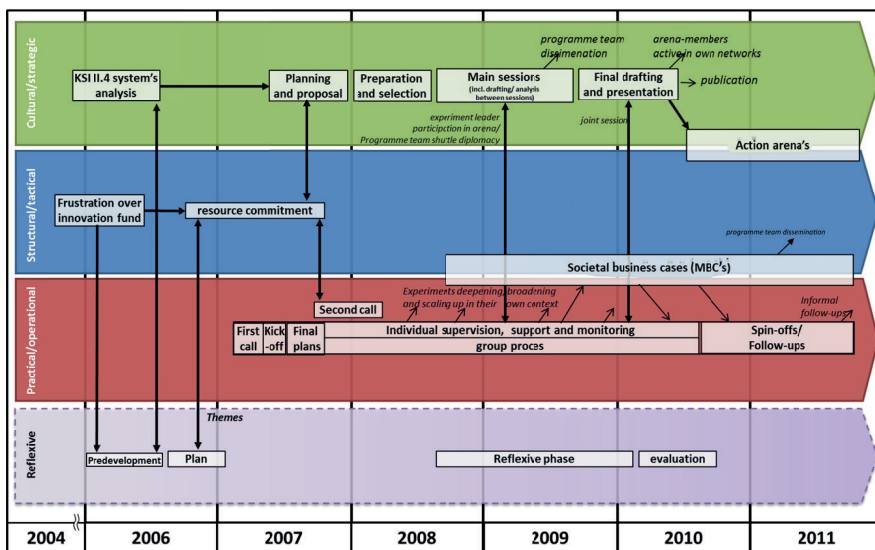
Figure 6.7 Simplified scheme of activities of the TPLZ programme mapped in three stream framework. Paredis (2013) uses similar diagram from programme (like) TM processes, but with process, events and context categories.

Even though activities ran parallel, both in number (and intensity) of activities and starting points, an emphasis on the operational track can be noted. The programme was thus only partially adapted from the original aim of an experiments-only programme to a three track programme. This constitutes an interesting variation on the earlier noted difficulty in 'transitioning' an innovation programme in a transition programme (Avelino 2009). In the end, the strategic track became successful in its internal process,

external effects and interaction with the experiments. The tactical track remained at least as much a classical environment of funding and accounting for these funds, as an environment to foster institutional change. We can also note a period with relatively few tactical activities.

Third, we anticipated a continuous interaction between tracks. In fact, interactions were more intermittent: at times strong, but at times activities in the tracks developed more or less independently. The tracks also did not shape each other to the extent originally anticipated or to the extent which the classic TM-cycle implies. We can conclude the tracks were 'coupled' but only 'loosely coupled'. In the next section we will reflect on the desirability of loose couplings.

External dynamics

On-going Transition Governance dynamics not explicitly analysed or otherwise addressed were in the programme. The programme based its perception of existing dynamics on the analysis of the transition dynamics of the whole healthcare system. This might be one of the reasons why the programme assumed that very few transition processes were already going on. From later insights, we could expect, especially in the 'pre-development' phase, that there might be a considerable difference in level of activity in Transition Governance and activity in the system as a whole (as the transition governance processes will typically be anticipating wider transitional system change). Nevertheless, during the programme, relationships to other initiatives were actively sought.

The conditions and patterns approach (see chapter 3 and 7) was not yet developed and thus not explicitly used. Implicitly, in the beginning, actions were clearly more oriented towards an empowerment pattern, with the programme providing 'shelter' against the regime. At the same time, this empowerment pattern did not seem to have been thought through thoroughly; there was not a strong vision on how a niche(regime) might slowly develop into a new regime. There appears to have been a general expectation that in the end for example financing structures would be adapted to accommodate the new approaches. Later in the programme, possibly as a result of the more reflexive phase, adaptation became a more explicit goal, for example with the societal business case, the desire for a 'good landing' of the experiments, etc.

In chapter 5 we observed that on-going Transition Governance for chronic care appeared almost obsessed with structural change in that period. It is remarkable that in TPLZ this aspect was underemphasized. In a sense, the programme implicitly took a complementing approach to on-going dynamics: it complemented the structural dominance of governance discussions with practice- and culture-oriented learning processes. Although indeed strong, complementary results were achieved with a new vision and supporting experiments to grow, the connection to the on-going structural governance processes was relatively weak. We reflect on this further in 6.3.6.

6.3.5 Reflection on dynamics, and management thereof, on interfaces

In the previous section we reflected upon the significance of interfaces between the different streams of activity within a programme, and those programme activities and wider, on-going governance dynamics. In TPLZ various instruments were designed (and also ad hoc improvised) which could be considered forms of interface management.

Internal interfaces

The interface between the tactical management and the operational Transition Management started from the selection criteria and procedures for transition experiments. Although these were also informed by preliminary system analysis, their main function was to bridge the space created within tactical Transition Governance on one hand and funded initiatives on the other hand, including all the difficulties in negotiating and mediating between the conflicting requirements in both streams.

A criteria set was developed for the programme managers to select experiments and account for their selection to the tactical sphere of the transition programme. The four basic questions were: (1) Is the idea underlying the project plan in line with the broad transition aim (and responsible)? (2) Has the project the potential to broaden, deepen and/or scale up? And (3) do all selected projects together constitute an encompassing portfolio, covering as many promising directions and yet focusing on the most promising direction(s)? These three main criteria led to the following list of detailed criteria (so-called 7V's or 7V+P):
- Quality of the idea
- Original/innovative (vernieuwend)
- Promising, high potential (veelbelovend)
- Responsible and safe (veilig en verantwoord)
- Potential for transition
- Broadening (Verbreden)
- Deepening (Verdiepen)
- Anchoring, scaling up (Verankeren[12])
- Added value to the Portfolio of selected experiments (diversity balanced with critical mass on each topic)

These criteria were later integrated in the programme with more traditional organisational criteria suggested by the involved business consultant in the project team (van den Bosch 2010). As noted, there was tension between these criteria and the necessity to formulate 'SMART' proposals.

The other way around, the lessons of the experiments should have informed actions oriented towards change of structures. The 'meta business case', summing the effect of all experiments in the programme, could be seen as some form of translating the insights from experiments to insights for structural change. However, as we will explain,

further on, the interface between the tactical Transition Management and structural Transition Governance turned out to be challenging. Most actions operating on the interface were aimed at securing resources, not about learning about structural change.

The interaction between tactical Transition Management and strategic Transition Management revolved in the beginning around securing funding for the arena, which required substantial diplomacy towards authorities and the programme team. The arena vision did address structural problems and general solutions. At some point, an attempt to elaborate in the arena vision document on a new financing system was undertaken, but this was abandoned as it was quickly realised this would require a different setting and different participants. The action arenas towards the end of the programme attempted – amongst others – to create coalitions around the solutions identified in the main arena.

As noted, the interaction between the arena and the experiments occurred late and the effect on the experiments of the vision appeared to have varied. However, insights from the general system's analysis and reflection on healthcare started already as part of the KSI research-programme, were used extensively in the experiments track, e.g. in presentations to, and sessions with, project leaders. The experiments were used as examples in discussions within the main arena, and each experiment was linked to a specific part of the vision of the arena.

External interfaces

In the previous section we noted that experiments of a programme could be considered to be either part of the programme or considered to be on-going, practice-oriented Transition Governance. TPLZ clearly acknowledged from the very beginning, by selecting mostly on-going activities as experiments, that experiments already had their own local context. At the same time, programme team members did identify strongly with the experiments and presented them in external communications as 'TPLZ experiments' (and not as 'TPLZ supported experiments').

In subsequent individual support and group sessions, much emphasis was placed upon how experiments dealt with their own environment (such as their own organisation). In addition, on the programme level, collaborations were sought with other innovation programmes and platforms, even though this turned out to be challenging at times (with one major event cancelled). For some experiments, the label of the programme, as a form of external recognition, also appears to have been important to promote their own initiative. The wider impact of the experiments (as a result of TPLZ) on the care sector has not been researched as the formal evaluation (and this thesis) primarily relied on contact with those inside the programme. Nevertheless, the operational TM – practice-oriented Transition Governance interface can be concluded to have received much attention.

For the strategic TM – cultural Transition Governance interface, the arena-members formed the primary interface through their personal network(s), introducing ideas from these networks and taking insights from the arena to other places. Some arena members were very active in other (national) platforms, whilst activities of others were limited to their own organisations. A select number of interviews five years later, yielded very different responses from arena members on the impact they perceived in this way: some did not directly or consciously use ideas from the arena at all, whilst other extensively used and propagated the ideas in their organisations and their informal networks. Of this latter group, some felt that other people picked up their ideas and were convinced of at least a modest contribution to a paradigm change in healthcare, others felt less sure if they had convinced others.

In addition, the programme management team played an important role in presenting the vision (even whilst still in development) at conferences, meetings, to policymakers, etc. They even participated in the new vision for the largest trade organisation, which led to the inclusion of ideas from the arena process into this vision.

The interface between tactical Transition Management and structural Transition Governance turned out to be the most challenging in the programme: a true tactical track was never developed. Also, one might question if the tactical activities were indeed about joining and interacting with a larger community concerned with transitional change of structures, or were mostly direct interactions with regime actors. Nevertheless some activities can be noticed, such as the societal business cases. Also, there was some interaction between the programme and policymakers involved in revising the financing laws for long term care. Interestingly, perhaps because of the strong 'regime influence' in the tactical track, the programme team also tried to act as a buffer between the operational and tactical track. They felt it was their duty not to let institutional problems burden the experiment project leaders and at times they appeared to be vicariously ashamed on behalf of their formal client, if institutional turmoil seeped through in the operational track. Also, we noted in the previous subsection the programme appeared to steer towards an empowerment pattern, in which case a tactical interface with incumbent actors would be less necessary.

6.3.6 Conclusion and reflection on observed dynamics and management of interfaces

Concluding, the strategic and operational track strongly interacted in a fruitful manner with on-going Transition Governance processes and other governance processes. The strategic and operational track did interact, although also periods of more independent development can be observed. The interfaces of the tactical track were more limited, as the track itself was more limited in nature, nevertheless some good examples can be identified.

The drifting between aiming for an adaptation and an empowerment pattern might

explain the difficulties in the tactical track and the tactical external interface. One factor might be that this was one of the first Transition Management efforts of this scale in a public service system. Any empowerment pattern is bound to become somewhat hybridized as the necessary means for an alternative approach in healthcare are enormous, they require typically some form of financing from existing public structures. In addition, the transition was in an early phase, which might make it particularly difficult to achieve institutional change and the programme was conceived as a budget compensation in an atmosphere of distrust between the regime actors themselves (the ministry and healthcare providers), which was also far from an ideal base for inducing a structural adaptation pattern.

Regardless of the cause, one of the possible consequences has been that the transition programme was not formally or otherwise explicitly used by the ministry as a base for the large revision of legislation or its ambitions for a more profound transition. Although some extensions and spin-offs were funded from the ministry, the programme as such as was not continued or superseded by a new transition programme. In chapter 8 we will discuss this further from an analysis of present healthcare policy and recommend to restart such a programme.

The previous section anticipated those involved in TM, such as the programme management team, to be organising interaction between the tracks. In our case, we found that the programme team in addition often internalised insights in one track, to explain and present these in another track, in a way operating as 'interpreters' between streams.

6.4 Conclusion on governance - instrument relationship

This chapter studied the relationship between general transition policies on one hand, and instruments and activities on the other hand; including attention to how these activities are related to wider transition dynamics. We concluded the existing TM cycle describes and prescribes a cognitive ordering, not an actual sequence. We thus developed an additional analytical lens of four tracks of Transition Management within the context of the three (or four) streams of Transition Governance of the previous chapter. We further described how such a reconceptualization successfully supported the design of a large scale transition programme in the long term care. Also in other respects, this TPLZ programme was a demonstration of many aspects of Transition Management, in a programme unprecedented in the involvement in every phase of action researchers at such a large scale. Two more critical notes are: (1) ambiguities in the dynamics aimed for, such as empowerment or adaptation patterns; and (2) the difficulties in managing the tactical interface (also related to the ambiguity if the programme should complement or redirect on-going structural Transition Governance). In chapter 7, we will explore the ambiguity on pattern in more depth.

Loosely coupled interfaces

In the reconceptualization and especially in the case study, we found that our new approach lead to less tightly coupled activities. This is, to some extent, unavoidable if we assume activities to run in parallel and in different contexts. This is also not necessarily an undesired characteristic of TM programmes. One of the reasons TPLZ apparently achieved successes in both the experimental and the vision track, was that each of these tracks primarily focused on its own context and target groups. Loosely coupled tracks might thus even be a key to success.

In this chapter we extensively addressed (the management of) interfaces. The parallel running of activities appears to increase the relative importance of this type of management. This also results in a more opportunistic and entrepreneurial style of Transition Management than the TM cycle might suggest, and one more in line with TM's philosophy on governance. For the management of such interfaces, two specific points for further exploration emerge from this chapter. First, we find that especially in the tactical governance track, it may be difficult, yet essential, to connect to on-going debates on the structure of the system. Although theoretically TM does address the building of coalitions, this has not been translated into an instrument (whereas the other three parts of the TM cycle have specific instruments). Second, in managing an interface, we noted in the TPLZ case that the programme team often tried to be a buffer between the tactical and operational tracks, which could be quite strenuous and not always successful. Another strategy might be to 'articulate' the opportunities and barriers of one track to the other. For example should the TPLZ programme have been more transparent to the experiments about the uncertainty in financing and actively involve them in this process? Or was it wise to shelter the experiments as much as possible from institutional turmoil?

Other coordination forms than a formal programme

In the beginning of the chapter we stated that instruments in a transition policy argument can be coordinated in various ways, of which the programme we elaborated on in this chapter is just one approach. More diffuse approaches are also conceivable, for example a group of actors that are each active in one track (or even one instrument) and coordinate amongst themselves for managing the interfaces.

As, at least in the Dutch context, budgets for transition programmes are dwindling, we could expect much more selective policies with more precisely targeted interventions or policies which use the potential of social movements. This might require some adaptation of the frameworks in this chapter, which could be part of future research on executing TM instruments.

Notes

1. We did not include this as a necessary element in our definition of a transition policy argument.

2. For policies aiming at positioning a company or other organisation within a transition, a different operational framework will be necessary (Loorbach and Wijsman 2013; Loorbach and Kneefel 2010; Loorbach, Van Bakel, et al. 2009; Schoolderman et al. 2014; van Raak and Loorbach 2014).

3. Typically tactical Transition Management precedes the formal start of the programme as resources for the programme need to be found and typically these are acquired from existing Transition Governance resources or by tapping into regime governance resources (see chapter 4). This process is rarely described in Transition Management literature, although to some extent for the same TPLZ case by Van den Bosch (2010 see also section 4.4). Whether such a process is part of a transition policy argument depends on who is taken as the policymaker and at what time the argument is developed. If one

formulates the plan at the level of for example a government ministry, resources might already be with the policymaker. Otherwise, there is no reason to exclude how to acquire funding (including the entrepreneurial/lobby type of activity required) from the transition policy argument.

4. A different approach is the 'societal business case' instrument developed for the TPLZ programme by Ernst & Young (TPLZ/Omring 2010; TPLZ 2009; de Keijzer and Özkanli 2010). Through this method an innovative practice is translated into a business case with clear indication of profits at the organisation and societal level and barriers to harvesting these profits.

5. There are some methodological incompatibilities however. This includes the "radical actorthese" as basis for monitoring, which Diepenmaat summarizes as: our society is constituted by [inter]related actors and nothing else: "Onze maatschappij bestaat uit samenhangende actoren en slechts actoren alleen" (Diepenmaat and Taanman 2009, 20), departing from the conventional structure-agency duality of Giddens (1984) which is foundational to most work in Transition Studies, including this thesis. Moreover, programmes are conceived to be primary portfolios of projects, perhaps in line with the Dutch large scale innovation programmes the monitoring framework was developed for (the so-called PIZZA framework Diepenmaat and Taanman 2009). A specific research into transition monitoring and evaluation is being conducted as part of the Flemish TRADO research programme, first insights from this research have been published (Bussels et al. 2013).

6. It should be emphasized that the framework might be a model of the interaction in time (and over interfaces), but is nevertheless an abstraction from actual TM dynamics. Descriptively, it is an ordering framework to study different interfaces and changes in focus over time; prescriptively, it helps designing a 'complete' programme (or explicating the choice to focus on certain interfaces). It is not intended to be a step-by-step description or guide for a transition programme or other policy. This holds especially for the schematic depictions of actual sequences of events (e.g. figure 6.5 in the next section).

7. BSIK was a 800 million Euro umbrella innovation programme of the Dutch government, of which the KSI programme into transitions was part. Which ran from 2002 till 2013. (http://www.agentschapnl.nl/subsidies-regelingen/besluit-subsidies-investeringen-kennisinfrastructuur-bsik)

8. This draft analysis was not yet based upon multi-pillar approach (which was not developed yet), but by the more conventional multi-phase and multi-level (including a nicheregime level) approach.

9. See chapter 8 for some notes on what actually happened.

10. Van den Bosch (2010) and Van den Bosch & Neuteboom (2016 box 2), provides a systematic overview of the differences

11. SMART: "Specific", "Measurable", "Assignable", "Realistic", "Time-bound", a popular management acronym.

12. Anchoring (verankeren) was used as an alternative term for 'scaling up' of Van den Bosch as scaling up was considered to be easily confused with simply increasing the scale of an experiment (e.g. from 100 patients to 1000 patients) which is not Van den Bosch's definition of upscaling.

7. From dynamics to instruments & from projects to methods

This penultimate chapter of this thesis explores the final two relationships in the thesis framework: (1) the relationship in transition policy arguments between the dynamics of the system and instruments; and (2) within these instruments the relationship between projects and methods. This chapter focuses on the direct relationship between system dynamics and instrument design, not the interrelation between instruments, which was discussed in the previous chapter. In our framework, we have already established an indirect relationship between dynamics and instruments, through transition governance (chapter 4 through 6). This chapter addresses the direct relationship: how is the design of a specific instrument fine-tuned to the transition dynamics it aims to influence?

The structure of this chapter is as follows: first we will bring together existing concepts in literature (section 1). A conceptual synthesis of one hand transition phase and transition pattern and on the other hand design parameters of Transition Management instruments will be proposed in section 2. In section 3, we will describe the empirical testing of one aspect of this framework regarding the relationship between dynamic pattern and design in the Dutch 'chronic care transition arena'. In section 4, we will explore the relationships within a Transition Management instrument: between its project(s) and more concrete methods. This section includes an example from the arena 'Sustainable Housing and construction' in Flanders. In the concluding section 5, we will recap the points of attention and analytical lenses and reflect.

The dominant sequence of discovery has been the same as the structure of the chapter: from reflection, to conceptualisation to the case. And for the Flemish case from the empirical case, to reflection to conceptualisation.
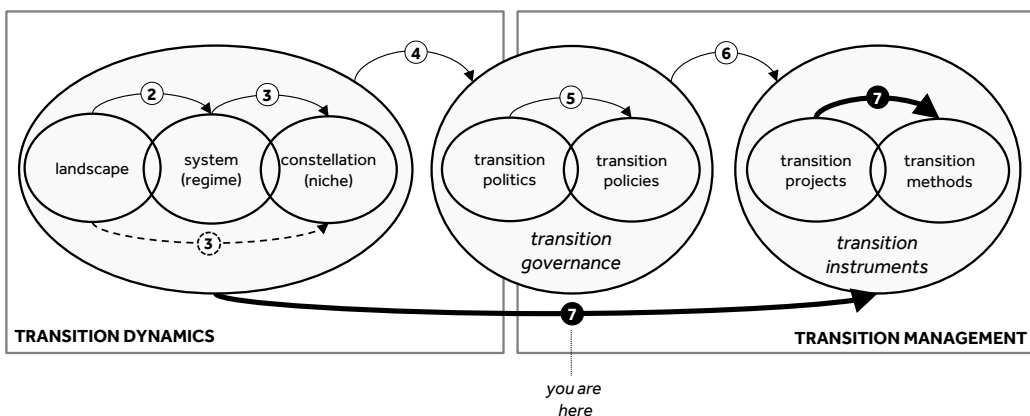
7.1 Reflection

In this section we will recap earlier chapters on how, in a transition policy argument, the dynamic state of transition is characterised; how we can characterize a 'Transition Management instrument' and lastly which existing concepts linking these characteristics of dynamic state and instrument characteristics can be found in transition literature.

7.1.1 Characterisation of the dynamic state of a transition in a policy argument

How to characterize the dynamic state of a transition for the purpose of analysing and/or developing a policy argument was extensively discussed in the first half of this dissertation and concluded upon in chapter 3 (see §3.4), where we concluded that in order to globally characterize a transition, we need to describe[1]:

- The phase of the transition: which can be pre-development, take-off, acceleration or stabilisation. These ideal-type phases are also associated with an order of magnitude of the power of the regime and its competitor.
- The dominant pattern: if the system as a whole is dominated by adaptation, reconstellation and/or empowerment patterns.
- The 'global' conditions for change in the system: stress (within the regime), pressure (from the niches), tension (between regime and landscape).

We also concluded that below the system-level, specific dynamics (or stability) within and between subsystems (the constellations) can exist and the power of each of the non-regime constellations is relevant in understanding on-going dynamics. Also, the same regime and landscape forces might affect different constellations differently.

7.1.2 Transition management instruments and their characteristics in literature

Transition instruments are the actions in a transition policy argument: "in order to achieve the transition objectives, Transition Management uses a series of management instruments (transition arena, integrated systems analysis, transition agenda, visions, portfolio of experiments) that only become concrete in the practical situation" (Rotmans 2005). These encompass both process- and analytical tools (Loorbach 2007a). These transition instruments appear to share the meaning of 'instrument' with the conventional concept of a policy instrument[2]:

> "Under the notion of policy instruments we understand a range of tools for initiating, stimulating, supervising, implementing and evaluating policy processes or societal processes. These can range from a variety of actions, processes and campaigns to financial measures and public-private arrangements. Here we can distinguish between regular policy instruments and transition instruments. Under regular policy instruments we mainly see pricing policy and regulations

(legislation). For persistent problems, with a combination of market and system failures, regular policy instruments are just not sufficient. This means that new instruments are needed (…). It is important that the new transition instruments do not just supplement or replace regular policy instruments, but that they complement and strengthen each other"

(Rotmans 2005).

Thus within a transition policy argument, regular policy instruments are possible[3]. Rotmans states these regular policy instruments to be 'mainly pricing policy and regulations (legislation)', however in policy sciences at least three categories of instruments exist4:
- Regulation (such as exemptions and bans, but also procedural)
- Material incentives (such as taxations and subsidies)
- Communication (both stimulating desired behaviour and discouraging undesired behaviour)

With regard to non-regular instruments, many potential instruments are mentioned (Loorbach 2010), an early list in Rotmans (2005) includes[5]:
- "transition arenas to establish and further develop experimental "gardens" (Rotmans 2003);
- strategic niche management: experimenting with new technologies in an experimental space (Kemp, School, and Hoogma 1998);
- uncertainty management: identifying various sources and types of uncertainty and how to cope with these (Van Asselt and Rotmans 1996; van Asselt 2000);
- policy laboratory: simulating a learning environment for societal actors (Smits and Geurts 1997);
- constructive technology assessment: tuning technological developments to societal requirements and wishes (Schot 1991; Schot 1997);
- monitoring instrument: for measuring both content and process-oriented aspects of transition processes;
- learning instrument: for registering and evaluating different types of learning processes: learning by doing, doing by learning, and learning by learning;
- new networks and coalitions: e.g. the Innovation Network Green Environment & Agro-cluster, NIDO (National Initiative for Sustainable Development), and CCT (Competence Centre for Transitions);
- new arrangements: financial or organizational stimulation initiatives"

Some of these non-regular instruments have been developed specifically for Transition Management (such as the arena); others have not, but are also new governance approaches, such as 'complexity governance' (Teisman and Klijn 2008).

As discussed in chapter 6, instruments are often ordered according to the steps in the Cycle of Loorbach or the related strategic-tactical-operational(-reflexive) ordering (Loorbach 2007a; Pisano 2014):

- Strategic and/or visioning instruments (strategic): such as the transition arena and a number of underlying methods, e.g. transition scenarios (Sondeijker 2009; Sondeijker et al. 2006).
- Agenda instruments (tactical): here the agenda (a document supported by a coalition) can be seen as an instrument, but also more traditional instruments such as taxation, regulation etc.
- Learning, evaluation and monitoring instruments (reflexive): instruments collectively learn from experiences with Transition Management (Diepenmaat and Taanman 2009).
- Transition Experiments (operational): besides experiments (Van den Bosch 2010; van den Bosch and Rotmans 2008), other instruments oriented at practical actions could also be part of this group, for example disseminating radical new practices that are more mature than an experiment (e.g. adoption of system innovations without experimental character).

Instrument characteristics

We are interested in how these instruments could be (and are) aligned to specific (expected or desired) dynamic states of a transition. By aligning, we mean changing characteristics of the instrument: for example, who participates or what the magnitude of the instrument is. These changes are intentional to either make an instrument more effective in the given dynamic conditions of the system, or to specifically change these conditions (directly or through engaging with others involved in transition governance). Given their intentionality and aim, we might interpret this as 'instrument design'[6].

In Transition Management literature, there is no systematic discussion of these adjustable characteristics of Transition Management instruments. The characteristics of specific instances of instruments are described in case studies, but these descriptions outline how these characteristics are an expression of the general principles of TM and how the characteristics compare to a regular policy approach. Loorbach (2007a) in his description of the 'Parkstad' case, for example, does explicitly list all choices made for the arena on process and substance; for example, choosing between a single image of the future and multiple images as arena product. The reference point for these choices is a regular participatory or planning process, thus there is no distinction between the choices that are inherent to the arena-instrument and choices that adjust the arena-instrument to specific circumstances.

Similarly, in van den Bosch (2010) we can find several choices in applying a Transition Management in case descriptions. For example, choices in the selection of experiments between comprehensiveness and focus; and whether specific priorities and/or transition paths are pre-defined ("learning for sustainability" programme case, Van den Bosch

2010, 102); or the choice to what extent and when to involve regime-related actors ('rush hour avoidance project', page 143). In her description of the TPLZ experiments (see chapter 6), she compares two rounds of experiments on their characteristics on, for example, openness (open or closed call) and the tough choices in how selective an experiment programme should be (see p. 176, and p. 178 footnote 35).

Avelino (2011) has described the 'transition ambitions' in a series of cases of transition programmes. These transition ambitions also appear to contain some design characteristics such as 'who transforms' (who is the target audience of the instrument) and how sustainability is incorporated in the instrument.

Paredis (2013) has extensively described two TM processes in Flanders (Belgium). In these descriptions, we can find choices on how to position the instrument to the mainstream policy process (p. 107), the internal structuring and size of an instrument (p. 109), the difference between facilitating or 'carrying' the process as moderators (p. 131), and the balance between focus and diversity (p. 193).

7.1.3 Existing notions on relation between dynamic state and Transition Management instrument design in literature

With regard to phase, one of the earliest publications on Transition Management (Rotmans et al. 2000, 8) already describes the connections. The links stated in this publication can be summarised as:
- "Pre-development: keeping the field (of those involved in the transition) broad, stimulate participatory dialogue, strategic management of niches.
- Take-off: mobilise actors (appealing perspectives and quality images),
- Acceleration: adjust streams and monitor developments, chose promising options
- Stabilisation: stimulate new regime"

In this approach, instruments are not adapted to phases, but different instruments are used in different phases. Nevertheless we see a shift from focusing on 'diversity' in early phases to 'choosing' and stimulating the new regime in later phases, which could be considered a change in design. Loorbach (2007a) has built upon this, which is summarized in the table below. Again, the differentiation is on type of activities, not on characteristics of instruments, but some shifts in characteristics also appear to be prescribed. For example, the take-off phase requires more direction and leadership and thus, apparently, a less open process. In the acceleration phase, the direction is even enforced by authorities.

	Predevelopment	Take-off	Acceleration
Strategic	Problem structuring, envisioning, facilitation	Direction, leadership, facilitation	Legislation, regulation, institutionalization
Tactical	Agenda and strategy development	Coalition-building, networking	Integration and alignment
Operational	Knowledge production, experiments, innovations	Participating in debate, knowledge diffusion	Practice

Table 7.1 Loorbach's typology of instruments in different phases (Loorbach 2007, table 5.3)

Brown, Farrelly et al. (2013) established a matrix of actor 'institutional work strategies' versus transition phases for an empirical case. In this matrix, they list identified specific 'strategies' (developments and activities) in each cell. This table, and the rest of the publication, suggests that in the case of 'Melbourne's storm water management', as the transition progresses, the strategies of transition striving actors evolved to be: (1) broader, larger, more diverse networks; (2) applying more positional power and authority; (3) engaging more directly with the regime; and (4) moving from ideas to concrete action.

Pattern (and conditions)

On pattern (in the sense of De Haan 2010), little can be found in existing literature. Recently Loorbach introduced the idea of 'bottom-up' and 'top-down' transition governance (Loorbach 2014), but this is not (yet) elaborated upon. As little is known on the pattern-instrument relation[7], this will be the focus of the empirical section (§7.3) of this chapter. The mentioned matrix in Brown, Farrelly et al. (2013), has three institutional work categories: creating, disrupting and maintaining. The first two bear some similarity to De Haan's transition pattern of an 'empowerment' and 'adaptation' respectively.

7.1.4 Conclusion on existing literature on characteristics of TM-instrument and the link between these characteristics and transition dynamics

Already in chapter 1 we concluded that no systematic framework for linking the dynamic state of a transition and transition instrument design is available, we found in this section however the relation between phase and characteristics has been described and a number of pieces of the puzzle are already present for connecting pattern to instrument design. These findings will be used to develop a proposal for a more systematic framework in the next section.

We can also conclude that a point of attention in analysing and/or developing a transition policy argument is the question of if the argument gives consideration to the specific characteristics of the instruments it prescribes and if these characteristics are related to the dynamic state of the transition.

7.2 Conceptualisation: design parameters versus phase and pattern

From the previous section we can conclude that there are quite some significant gaps in current literature on how instruments relate to dynamics, or even on how a specific instance of an instrument can be characterized. In this section, we will propose a more systematic approach to describing the characteristics of an instrument. This systematic proposal will be in line with the limited findings in existing literature, some findings in earlier chapters, but also is partially a postulated framework that needs further empirical and theoretical research, especially to check for comprehensiveness. A modest start will be made in §7.3, by further exploring one relationship in the framework in an empirical case.

7.2.1 Design parameters

Although there is a great diversity in types of instruments, I would argue, changes in their specific design (with regard to context and aim) can approximately be described by positions on a limited number of parameters. For example a 'transition experiment' is very different from a 'transition arena', but both might be characterised by the extent to which the concepts they use deviate from the regime. A starting point for such as set of design parameters would be the following:
- **who participates** (or is the target group or beneficiary), especially in relation to the (extended) MLP concepts of niche, niche-regime, outsiders, 'under-current' etc.
    - **openness of the process:** can everybody of the above group apply or join? For example is a call for proposals by invitation or by open call?
- **magnitude of efforts:** is only a tiny amount resources directed towards this instrument, or are significant resources invested?
- **authority** (with respect to the societal system at hand): does the instrument claim or aim to propagate (a sense of) authority (for example using formal powers, or claiming scientific knowledge authority or broad societal support) or is the instrument (presented as) just one of many possible ways to solve the problem?
    - **committed versus 'no strings attached'**: are participants (and their organisation) bound to the instrument (formal commitment, resources, contracts)? Or do they participate on personal basis, without a counter promise (other than their time).
- **diversity versus focus:** does the instrument in its selection or product promote 'anything goes' or does it preselect on the other extreme a single technology or pathway?
- **constructive or (also) destructive** (or even maintaining): is the focus on demonstrating, building, creating new networks, concepts, ideas, practices etc. or on attacking existing ones (of the regime)? See also Avelino (2011) on different types of power.

Table 7.2 demonstrates how these general design parameters can be made specific for two typical TM instruments: the transition experiment and the transition arena. Specific parameters might be more crucial for some instruments than for others. For example, for the design of an arena it can be quite important if it assumes a role of authority, whilst this is usually not a crucial design question for experiments. The other way around, the available budget is more important for a portfolio of funded experiments, than for the organising of arena sessions.

Parameter	Transition Arena	Transition Experiment (portfolio)
who	Are the participants in their daily life more associated with regime or niches? How is the balance between outsiders and insiders in the arena? Who is invited to exchange thoughts with the group or are the results shared with?	Are the selection criteria specifcally aimed on persons/parties without ties to the regime or aimed at existing parties?
openess	Open or closed invitations	Open call or closed call for selection, open or closed learning meetings and presentations
magnitude	Effort spend on disseminating results and underlying research	Total budget for experiments support (including non-financial support and contributions)
committed	Participation on personal title or in formal representation, commitment by other parties to incorporate results in their vision	Binding contracts, large co-funding by parties, legal obligation to deliver activity or output, or to share knowledge
authority	Is the arena mandated with some authority? (e.g. a government committee), are authority figures participating or does the resulting vision claim authorative findings?	Are the experiments seen as a deciding feasibility test? Are they presented as authorative (e.g. evidence based, scientifically proven).
diversity	How diverse are the participants in the arena? Is the resulting vision focused on specific pathways or open? Or does the vision address a specific theme or aspect of the transition?	Is the aim to create a focused or diversified experiment portfolio? Are there predefinied transition pathways in which experiments must fall?
destructive	Is the main aim of the arena to delegitimize or question the regime? Does the resulting vision directly attack the regime?	Are the experiments explicitly framed to deligitimize the regime?

Table 7.2 Illustration of applying generic parameters to specific TM instruments

7.2.2 Conceptualising the link between design parameters and dynamics

We can further hypothesize how these design parameters might be related to the dynamic state[8]. If confirmed these hypotheses indicate how, in transition policy arguments, characteristics of instruments are or should be aligned to dynamics. Table 7.3 provides an overview of which dynamics (phase or pattern) might have implications for which design parameter. Tables 7.4 summarizes what these implications might be.

	pattern	phase
who	x	-
openess	x	x
magnitude	-	x
committed	-	x
authority	x	x
diversity	-	x
destructive	x	-

Table 7.3 Parameters affected by respectively pattern and phase targeted by instrument, the destructive parameter might affect who is targeted.

Who

The relationship of those involved in the instrument to the MLP and its variants (regime, niche, outsiders, undercurrent etc.) is directly related to the pattern that is to be stimulated. It is plausible that, for example, an arena would be more composed of persons related to niches, and appeal to those niches, if an empowerment pattern is sought; or that an experiment programme stimulating an adaptation pattern would encourage regime actors to participate (or regime-niche combinations). As this parameter is closely related to transition patterns, we would expect it to be not directly related to phase because instruments can be more oriented to the regime or niches in any phase.

Openness

In contrast to most participatory processes[9], Transition Management uses a selective approach, but there are degrees in this selectivity. With regard to pattern, we could expect an empowerment pattern to not be fully open, as a specific group of actors related to niches are to be empowered, which require quite a strong selection (for example, not to include those aiming at innovations optimizing the current regime). An adaptation pattern would also require selectivity (aiming at the regime), but as the majority of a societal system's actors would be part of the existing regime, selection could be less stringent. For a reconstellation pattern, at least two lines of thought are possible: first, one could imagine a reconstellation pattern to involve a small, powerful group of actors to intervene, for example in response to a (impeding) crisis. Second, one could imagine a reconstellation to occur as the result of a broad societal movement. In the first line of thought, an instrument furthering this would be selective, almost secretive, whereas in the second line of thought, the instrument would be very open.

With respect to phase, we could expect that transitions start out in organizing a small group of 'frontrunners' that are heavily selected on competences to initiate a transition and in later phases to target increasing larger groups of actors[10].

Magnitude

The magnitude of efforts could be expected to increase as the transition progresses, and to possibly decrease as the transition nears completion or even when the transition is beyond the point of no return (into a sustainable or otherwise desired direction). We could thus expect a peak in efforts somewhere between take-off and stabilisation.

instrument parameter	pattern		
	empowerment	adaptation	reconstellation
who	mostly niches	mostly regime	mostly outsiders
openess	low to medium	medium to high	low (elite intervention) or high (societal movement)
authority	low	high	high
(destructive)	(low or high)	(low to medium)	(low or high)

instrument parameter	phase			
	predevelopment	take-off	acceleration	stablisation
openess	low	low / medium	medium / high	high
magnitude	small	medium to large	medium to large	medium to large
commitment	low	medium	medium	high
authority	low	low	medium	medium
diversity	very high	high	medium	low

Table 7.4 Possible relation between design parameters and (sought) pattern / (occurring) phase

Commitment

We could expect instruments to demand more (formal) commitment of resources later in the transition. For example, we might expect funding for an energy R&D project with a highly unlikely outcome to be on a 'best effort base', and later funding based on actually produced sustainable energy. Similarly for a transition arena, in the predevelopment phase, participation is on personal title, whereas later in the transition, it is more plausible that participation can also be done on the basis of representing influential organisations. On the tactical level, early in the transition, a coalition could be asked to make non-binding general promises of support for the transition, whereas later in the transition it would be logical to ask for binding, concrete commitments.

Authority

Analogue to commitment, the use of authority could also be expected to increase as

the transition progresses, thus being dependent on phase. With regard to pattern, an empowerment pattern would be unlikely to be able to use authority early in the transition, whereas an adaptation pattern might use persons of authority to convince the regime actors. For a reconstellation pattern, in which the regime is sidetracked and change organized more top-down, authority could be expected to play a large role. This might be 'knowledge authority' to point out the imminent unsustainability of the regime, 'direct authority' derived from formal powers to intervene, or 'authority of the many' if the reconstellation pattern is induced by a large societal movement.

Diversity

A transition could be seen as a form of variation and selection to deal with a changing environment (Rotmans et al. 2001), which would imply that diversity is stimulated in early phases, and in later phases selection is stimulated. The general principle of 'keeping options open' and the findings of chapter 3 stress that diversity is only (and should only be) reduced far into the transition.

Destructivity

In the previous subsection, we found that literature considers destructivity to be a factor in instrument design, yet it appears that in most phases and most patterns, one could aim efforts at either destabilizing (or delegitimizing) the regime or at building up an alternative (or changing the regime); see also the 'panarchy' concepts of building and simultaneously phasing out (Loorbach 2014). Depending on the phase, one might try to induce the first hair cracks in the regime or take away the last legitimacy. One might argue that for an adaptation pattern, there would be some limit to how aggressive the regime can be targeted, before even 'enlightened' frontrunners within the regime become alienated.

Destructivity might also have consequences for the relationship we described for the who. A very destructive approach might not target the niches to be empowered for an empowerment pattern, but directly attack the regime.

7.2.3 Selection of instruments and phase-pattern combinations

In the previous subsection, we discussed how different phases are associated in literature with different type of activities. In contrast, I would argue that many of the mentioned instruments are in fact not phase specific. For example, regulation is conceived to be an instrument for the later phases, yet changes in regulation can be necessary to make room for experiments in the predevelopment phase (e.g. allowing driverless cars on the road for first testing). Visioning is designated an early place in the transition, but the changing context and advanced insights in what should be the sustainable end point of the transition need to be interpreted and disseminated by visioning processes throughout the process.

7.3 Case: the Arena Long Term Care

The Dutch 'arena long term care' was organized from 2007 to 2010 and was funded by the ministry of health as part of the Transition Programme for Chronic Care (Transitieprogramma in de Langdurende zorg, TPLZ)[11]. We described the programme and the role of the arena in this programme in more detail in the previous chapter. In this chapter we will focus on how this arena specifically dealt with the concept of transition patterns. A secondary goal is to give a general description of this arena, which was one of the first non-technological oriented arenas and appears to have had a considerable impact (see 7.3.6).

This case could be considered as a research intervention to test theory on two levels: first, the arena as a whole was an intervention by a team of action researchers and consultants, implementing a programme of innovation experiments. This arena was of research interest as it was one of the first arenas in a non-technological industry or public service. On a second level, within this team, I tested the idea to differentiate the design of the arena based on the phase and especially pattern. Besides this role, I also helped in organizing sessions, conducting analyses between sessions and writing and editing the vision document until (and including) the presentation of the vision.

In this section, we will first discuss the design (7.3.1), followed by the activities and developments (7.3.2), and then the resulting vision and indications for its impact (7.3.3). In 7.3.4, we will discuss how the supporting team and arena addressed the pattern aimed for, on which we will draw conclusions in 7.3.5.

7.3.1 Design

The arena process was organised by a team of action researchers and consultants, amongst which the author. This team had differentiated roles, not only internally, but also explicitly to participants: one person moderated the sessions, another wrote and edited the vision, and a third participated substantively as a member of the arena, giving input at the start of the discussion and reflecting towards the end. We will discuss the importance of this differentiation of roles in section 7.4.

A preparatory analysis was conducted in support of this team. As discussed in chapter 6, the analysis concluded that transition dynamics were most likely to occur in the 'care' (in contrast to 'cure') in the coming years. Curative care was preoccupied by a revision of insurance and financing laws. Curative care remained well funded (with only marginal and symbolic measures to cut costs) and very few in society questioned its performance on a fundamental level. The 'care' system on the other hand was reckoned to be faced by continuous budgeting and labour shortages and was widely seen as delivering low quality and sometimes inhumane treatment. Although both 'cure' and 'care' are affected by an ageing population, constraints in budgets and labour market for skilled medical staff, made this demographic trend more challenging for 'care'.

For the 'care' system, the transition was estimated to be in the (early) predevelopment phase having identified few niches with potential to upscale. The conditions for a reconstellation pattern were estimated to be absent. The choice for the design of arena was thus concluded to be one between an adaptation, of the care (niche-) regime, and empowerment pattern (of the niches).

To facilitate discussions within the team (see further) of the arena, two 'narratives' were developed for the team: short, fictional stories on what different types of arena might look like, who would participate, and what would be the atmosphere, outcome etc. The described types were an adaptation arena[12] and an empowerment arena. A reconstellation example was added for completeness, but with a storyline of the arena taking place years later.

The team decided for an empowerment arena mainly because a fundamental change was deemed necessary that would require building new ideas and practices from the ground up. The existing system was considered too locked-in and the niches too under-developed for the induction of an adaptation pattern to be feasible. Thus it was decided to focus the arena upon stimulating an empowerment pattern. By using a preliminary version of the framework outlined in the previous section, the design of the arena was discussed and a number of specific design changes were made to align with an empowerment pattern.

Composition of the arena

Selection of participants was done in two phases. First, a long-list was established of all potential candidates, by a wide search on transition visions and ideas, and also by team members informally asking around and considering their existing contacts. Persons on this list were further researched for biographical information, publications and personal characteristics (age, gender) and their position (in daily life) relative to the chronic healthcare system. A short list of the most promising potential participants were asked to cooperate in an interview. About half of the persons on this short list became participants in the arena, others did not react, declined or were not selected by the arena team. Specific attention was paid to select participants that were deemed able to let go of the regime paradigm and built a vision from a bottom-up, niche perspective. In Dutch such persons referred to as koplopers (frontrunners), friskijkers ('persons having a refreshing view') and dwarsdenkers (provocative, unconventional thinkers).

In the selection process, the relationship to the regime was mainly determined on the basis of personal opinion, vision and involvement in earlier transition (like) initiatives. Looking from a more objective standard, such as their formal position in daily life, regime-related participants dominated niche-related participants (see figure 7.2). A good example of the difference between formal position and personal attitude would be a nurse working for a regular nursing home of a major healthcare provider, but a provider which she earlier accused on national television to mistreat patients, shortly becoming a cause célèbre for the need for change in nursing homes. Also, multiple 'roles' or posi-

tions in relation to healthcare were actively exploited to involve as many perspectives with a limited number of participants in the process. For example, many arena participants had intensive personal experiences in healthcare, and from these experiences a complementary view to their professional attitude on the system.
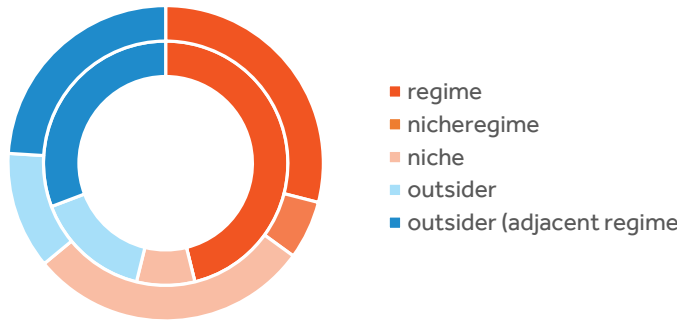

Figure 7.2: characteristics of the arena: type of organization where (potential) participant has employment (incl. self-employed).

Distance to the ministry and other funding parties

The arena was part of the TPLZ-programme, even though the ministry funded it separately. As such, the arena process was financially dependent on the ministry and other partners, such as trade associations, in the coalition that administrated the program. However, such parties were kept at arm's length and were not allowed to participate, observe the arena, or influence the resulting vision. One member of the arena, who was also as a consultant involved in the TPLZ programme, had the additional role of guarding the programme interests.

Attention to personal roles in moderation of sessions

The sessions were further designed and moderated to ensure that participants would bring a more personal perspective and motivation to the table and not representing the organization they would normally work for. For example, most of the first session was spend on personal introductions and dialogues.

Structure of the visioning process

The approach used for developing the vision consisted of six, iterative steps (later described in Wittmayer et al. 2011):
- Analysing and interpreting the current situation, explaining the persistency of the problems in the present, aided by understanding the past.
- Stating the sustainability challenge we are facing
- Identify leading principles for a sustainable future system

- Develop possible future images: potential components of a sustainable future system
- Backcast pathways to these future images
- Formulate a short-term agenda and identify a potential coalition.
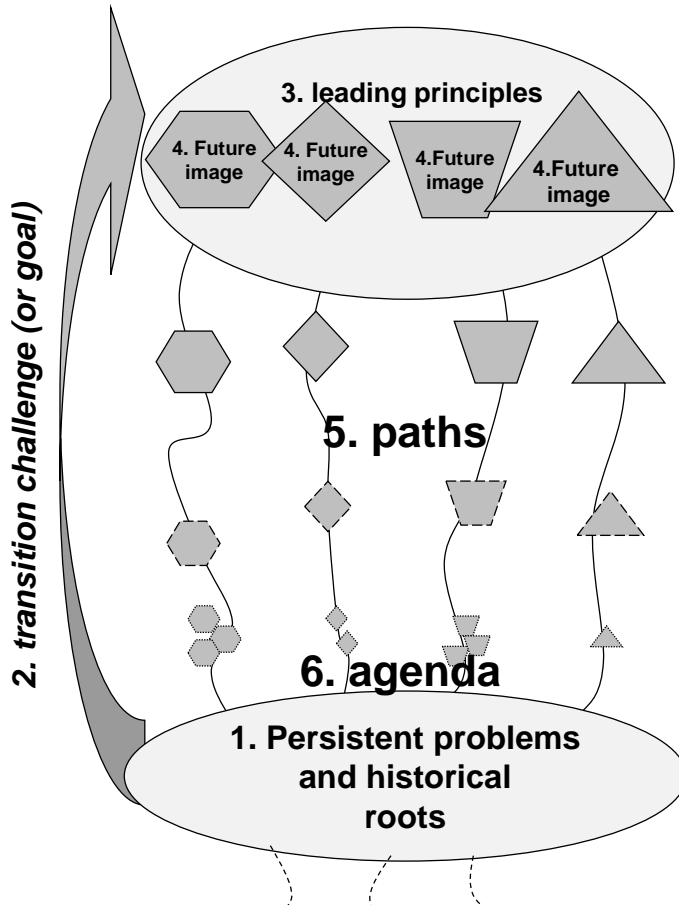

Figure 7.1 Schematic depiction of visioning process, translation of version used in arena.

Narratives used for discussion about arena-pattern relation

For guiding choices in arena design, stories about how an arena might look were developed . The two main narratives were (translated from Dutch):

Empowerment-arena

On the first of November 2007 a varied group gathers in a small hired conference room in Utrecht: nurses, writers and healthcare entrepreneurs. This diverse group has a lot more in common than it appears: all of the participants are from different perspectives dissatisfied with the current healthcare paradigms. And they have acted on this dissatisfaction: one wrote a book, others created a free spaces in their organizations or founded a radically innovative start up. These initiatives are successful but under the current dominant system still heavily constrained. Many of the participants feel a much wider, more fundamental change is necessary, which drew them to this meeting. During this and subsequent meetings they meet others who provide other pieces of this large puzzle. The moderators and transition concepts aid in putting these pieces together. Sometimes there are tensions between ideas, but these are creatively resolved and lead in the end to better ideas. Over the course of the process a tight core group emerges who are able to combine their perspectives in a revolutionary new vision for future healthcare, which in an unique way address many different aspects, ranging from sustainable finances to a return to a 'human scale'. The vision is laid down in a final declaration, which the participants are proud to sign. In the coming years they become transition ambassadors

Adaptation-arena

On the first of November 2007 senior staff from the ministry, trade associations and large insurance companies gather in one of the main conference rooms of the ministry of health. They share a professional attitude and they already know each other well from other meetings on health policy. But the atmosphere today is different from these routine meetings. This is the start of a 'free space' for those on key positions in the healthcare system that want to look ahead and explore relatively unconventional solutions to the persistent problems they feel healthcare is facing. As such they are an 'enlightened' group within the healthcare regime. In each monthly session, they invite frontrunners and visionaries to share their ideas for the future. These ideas are met with enthusiasm, even if the participants know for now they could never sell these radical ideas in the ministry or their industry. Still, slowly the more moderate ideas are incorporated in policy papers and business strategies. Slowly but steadily, the large incumbent actors in health are taking 'baby steps' into the transition as a result of the arena-process, supported by transition action researchers.

7.3.2 Sessions and other activities

The sessions were planned to be iterative: each part of the vision (problem structuring, leading principles, paths and agenda) was prepared in advance by desk research. Ideas and remaining questions were presented to the group, and after the discussion, a text was drafted (and where necessary additional desk research was done), which was again presented to the group in a subsequent round. Figure 7.4 depicts this iterative process as originally planned (see table 7.5 for the actual meeting agendas).

This structure was not meant as an inflexible agenda, but rather as a rough guide to the process. Also, much of the dialogue was expected to (and did) drift away from the order of the agenda, which was allowed to facilitate a more open, creative dialogue. These loose bits and pieces of discussion and insights were between meetings integrated into the vision, where relevant.
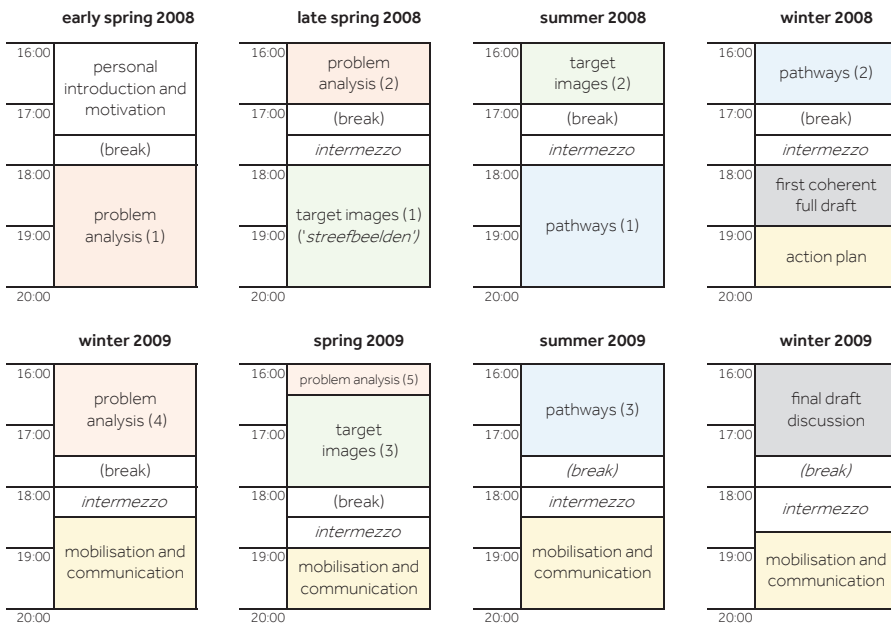
Figure 7.4 Planned visioning steps (including iteration)

Meeting 1

Half of the meeting was taken by an introduction round in which participants were invited to discuss their personal view on health (not just healthcare) and share personal experiences. After this, a presentation was given on the theory of transitions and Transition Management, on which the participants reflected. The rest of the meeting was used to have an open dialogue about persistent problems in healthcare. The discussion focused on:
- Being crushed between a bureaucratic, fragmented system and the desire to

really know your patient and provide care customised to the needs of that
patients.
- A wrong, over-rationalised concept quality of care (or quality of life).
- The dominance of fear (and lack of courage) to improve care within the limitations of current regulation and financing arrangements. The illusion of having no
room to change and overreliance on improvements through top-down change.
- The need for change to occur bottom-up, with no consensus among participants
how fundamental this change should be.

The general atmosphere of the meeting was one of respectful dialogue and taking the
time to listen to and question the other. This atmosphere was the result of starting from
very personal experiences, and stimulated by the moderation.

Meeting 2

In preparation of the second meeting, a first draft description of the problem section was
produced, some questions raised in the first meeting where researched and a summary
prepared of how the experiments in the operational sphere of the larger programme
defined the problems in healthcare and their solutions.

Also, many of the participants were mailed or called after the first meeting to discuss,
on a one-to-one basis, how they experienced the arena, if they had any reflections on
the previous meetings, and suggestions for future meetings. This was especially done
for participants, where the team felt they might be critical on some aspects of the first
meeting, or participants that might not have spoken out on some issues. After each
subsequent meeting similar follow-up calls (and sometimes meetings) were held.

In the meeting itself, the arena team presented in more detail the structure of a transition vision followed by discussion. Subsequently the discussion on the persistent problem was continued, on the basis of the first draft. Lastly, a dialogue was held focusing
on leading principles and future solutions to escape the persistent problems. Amongst
the suggestions discussed by participants were:
- Learning from non-western philosophies
- The importance of diversity, flexibility and freedom in care provision, and the
importance avoiding to try to define a new 'one size fits all' healthcare
- The importance of open communication as equals between patient and healthcare professional and to reorient healthcare to this dialogue
- Involving the rest of society (other than the healthcare sector and patient) into
healthy living, including a wider, more open definition of benefits to that society
from health.
- Bringing people in contact with each other, so they can help themselves.
This meeting had an atmosphere of enthusiasm and creativity in suggesting solutions
for the identified problems.

	Agenda of the meeting	Actions of the transition team after meeting
Meeting 1 (13-3-2008)	**Introduction** to theoretical background of Transition Management and the functioning of a transition arena.	Prepare summary of the problems and solutions as perceived by the transition experiments as discussion input
	Introduction of the role, goal, activities, functions and practices of the arena.	Work on problem definition
Meeting 2 (1-7-2008)	Further discussion on problems	Work on problem definition – prepare concept
	Introduction to the concept of a **'vision'**	Work on visionary images
	First ideas about **visionary images**	
Meeting 3 (23-10-2008)	Introduction to the **vision and agenda**	Prepare a synopsis of the transition agenda (incl. visionary images and pathways)
	Review of **problem** description and direction of transition	Write concept chapters of the vision
	Dialogue on **visionary images**	
Meeting 4 (16-12-2008)	Presentation and discussion of a **transition experiment** (Buurtzorg Nederland)	Work out visionary images and pathways
	Sketch of **visionary images** and **pathways**	Prepare complete vision
Meeting 5 (5-3-2009)	Discussion of **visionary images** and **pathways**, the complete **vision** and the follow up of the arena	Finalize the transition agenda
		Organize printing of the vision and public presentation moment
'Sneak preview' (23-4-2009)	First presentation of the **vision** Mensenzorg to the project leaders of the transition experiments by three participants	
Public presentation (13-5-2009)	Public presentation of the **vision** Mensenzorg	
Meeting 6 (9-11-2009)	Review of what has happened since the presentation of the **vision**	Prepare and conduct action arenas
	Introduction of success factors for a **movement**	Prepare first input for broader transition agenda
Meeting 7 (30-6-2010)	Presentation of results of **action arenas** Presentation of first input for **broader transition agenda**	Prepare broader transition agenda
	Discussion about **movement**	
Meeting 8 (7-1-2010)	Review of work 2008-2010	Finalize the broader transition agenda
	Dialogue about **follow up activities**	Write up lessons learned for the 'movement'
	Presentation of **broader transition agenda** as concluding activity	
	Discussion about **movement**	

Table 7.5 From: Wittmayer et al 2011 (with some minor changes)

Meeting 3

Before the third meeting, a revised draft of the problem and a first draft of leading principles for a solution path were prepared and many of the participants were contacted to provide thoughts on the previous and next meeting.

In the meeting, short presentations were given on how the final vision could be structured and insights were given from the experiments of the larger programme in which the arena was a part. The focus of the meeting was on discussing the draft chapters of the vision, deepening the images of a future healthcare, and pathways to such healthcare. Major themes in the discussion were:
- How can we scale up radical innovation from experiments to mainstream?
- Instead of only complaining about current healthcare, how can we come to a style of management in healthcare that is more facilitating, more willing to fight for the good cause and less control-and-compliance obsessed?

- Health is only partially determined by healthcare; how can we better address this in the vision? Shouldn't health be more about making a meaningful life and contributing to society, than about physical limitations?
- Can we transform the current 'market' for healthcare into a system in which the patient controls the financing: reframing the question of market versus state, to how we can empower the patient through financial reform?
- Which new sort of functions and professionals would a future healthcare system need? What role will and can technology play?
- The downsides to empowering the patient. What if patients make unhealthy choices for short-term relief? Should there be a safety net for those incapable of taking control of their own lives?

This meeting continued the creative, enthusiastic atmosphere of the second meeting, but also tackled some tougher issues, which were raised for the second of third time.

Meeting 4

For the fourth meeting, a first (nearly) full draft of the vision was prepared. And again, participants were contacted between meetings. The meeting featured a presentation by one of the experiment leaders to facilitate a more in depth exchange between experiments and arena. The rest of the meeting was spent on reviewing and deepening the draft of the vision. This led to some discussions on the role of the vision, such as:
- Demarcation/choice for focus on long term care: some participants felt the scope of the vision and arena too limited and by taking an existing boundary, replicating the existing system of healthcare.
- Debate on the message of the final document, should it invite everybody to work on change from the existing system, or should it directly attack the vested interests and call for building an alternative healthcare system bottom-up (see 7.3.5)?

In addition, a dialogue was held on the extent to which individuals can make a difference in a system. This meeting had a different atmosphere from previous meetings, the focus was on reviewing texts, and attempting to bring the remaining discussion points to a conclusion. At the same time, some more fundamental questions on system demarcation surfaced. Although the atmosphere was still positive on a personal level, it was more critical on substance.

Meeting 5

The fifth meeting focused on the draft publication and the plans for the presentation of the vision. Preparations revolved around getting the draft ready in time and getting promised text contributions from participants. In this meeting, people agreed on substance of the draft and felt pride and satisfied to have come (together with the team) to a joint document. Subsequent discussion focused on the form of the publication and how to communicate:
- Some argued a communication campaign and accompanying budget several

orders of magnitude above the available budget for communication in the arena, to 'launch' the vision.

- Discussion on the tone of voice of the final document: antagonizing or inviting?
- Urging to better integrate practice: not only more references and intermezzos with examples, but also a better translation of the vision to innovation in practice.

Presentations

Over a year after the arena started, the vision document was ready and sent to the printer. Preparations for the public presentation were started. Some weeks before, a meeting was organised between some arena participants and many project leaders from the experiments of the larger programme to give these experiments a 'sneak preview' on a document, which also incorporated insights from their experiments, but also to further the exchange of ideas between the two groups and preparing the ground for the action arenas later in the year. The arena participants took ownership of the vision document in this meeting, for example defending the document against criticism for the experiments.

The main, public presentation was held in a wharf where youth were building a replica of a 'ship of the line' as part of a welfare project, deliberately far from usual venues for the presentation of policy reports. About two hundred persons attended, some of these where directly involved in the programme, others were indirectly related to the programme, and some attendants had no previous relation to the programme. The presentation featured an outline of the vision by a slides presentation, but also a poem by one the arena-participants, and a personal story by another arena participant. Lastly, a youth client was invited to ceremoniously receive the first copy of the publication and provide comments. His, apparently unplanned, comment was:"you all seem to consider yourselves victims of the system, but can there really be victims without perpetrators, so where are the perpetrators?" The interpretation afterwards of some attendants was: take responsibility, you (the professionals and administrators) are the system.

7.3.3 Resulting vision and observations on impact

The resulting vision was composed as follows:
- **Historical prologue:** the interpretation of the arena of how the present system came about, also informed by an early version of the analysis in chapter 3 of this thesis.
- **Symptoms:** next, the reader is taken step by step to understand the persistency of the problems in healthcare by starting with observations from individuals dealing with healthcare: frustrations, confusion, focus on short term problems, and a general feeling of being lost in the system (or unable to find the entrance to the system).
- **Structural roots and cultural dilemmas:** next, these phenomena are interpreted as having deeper structural causes, such as fragmentation (broken relations)

at all levels and command and control routines by those in charge of the system. These structural roots are, in turn, related to deeper, cultural values and dilemmas: such as our inability to accept medical limits, to perceive problems as a mixture of medical causes and non-medical causes, mechanisms by which we cope with embarrassments and fear about our health and the health of those around us, and the related social dilemmas we face.

- **The need for a transition movement:** a societal challenge to address these persistent problems and forming a transition movement is stated as a lynchpin between the two main parts of the document.
- **Leading principles:** three leading principles are identified for this movement: (1) humane orientation (2) economically sustainable (which is different from cost reductions) and (3) societally embedded care (instead of care as the last resort for all societal problems).
- **Possible sustainable futures (future images):** the next three chapters formulate future images that fit within the leading principles and are thus potential components of a sustainable healthcare system. These images are grouped on three levels (with each two sublevels): people (individual and group), organisations (enterprises and professionals), and society (as a whole and our financing system). By starting from the individual and his or her social relationships a mental bottom-up model of healthcare is formulated (instead of starting out of macro-concerns).
- **Paths (to these futures):** paths from the present towards the future images were described in each of the three chapters. These were not fully back casted pathways, but more a collection of ideas for new practices in line with these future images.
- **Agenda:** an agenda for future actions is formulated, consisting of: (1) enriching the vision (2) learning in practice (3) broad dialogue.

On the next two pages, two visualisations used in the vision document are printed: first a tree of problems (differentiating between symptoms and roots of problems in healthcare) and a tree of solutions (differentiating between leading principles, future images, paths and concrete options).

Throughout the document, the experiments of the operational Transition Management of the programme were linked to illustrate problems (which the experiments addressed), principles and concrete ideas. The vision was published as a brochure-format (about 10 pages) and a book (about 80 pages). The impact of the vision was not part of this research, but some indications that the vision did have a significant impact on transition governance in long-term healthcare exist:

- The participants themselves indicated to use both the final product and the insights they developed in the arena, with some on positions of significant power in government, insurance companies or healthcare providers. It should be noted that some participants explicitly indicated they found the discussions interesting, but do not use the vision or the insights from the discussion in their professional life.
- 6 000 copies of the resulting vision document were printed, of which 4-5000

were distributed, often on request of individuals and organisations. Examples are known were the vision did directly influence organisational strategies and policies and other examples where the vision was used for education and discussion.

- The use of follow-up 'action arenas', with a large majority (70%) of participants in a survey afterwards, indicated learning about this the vision had been (very) helpful to them.
- The arena team members themselves became important in spreading the vision at various conferences, meetings and other presentations. Moreover, some cross-fertilisation with government and trade association policy and strategy development occurred through arena team members.

It is difficult to even speculate if this impact has contributed to the movement or other mechanism inducing an empowerment pattern, especially as it would be hard to distinguish from the effects of other on-going and earlier transition governance dynamics (see previous chapter). There is in the end not a significant, clearly distinguishable movement with explicit reference to the arena, but this not to say not a significant contribution to such a movement in the long term was made.

We can trace one contribution of the arena, namely the word 'samenredzaamheid' (roughly translates to 'the ability of coping together') which was introduced in the 'Mensenzorg' vision to complement 'zelfredzaamheid' ('the ability of coping by one-self'). Samenredzaamheid (or the adjective samenredzaam) was not used prior to May 2009[13]. However in the period after May 2009 it was used in 50 parliamentary documents, 16.000 websites (as indicated by Google Search), 200 newspaper articles (LexisNexis database) and listed in an important Dutch dictionary (Van Dale full edition dictionary)[14]. It is thus likely the arena has contributed a new term into the discourse on the transition in long term healthcare.

Table 7.6 Chapters in vision document and correspondence to visioning steps

| chapter	visioning step
1 History - How caring became the care industry	
2 Symptoms - frustration and confusion	1. Problems and historical roots
3 Structural roots (causes) - disconnected/torn relations	
4 Cultural dilemmas - limits to medical dreams	
5 Sustainable direction - new guiding principles for bottom-up care	3. Leading principles
6 From vision to movement	2. Challenge
7 Future images for people	
Self coping by aware individuals (including 6 paths)	
Coping together in social relations (including 6 paths)	
8 Future images for organisations	4./5. Future images and associated paths
Driven professionals (including 5 paths)	
Societal health enterprises (including 4 paths)	
9 Future images for society	
Caring society (including 5 paths)	
Sustainable financing system (including 3 paths)	
10 Agenda for tommorow	6. Agenda
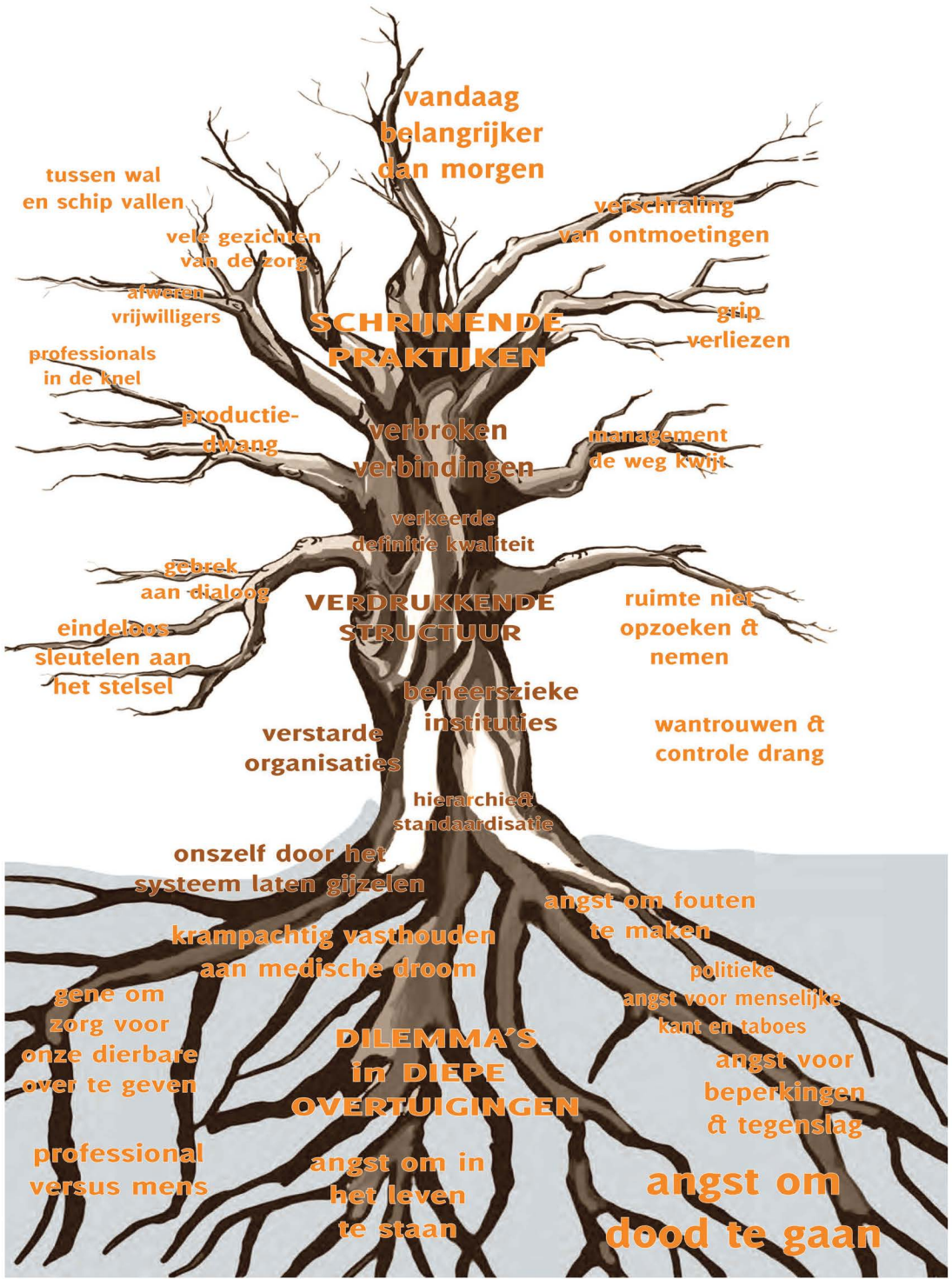
Figure 7.5: Tree of problems
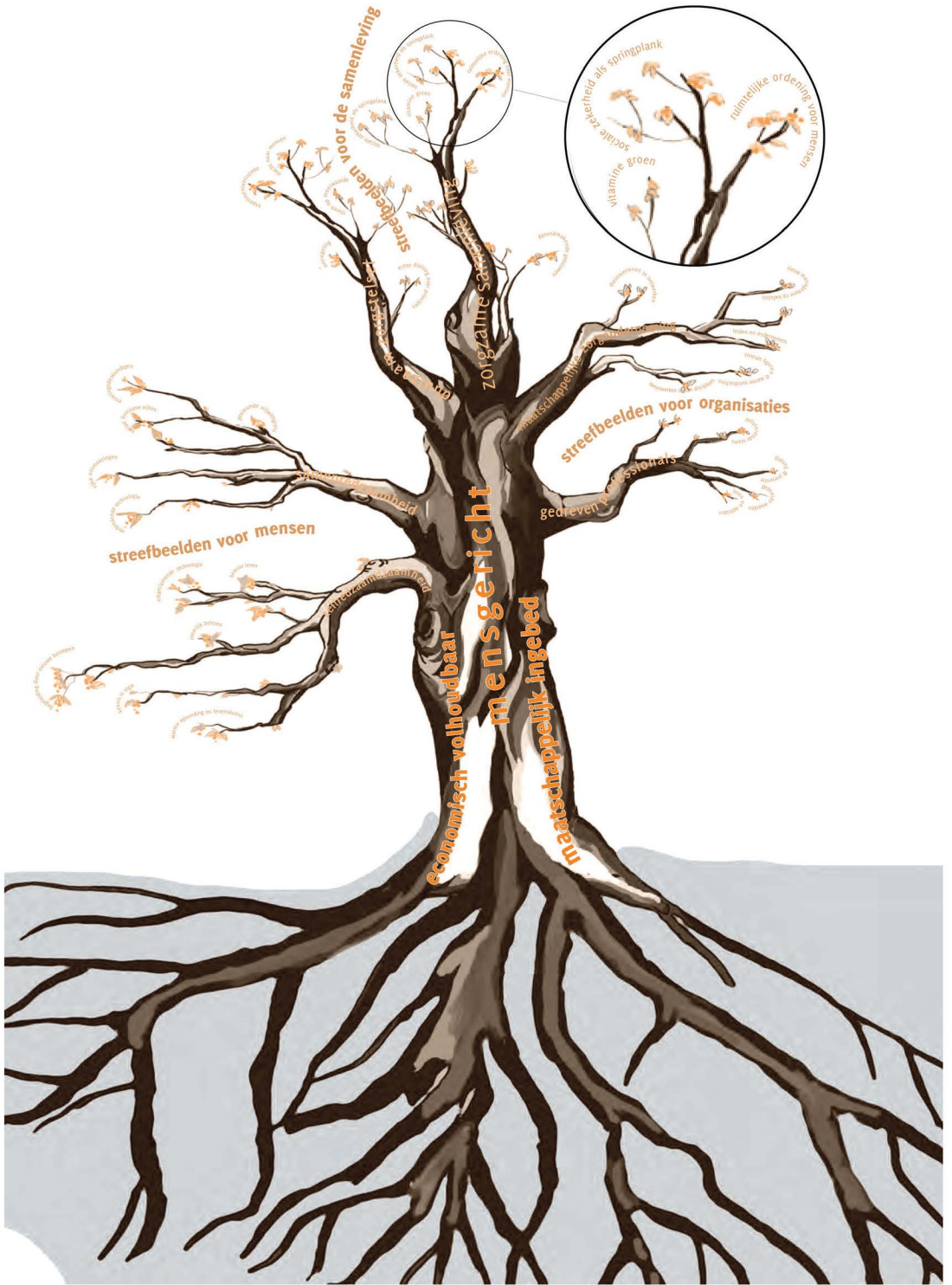
Figure 7.6 Tree of solutions

7.3.4 Observations and reflection on patterns

In general, the actual process of the arena conformed to the fictional narrative and the underlying idea about an arena aimed at an empowerment pattern. The arena succeeded in bringing together diverse persons with very different functions and very different perspectives on the persistent problems, desired future healthcare system, and transition paths. The building of a network alone could be considered a form of empowerment-oriented transition governance. The initial hesitation and unease of some of the participants with regard to the group or process, transformed into (mild) enthusiasm and trust in the group in an early phase. In the end, all participants agreed to be named authors of the vision, even if some explicitly had reservations about this during the interview and invitation phase.

At a more cognitive level, diverse alternative ideas about the future healthcare were merged into a more overarching vision. For example, the arena featured persons with political affiliations (or affinity) to both the left and the right, thus a discussion about market versus state would not have been fruitful, instead the participants agreed that the client's autonomy and choice should become more central in a future healthcare system, regardless if this would be called "market".

The opinion of the group on whether to further an empowerment pattern or to further a regime adaptation pattern, is more ambiguous. Although not directly discussed in those terms, many dialogues touched upon this subject.

We could distinguish between three groups of participants in the arena. First, a small group within the arena was consistently focusing on building up a new, radically different, system and to circumvent vested structures, organisations and interests, and would consistently press for the vision to be empowering and inspiring (radical) niches. For example, one person remarked:

> "Let's stop grumbling, let's start with what is already happening in practice, against all odds. Just ignore what comes from above, and start building from bottom-up."

Second, an even smaller group would consistently be in favour of an adaptation pattern. Although they were sympathetic towards niches, they would consider it crucial to stimulate regime actors to change in incremental steps. They also doubted sometimes if a fundamental change was really needed or should be the first priority, or a change of attitude and improvements within the current system would not produce better and faster results.

The largest group of participants appeared to be ambiguous, with the same persons making statements in favour of an empowerment pattern and in favour of an adaptation pattern. This ambiguity occurred, throughout the sessions, but this group appears to tend towards empowerment, until the last session. For example, in the fourth session, one would remark on the draft:

> **Participant:** "why don't we use the word 'war' in the section on a social movement?
>
> **Moderator:** "Well we put in 'dismantle' as a subtle reference to…."
>
> **Participant (interrupting):** "yes, it is there, but it is all formulated very gently ("lief") [towards the vested actors]"

Later, especially when questions of presentation, tone of voice, etc. were discussed, they would stress the need not to 'needlessly antagonize' and to appeal to a larger target group than just niches and frontrunners. For example, one participant remarked, "could you imagine if you are a nurse, working hard and trying to do well, and you are being told the whole system you have been working in and everything you do is wrong?" Or:

> "We want to appeal to those in favour of healthcare innovation, those who are impartial and even those who are against innovation. You need to have a subtle message about change, which also gives 'the Hague' [the ministry] the impression they have some control over it, to allow change to happen elsewhere (….) which implies we need to reach persons with the ministry at the highest level."

This ambiguity was not limited to the participants, in the supporting team some shifts and mixed feelings about the course to be followed could also be noted. Already in the selection process, the number of persons directly involved in niches was quite limited; this might also partially have been the result of niche-candidates opting out themselves (who were in interviews typically much more critical if the arena would have tangible results). But also within the sessions, sometimes, arena team members took a quite adaptive position, for example:

> **Participant:** I am still struggling with the fact that currently most power in healthcare is attached to men, most health workers are female, but it is men who decide what type of care dominates and they do so on more male values, framing the discussion in terms of money, power and market…
>
> **Arena team member:** I find this an interesting observation, to play devil's advocate: overall the vision is rather feminine (….), I wonder if this will sufficiently appeal to the [now] dominating males [in healthcare].

At the presentation of the vision, this ambiguity again became apparent. For example, the team attached much value to the presence and reaction from the directors of the trade associations or the ministry. Vested actors were also an important target group for the widely disseminated vision (next to initiatives, niches and frontrunners).

In the second phase of the arena, where it supported the formation of a coalition and agenda for change, this discussion lingered on. For example, when the team proposed to link each action arena to a large, vested organization that would adopt a transition path, objections were raised from the arena participants. Participants felt "tapping into the existing system, will greatly complicate matters" and one participant even stated: "do you really want to bet on the dinosaurs for change?" Although this phase falls outside the case demarcation, it is emblematic for the ambivalence about transition patterns.

parameter	expected for empowerment pattern	expected for predevelopment	this case study (arena care)
who	mostly niches		ambiguous niche-ideas, but actors connected to regime and larger outsider organisations
openess	low	low	low
magnitude		small	medium
committed		low	low
authority	low	low	low
diversity		very high	high
destructive			low

Table 7.7 Expected (and sought) design characteristics and observed characteristics

For comparison, table 7.7 lists the expected design characteristics of an empowerment arena in the predevelopment phase and the actually observed characteristics using our hypotheses of the previous section on this single case. In general, the arena characteristics conform well to the hypotheses. Besides the ambiguity in participants, only the magnitude of efforts was relatively large for an early transition arena. For example, resources were available for extensive in-between editing and desk research, an event for several hundred visitors was organized for the presentation, several thousand hard cover publications were printed and there was through action arenas extensive follow-up (even though some participants felt the support and especially communication should be one or several orders of magnitude larger).

7.3.5 Conclusion and discussion on the case of long term care arena

In the previous section we formulated a framework on how Transition Management instruments might be aligned to transition dynamics on the basis of existing literature and additional assumed relationships. In our action research case, we found that distinguishing between different arena characteristics for possible patterns and the estimated phase of the transition is a useful aid in designing and conducting a transition arena. Overall, practice also corresponded to design choices.

However, we also found that whether to strive for adaptation or empowerment became ambiguous in moving from theory to practice, and a shift in focus from empowerment to adaptation occurred. Possible explanations for this might be:
- The empowerment pattern might hold a rhetorical value, whereas the adaptation pattern was preferred from a more rational point of view (compare the occurrence of astroturfing in scenario-building[15]).
- A distinction by some participants between the system (including managers) and the 'rank and file' health workers and patients: for the first category it was thought more appropriate to be directly attacked and the second category to be victims of the first category, who should not be criticised. This distinction became

complicated as the interpretation of the problem indicated some of the problems are engrained in paradigms and routines of all those involved in healthcare.

- The group as a whole had strong relationships with organisations that could be characterized as regime organisations and the outsiders involved were mainly working for large, vested organizations in other societal systems. This might result in orienting actions towards these type of organisations, for example to adapt these organisations to make space for niches or more extensive transition governance.

- We identified a path that first stimulates an empowerment pattern to create niches, and when these niches are strong enough to incorporate these back into the system (see scheme in 3.3.4). This might have been implicitly attempted on a much smaller timescale.

We will revisit the more rhetoric, strategic aspects of transition policy arguments in the discussion of the final chapter (see 8.4.6). Next to exploring the relationship between dynamics and instrument, this case also described the first transition arena for a non-technological industry or service and thus contributes to the empirical knowledge on transition arenas.

7.4 From projects to methods - the case of Sustainable Building in Flanders

In chapter 1 we distinguished instruments to consist of projects and methods in a nested fashion. In this section we will explore this last relationship of our framework: how the project and method level relate to each other. In chapter 6 we discussed programmes as a high-level transition policy prescribing a set of activities that are not fully integrated but are typically loosely coupled to each other. This loose coupling is necessary to deal with the very different environments in which programmes operate in parallel. However, some of these activities could be expected to be clustered in projects: activities that serve well-defined goals, in the same environment, are strongly coordinated, and are presented as a single instrument.

Those activities within a project might still use very different methods. Methods, we interpret to consist of activities that are very similar to each other in competence, nature of the activity (e.g. generating knowledge, organising a process, setting financial incentives, etc.). For example, an arena requires the methods of moderation, analytical techniques, writing/editing, and external communication. As typically multiple methods are employed within a single project to implement an instrument, we could expect them to be highly coordinated (or integrated). For example, the moderation of the arena (which topics to discuss in which atmosphere), the analysis and the writing of a vision document should be very well aligned to each other. Compatibilities between methods are thus more of a point of attention, than the compatibilities between projects (and the instruments they implement).

We will explore compatibility issues by an example from outside healthcare: the Flemish arena for sustainable housing and construction (Dutch: DUurzaam WOnen en BOuwen, or as acronym DuWoBo). In subsection 7.4.3 we combine theoretical and practical insights in some reflection on role conflicts in combining methods in a project.

7.4.1 The case of DuWoBo

The first phase of the arena of DuWoBo was organised in 2005 and 2006, with a preceding period of development and preparation, and followed by subsequent phases and follow-up activities until at least 2012 (Paredis 2013)[16]. This arena was part of the environmental and nature policy note of the Flemish Government (Peeters 2004). The aim of this arena was twofold: on one hand it was a policy instrument to stimulate sustainability transitions in housing and construction, but on a meta-level it was also a pilot case for the adoption of Transition Management from the Dutch policy context to the Flemish policy context. This arena was not simply one component in a larger programme on sustainable housing, but was central to all TM activities on sustainable housing.

The arena was organised by a consortium of the Dutch institutes DRIFT and TNO (who developed TM in the Netherlands), the Flemish institute of CDO (part of Gent University) and the Flemish-Dutch facilitators of Pantopicon. My involvement, as a DRIFT researcher, was conducting an evaluation (by a series of interviews and a survey) in the final stage of this first phase (van Raak 2006).

This case has been described before, succinctly by Loorbach (2007) and more extensively by Paredis (2013). The description in this thesis has the specific purpose of illustrating the incompatibilities between methods (owing to role conflicts), however, for context we summarize the arena process below before we discuss the outcome of the evaluation and specifically the noted role conflicts.

Structure, selection and preparation

The project team consisted of 'substance experts' (CDO), transition experts (DRIFT/ TNO), and session facilitators (Pantopicon)[17]. A group of departmental representatives in a "strategic"[18] steering and overview" group guarded the process. One civil servant participated in both the daily decision-making of the project team and the steering group. From the second meeting onwards, one of the arena members was chosen by the other members to chair the arena. Later in the process, working groups on themes were added (consisting of members of the main arena and new participants) which involved about 70 persons in total.

The preparation stage for the arena consisted of an integrated systems analysis (DeRaedt et al. 2005) by the SCENE-model (Grosskurth and Rotmans 2005), which identified a number of interrelated persistent problems. Flemish houses had a high ecological footprint and a shortage of houses of acceptable quality existed. These symptoms were caused by a very individual culture, fragmentation in policy, distrust between parties, and a deterioration of social networks in neighbourhoods.
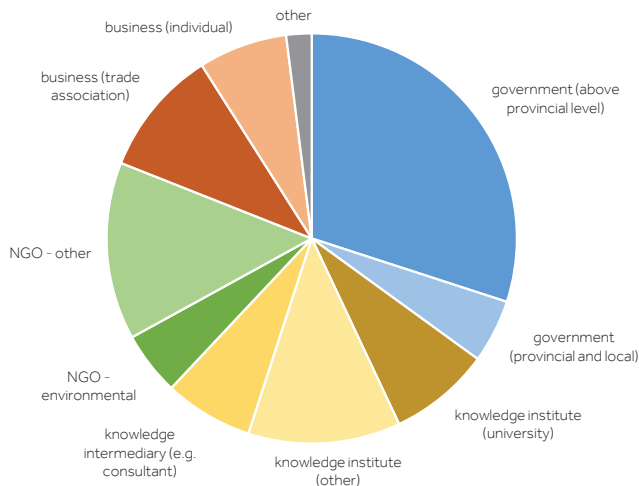

Figure 7.7 Composition of the arena and working groups

In parallel to the analysis, selection and intake interviews were held with potential arena members. This proved difficult as the Dutch transition experts expected the substance experts to identify candidates, which the substance experts found difficult. Also, some project team members wanted a firm emphasis on niches and outsiders in the arena, whilst others found broad participation from mainstream firms and policymakers essential as crucial actors to make a difference within an industry. We might say in retrospect that the team members disagreed on the pattern (empowerment or adaptation) to be stimulated. In the end, in a compromise about 20 arena members in total, of both niches and the regime, were selected.

Events and developments

The results of the problem analysis were discussed in the first meeting of the arena. Loorbach and Paredis describe that participants agreed with the analysis, with the exception of some minor points. Paredis also notes that participants doubted the added value of discussing these problems or the analysis itself. In the second and third meeting, an envisioning exercise was conducted to backcast from a sustainable future (by defining seven principles and future images) to pathways, resulting in four identified themes: closed material cycles, integral policy and innovation in the construction industry, quality of housing and their environments, and a new collective-private balance in spatial planning. These themes were to be further developed in working groups.

Although agreement was reached on substance, throughout the process tensions could be noted on the process. A recurring discussion in the project team (sometimes spilling over to the arena) was if the arguments in the process were either "becoming too rigid and top-down" or becoming "too chaotic and incomprehensible for participants".

The next five meetings were focused on developing the agenda. The working groups developed each of the themes further, whilst the main arena kept meeting. The arena (and the project team) gave presentations and short papers on specific issues to cross-fertilize between the arena and working groups (also some arena members were members of the working groups as well). The final document produced by arena and working groups was "Flanders in Scaffolds" ("Vlaanderen in de Steigers"), which contained all the elements of a transition agenda, including 18 concrete projects. Paredis notes this document was pivotal throughout the rest of the DuWoBo process (until 2012).

Results of evaluation: role conflict

The conducted evaluation consisted of interviews and a survey addressing different aspects of the arena: (1) composition, (2) process, (3) results, (4) (meeting) expectations of participants, and (5) concluding on the potential of TM for the Flemish policy practice. The main conclusion was:

> "On the aspect of results and meeting expectations, those involved are positive. On the aspect of the influence on government policy and industry the partic-

ipants are moderately positive. They are moderately negative to moderately positive on the process. The evaluation demonstrates a number of fundamental frictions between Transition Management and the Flemish policy context."

Yet, it was also concluded the Flemish–Dutch cultural and institutional differences were attributed too much explanatory power by those involved from both sides. For example, the Flemish indicated a cultural tendency to "just start doing and reflect as you go along", the Dutch stated TM was about "learning while doing", both sides were convinced they had a more assertive culture of "doing" and the other side had a culture of more "talking". The evaluation (and later Loorbach 2007a) offers the explanation of TM being an inherently semi-planned process, which was unconventional for those normally involved in policy, regardless of the nationality of policy makers.

The dominant problem in the process of the arena however, was confusion about roles, especially in the project team. Also as the process progressed, confusion and conflicts became more fundamental. First, confusion about own roles and role division could be noted, for example the confusion if the substance experts should also know the social and institutional networks within their field of expertise and if accessing these networks was their role. Second, project members started questioning each other's roles and felt others were not playing their roles as they should. For example, some project team members felt the transition experts violated basic principles in participatory processes. In a last step of escalation, members started to simply take over the roles they felt not satisfactorily performed by others. An example of this pattern is the "wild living" incident. At some point in the process, the Dutch transition experts tried to stimulate creative solutions, as they felt others were not taking this role. They introduced some ideas, amongst which "wild living": a policy innovation in the Netherlands of somewhat relaxed spatial planning standards, i.e. the government (together with large project developers) not deciding upon the architectural style, building line, etc. as part of a master plan. For many of the Flemish involved, this Dutch approach was not a solution for the Flemish situation, but was actually the problem: a too individual approach to building and housing. Some interviewees related these role conflicts directly to clashing methods, for example the inconsistencies by the role prescribed by Transition Management and the role prescribed by participatory methods.

7.4.2 Reflection on roles and conceptual framework

We concluded that methods require tighter integration than projects. The case of DuWoBo demonstrated that from different methods, conflicting roles could be prescribed. The concept of roles is addressed in TM literature, Loorbach (2007, p154) states:

"Ideally, a transition arena is facilitated by a team in which are represented: the initiating organization, experts in the field under study, Transition Management experts and process facilitators. In practice different backgrounds can be combined. This Transition Management team is responsible for the preparation in terms of process and substance. Throughout a transition arena process the

> contribution, role and practice of the Transition Management team changes. It is very important to make clear in advance how the different members of the team will function, what their roles and responsibilities are."

Loorbach presents an ideal type division of roles in a table (reproduced in table 7.8). A number of observations can be made about this existing concept of roles in the transition team. First, Loorbach interprets roles in an internal and technical fashion. Internal as the team operates in unity, Loorbach even states "Essentially this team is the transition manager…". Technical, as the table mainly lists activities and Loorbach's concerns appear to be about making sure all necessary competences (transition, substance, process) are present, and a clear division of labour (and mechanism to coordinate) is presented. In social sciences, roles are much richer concepts (see Scott 2001; Dunckel 2001), closer to the word's origin from theatre (OED). A role is the socially (or societally) expected behaviour pattern (which the role-taker to some extent can also 'make' as role-maker), which includes much more than tasks. In this sense, roles are different from tasks (assigned activities) or competences (skills and qualities). Tasks and competences typical complement each other instead of conflict with each other. Even if it might be atypical for certain skills to be possessed by the same individual, most skills can be combined; for example, there is no reason why somebody running a restaurant should not be able to both fix the plumbing and design new recipes. For behavioural patterns, this might be more complicated: if somebody is both manager and waiter in a restaurant this might lead to role conflicts (for example the conflicting requirements of taking charge of situations and to be modest and facilitating). From research into roles in the policy process, inductively by Durning and Osuna (1994) and deductively by Jenkins-Smith (1982), we know that value orientation for policy analysts crucially shapes this expected behaviour pattern.

	ISA	Actor selection	Arena process
Project initiator	Provide information, reports	Identify participants, select	
Transition experts	System structuring, transition analysis	Develop interview protocol, do interviews, select	Structure process and substance/ discussion
Substance experts	Relevant knowledge, data, facts	Provide participants, do interviews, select	Support process with information
Process facilitators			Facilitate meetings

Table 7.8 Active roles transition team according to Loorbach's dissertation (Loorbach 2007; table 6.5)

Moreover, the description by Loorbach appears to assign a leading role to the transition experts, the others appear to be assigned support roles. We might question how this reflects upon the interdisciplinary spirit of TM and if the transition experts are implicitly assigned a leadership role within the team. Third, and related to the previous observation, the identified roles appear to be somewhat limited. Examples of roles that might be added are[19]:

- **Writer and/or editor:** the team had a significant role in writing and editing

the vision in both case studies of this chapter. This role entails more than simply writing up results: it requires considerable re-ordering and filling gaps to build a narrative in a document from conversations.

- **Designer/creative role:** one might even question if at some point writing does not become creating substance: ideas for the future of a social system not from the input from participants but also from the transition team as co-producers.
- **Teacher:** knowledge on transitions and Transition Management is transferred in the arena and in experiment meetings. Moreover, education is also an instrument by itself[20].
- **Coach:** sometimes the support becomes of a more personal nature, in which case the role of the transition team can also be that of a personal coach, for example for supporting a transition experiment leader.
- **Activist, lobbyist:** a transition team is attributed a leading role, in a typical situation they introduce the urgency and general agenda for a transition. In this respect, they can also be seen as having a more activist or lobbying role.
- **'Networker'/entrepreneur:** related to the previous role, the transition team also needs to operate in informal networks, make informal connections, as we concluded in chapter 6.
- **Supervisor/auditor/funder/selector/delegated public authority:** although typically experiment leaders and others involved in the transition are supported by a reflexive, collective learning method in a 'safe' environment (Taanman 2012), the transition team can have the formal power to fund or defund experiments or be assigned a formal reporting role to organisations with the authority to cut funding or end/extend exemptions from regulations. See van den Bosch (2010) on such decisions in the TPLZ programme of chapter 6.
- **(Action Research) Scientist:** as action researchers, typically a transition team will feed results back into the scientific body of knowledge on transitions. Also, the transition team might explicitly position themselves in the arena process as 'scientific' (or implicitly, for example, through an association to a university).

Possible framework for roles in Transition Management (teams)

This subject of roles warrants more theoretical and especially empirical research than feasible within this thesis. However, we might provide some preliminary ideas on how a framework for understanding roles in the transition team might look like. On one hand, this would require a grouping in a comprehensive, but manageable number of (clusters of) roles, on the other hand we might characterise the expected behaviour associated with these roles by looking at underlying values, given the importance of these values in literature. Table 7.9 explores what such a framework might look like.

role group	transparancy	accesibility	objectivity	independence (from power structures)	progress	legitimacy
advocate roles	Low	Low	Low	Low	High	furthering the good cause (outcome)
creative roles	Low	Low	Low	Low	High	generating a good design or creative solution
interpersonal roles	Medium	Low	Low	Low	High	empowering individual
Process roles	High	High	Low	High	High	proces progress and fair participation
(public) authority roles	High	High	High	Low	Medium	fair judgements
knowledge roles	High	Medium*	High	High	Medium	enlightening (or informing)

*) A typical knowledge role would be interested in hearing all sides of the story, but would in the end make an impartial judgement

Table 7.9 Framework of relation between values underlying behavioural patterns and groups of roles

Advocate roles

Advocate roles are those roles that derive their legitimacy from a good cause or furthering an interest and are focused on achieving an outcome for this good cause (this could also be delegated to a professional: e.g. a lobbyist). As this typically involves strategic behaviour, we would not expect these roles to be fully open on their actions and motivations. They would also be typically less concerned with objectivity and are by definition not independent from an ideological (or interest) agenda.

Creative roles

Creative roles might share some values with advocate roles, although they are of a very different nature. Although requirements for a creative solution or design might be formulated, and generate ideas to test against these requirements, the design process is in essence neither objective nor transparent.

Process roles

Process roles, such a moderating or organising an arena, typically have a more transparent approach and value openness to the project. They would not be necessarily objective (as taking a substantive position would jeopardize their neutral position), but could be expected to value their independence to gain and keep trust of all involved

in the process. From a process perspective, usually progress of the process is seen as crucial, together with the fairness and accessibility of the process.

Interpersonal roles

For support on a personal level, gaining trust from multiple persons or parties is less of an issue, one might even say a coach is a personal advocate.

Knowledge roles

For a knowledge role, typically one would need to be an "honest broker" (Pielke 2007) of this knowledge. These roles might also be expected to take some values from science (even if they are themselves not scientific). These include transparency, objectivity (or intersubjectivity) and independence. Progress might be a less dominant value.

Public Authority roles

The public authority is not unlike a knowledge (authority) role. In deciding on public funds, judging an experiment or regulation, one might be expected to adhere to principles of 'good governance', including transparent and objective criteria. But a public authority is not independent, by definition it is subject to a political decision-making process within democracies and the executive power of administrators.

Value conflicts between groups

Value conflicts might occur between many roles, especially because the categories in table 7.9 are non-exhaustive, however two clusters might exist (coloured in the table with blue and orangee): the advocate, creative, and interpersonal roles on one hand and the authority and knowledge roles on the other hand. The process roles could be seen as a separate cluster, or an intermediate between the two previous clusters. This divide is roughly also the divide along which conflicts occurred in the DuWoBo case.

7.4.3 Conclusion on the relation between projects and methods (through roles)

In this section we have offered an explanation for role conflicts in our case: it is not confusion or disagreement about division of roles or a cultural divide that causes role conflicts, but it is the conflicting demands from different methods requiring different roles with incompatible values. Clearly, conflicting roles are a point of attention in developing and/or analysing a policy. Such conflicts might be difficult to resolve, but they might be mitigated by the following:

- **Reduce roles, unify values:** a direct solution would be to simply not combine incompatible methods in an instrument. This might often be at odds with TM's strength of combining substance and process, but in some situations, one might take caution against assuming additional roles if avoidable.
- Separate in person: one might also separate roles in persons, acknowledging that each person's role has legitimacy within a team. These different roles might also be communicated externally. A clear example is my role in the arena DuWoBo:

although from the same organisation, I clearly communicated that I had a diffe-rent role in the project.
- **Separate in organisation:** one step further would be to assign different roles to independent organisations involved in a project team, without the pretention of constituting a unified team. This would avoid role confusion or conflict in the team, but might ignore the need for a team in the first place: to integrate various methods and provide leadership to participants.

In the implementation of the policy, being aware of potential role conflicts, and having a continuous, reflexive dialogue on this subject during the TM process might mitigate personal conflicts and prevent escalation.

7.5 Conclusion on the system - instrument and project-method relationships

We set out to explore the relationship between Transition Management instruments and transition dynamics in analysing and/or developing policy arguments. We assu-med instruments share certain design parameters, which can be adjusted depending on transitions dynamics context. From an inventory of existing literature, we found some descriptions of the relationship between phase and instrument design, but little on the relationship between pattern and instrument design. We proposed a framework to systematically describe the relationship between design on one hand and pattern and phase on the other hand.

We explored the relationship between pattern and instrument design further in an action research case. The framework, translated into narratives, aided the design of the Dutch arena long term care and its actual characteristics corresponded to those prescri-bed by the framework. However, we also found considerable ambiguity in practice over the aim of the arena.

Lastly we explored the levels within an instrument, concluding that instruments are implemented by projects with tightly integrated methods. This integration can be pro-blematic, as different methods require different roles. These role and value conflicts warrant further research. We will revisit some aspects in the discussion section of the final chapter.

To recap, we thus found the following points of attention in analysing and/or deve-loping a policy argument:
- Does the argument give consideration on the specific characteristics of the instru-ments prescribed and if so, are these characteristics related to the dynamic state of the transition?
- Which roles do the methods require, are they compatible, and if not which con-flict mitigation measures are foreseen?

To address the points of attention, we developed two lenses: a framework on the rela-tionship between instrument design and transition dynamics and a framework of roles in a Transition Management process versus values.

Notes

1. If we study or assess an existing policy of a policymaker, these arguments will not necessarily use the above terminology or the underlying framework. Dynamic characteristics of the system in transition in an existing policy might be expressed by different terms, a different framework, unstructured or not identified at all. Also, the design characteristics of the instruments will not necessarily be described in detail. We will discuss the various options to undertake an analysis of such arguments in the next chapter, where we outline various possible applications of the findings of this thesis (see §8.2 and §8.3.1).

2. Transition management instruments can both be used to develop a policy or be prescribed by a policy. In the first situation, either a process instrument (e.g. a participatory sessions) or analytical instrument (e.g. a systems analysis) is used as a mean to construct a policy. This thesis addresses instruments in the second role: prescribed action within a policy argument. Even though in some sense, the framework and concepts of this thesis might be considered themselves instruments to develop policy. In the second situation, analytical or process instruments are the 'courses of action' of the transition policy argument.

3. Theoretically, a transition policy argument could even exclusively consist of regular policy instruments (and in the next section we will explain why this might occur late in the transition).

4. A fourth category consists of 'physical instruments' or 'direct action' (for example building a dyke or the direct provision of healthcare). This last category is not always included, especially as for some policy areas direct intervention might not be very relevant (Fenger and Klok 2014; see also van Raak 2004).

5. Note these include instruments we would position in our framework at the method level.

6. Design can be defined as "A plan or scheme conceived in the mind and intended for subsequent execution" (OED I.1) or more formally: "a specification of an object, manifested by some agent, intended to accomplish goals, in a particular environment, using a set of primitive components, satisfying a set of requirements, subject to some constraints," (Ralph and Wand 2009). The objects are, in our case, the instrument (or alternatively the policy as a whole), the particular environment of the system dynamics, ongoing governance processes, and possibly the wider program in which the instrument is situated. This environment (together with ideological choices and available resources) also generates constraints. The requirements and goal can be seen as the intended effect of the instrument. The components could be seen as the methods that together constitute the instrument (see §7.4).

7. Recently work in transition literature has been done on the 'grass root' and 'social movement' role in transitions and how to further these (Seyfang and Haxeltine 2012; Seyfang et al. 2010, 2013; Hielscher et al. 2011), but there is not a direct link between the three patterns used in this thesis (following Haan and Rotmans 2011; De Haan 2010) and this transitional mechanism. One might interpret these as radical niches that are empowered, but some examples, e.g. consumer boycotts or citizen's protests, could also be seen as fostering the 'expression' of a landscape pressure, or aiming at the undercurrent (or support canvas) level (Haxeltine et al. 2008; Rotmans and Loorbach 2010a).

8. In chapter 3 we discussed ideal type pathways, differing between pathways (Geels/Schot) in which longitudinal shifts in patterns occur and paths in which this does not occur (De Haan). In literature on specific instruments, as discussed in 7.1, there also seem to be shifts in patterns occurring and pattern stimulated. This would imply that over the years to decades, instruments within a policy argument (if the prescribed activities in the policy argument span such a long time), change their characteristics to match the changing pattern the policy as a whole aims for. In the case of the next section we will even see such shift might even occur on short time scales (months to years).

9. For example the International Association for Public Participations defines "Public participation is based on the belief that those who are affected by a decision have a right to be involved in the decision-making process" (www.iap2.org) as the first core value in participatory processes.

10. Although an opposite, but lesser, effect might be the exclusion of certain paths and solutions (and actors associated to these solutions, see under diversity).

11. Earlier this arena was described in the appendix to the manual to community arenas (Wittmayer et al. 2011)

12. Two alternative adaptation pattern were distinguished: one in which the regime incorporates elements from the niche (or even absorbs the niche), and an alternative adaptation pattern (co-evolution) in which a nicheregime and regime would shape each other, was also added. From the perspective of chapter 4, these patterns are not so different after all and the distinction is not made in later publications on the multipillar approach (e.g. De Haan Rotmans 2011).

13. An extensive search in the LexisNexis news database, the parliamentary database, the 'Woordenboek Nederlandse Taal' (WNT) and the general internet resulted in no earlier use, except one unrelated source using it to describe a disaster management strategy.

14. We can even trace its spread partially: the use of the term grew after it was used by politician, TV-presenter and writer Pieter Hilhorst in a column (6-10-2009 in the national newspaper Volkskrant), often later sources also credit the term to Hilhorst. Hilhorst refer to an essay by the Urgenda Foundation written by Jan Rotmans and crediting the Mensenzorg publication.

15. See Larsen, Katarina, and Ulrika Gunnarsson-Östling. "Climate change scenarios and citizen-participation: Mitigation and adaptation perspectives in constructing sustainable futures." Habitat International 33.3 (2009): 260-266. Note that in this concept, the bottom-up 'dressing' of top-down pattern is deliberate, whilst in our case unconscious processes might also play a role.

16. Note this phase corresponds roughly to phase 1 and phase 2 in the description in Paredis 2013.

17. Loorbach mentions this division, but Paredis extensive description not.

18. In TM terms this would actually be a tactical group

19. As transition arena's are 'co-producing' knowledge, some of these roles might also apply to the participants.

20. See for example the activities of the Transition Academy, transitionacademy.nl

8. Synthesis and conclusion

This thesis set out to better connect transition dynamics and instrumental Transition Management from the perspective of policy arguments. We added 'transition governance' as an intermediate level and further distinguished sublevels within dynamics, governance and instruments. This resulted in a framework of seven relationships between and within levels. In chapters 2 to 7 we have reflected upon each of these relationships: what we know from literature, what we could further conceptualise, and what we could learn from applying these reflections to a case.

In this chapter we will come to a synthesis of the findings on these seven relationships. We start by recapping our findings (§8.1), after which we will discuss the different ways these findings can be applied (§8.2). Subsequently, we will discuss three such ways: descriptive (§8.3), normative (§8.4) and prescriptive (§8.5). We will also give indicative examples of applications to present Dutch healthcare policy. In the final sections of the thesis, we will critically reflect on theory, methodology and application (§8.6), and end with conclusions on the contributions of this thesis and recommendations for further research (§8.7).

An integral narrative of empirical findings was not the aim of our research, as cases were sought to deepen particular theoretical issues. Nevertheless as it demonstrates how we could describe a case over various levels in our framework, we did include such an integral narrative as appendix B to the thesis based upon research at all these levels.

8.1 Recap of theoretical findings

As we peeled down levels and their interrelations, we drew conclusions on many different aspects of connecting transition dynamics to strategies and instruments from a policy argument perspective. As stated in chapter 1, this thesis seeks findings in three forms: (1) the research framework itself, (2) points of attention in analysing and/or developing transition policy arguments and (3) new analytical lenses to address these points of attention. We will recap each of these groups of findings. The research framework itself (see the scheme on the previous page) can be summarised by seven relationships:

- Within transition dynamics, from the landscape to the level of the system
- And from the level of the system to the level of the constellation
- From transition dynamics to Transition Governance
- Within Transition Governance from transition politics to transition policies
- From Transition Governance to transition instruments
- From transition dynamics to transition instruments
- Within transition instruments from projects to methods

8.1.1 Points of attention related to adapting transition dynamics theory for policy arguments

The textbox on the next page lists the points of attention found in each chapter. Our research focus was on embedding Transition Management better to transition dynamics and we will discuss those points of attention in 8.1.2. However, we will first discuss the points of attention addressing the need to adapt transition dynamics theory for the use in a policy argument. We recap these points into three categories: (1) limitations, (2) implicit assumptions and inferences, and (3) the nature of statements (prescriptive or descriptive, phenomenon or explanation). We will elaborate on each of these categories, and on how fundamentally they affect transition policy arguments.

Limitations

Some circumstances, philosophies of science, and ideological positions appear incompatible with a consistent transition policy argument. First, some policies might not meet the definitions of a transition policy argument, for example because they are addressing a policy problem that is not a persistent problem. Second, to connect Transition Management arguments to theory on the dynamics of regime shifts, requires assuming the validity of a number of core concepts in transition studies, such as the niche-regime-landscape interplay and the suitability of a middle range theory to describe the expected and/or needed changes to address a persistent problem.

overview of identified points of attention in each chapter

Chapter 1: Methodology and framework

- The policy at hand in relation to the definition of a transition policy argument (in this thesis)

  Defined as: motivated courses of coordinated action by an actor (persons, (parts of) governments, other organisations or networks) within a given environment in an effort to influence the course (pace, direction and/or substance) of transitions in to address 'persistent problems'

- The relationship between the actions and the party to carry out the policy

Chapter 2: From the landscape (the system's environment) to the system at hand

- The extent to which core concepts of the theory of transition dynamics (to which the policy is connected) are recognised.

  Amongst which the niche-regime-landscape (or reframed as constellation-system-landscape) conceptualization of dynamics and the middle-range nature of the expected or desired change

- The demarcation between the system and landscape (or other environment)

  Including the explication of connections and overlaps with other societal systems; overlaps which can be contested, dynamic and the subject of political struggles.

- The interdependence of the system demarcation on one hand and the problem and solution space on the other hand

  Including the one-to-one or one-to-many relationship between the policy problem at hand and the expected or desired transition(s) in societal system(s)

Chapter 3: From the system to subsystems

- The retrospective or forward-looking description of a single niche-to-regime path versus a perspective of many competing and complementing constellations

  The allowance of localised dynamics (or absence of dynamics)

- The structural, cultural and practical aspects of a transition

Chapter 4: From transition system dynamics to transition governance

- The diversity of transition governance theories in relation to scientific grounding in 'transition governance' or 'Transition Management' in the policy argument

- If the policy seeks an adaptation pattern: the mechanism through which the regime adapts

Chapter 5: From the bird's eye view on politics, to the over-the-shoulder policy view on governance

- The distinction of such a descriptive, 'bird's eye perspective' of on-going governance dynamics, and the prescriptive 'over the shoulder' strategy and actions contained in the policy

  Dynamics, which might aim for structural change, cultural change or new practices &

  The complementing, reinforcing, or confronting relationship between on-going and prescribed dynamics

Chapter 6: From transition governance to transition projects

- The connection between different instruments contained in the policy

  Connections in time but especially between different spheres of governance (i.e. aimed at structural, cultural change or new practices).

Chapter 7: From dynamics to instruments, and from instruments to methods

- The specific characteristics of the instruments in relation to the (perceived, expected and/or desired) dynamic state of the transition

  Dynamic state in terms of patterns of change, and phases of change

- Incompatible methods, owing to differences in prescribes roles

Not all ideological positions are reconcilable with middle range theory or specifics of transition regime dynamics models, for example, ideologies that advocate an entirely different society such as a revolution in our political system, or a shift from a material to a spiritual state of being. Third, we found that sometimes instead of the a priori theoretical or ideological position, the case at hand forces one away from adopting conventional transition studies theories or other middle range theories, as some policy problems touch upon many different transitions.

Transparency & completeness

A second category of points of attention relates to implicit assumptions and inferences in transition policy arguments. As discussed in the introduction, it is not useful to hold transition policy arguments up to the standards of formal logic, but we found some highly relevant elements to be conspicuously missing in theory and practice. Examples of these are the ideological position (or position on governance theory), or the assessment of on-going transition governance activities. When developing policy arguments, these issues can be overcome by explicating some implicit assumptions and complement the arguments where relevant.

Nature of statements

Related to transparency, we found that sometimes it can be unclear what the nature of statements on transition and Transition Management are in both theory and practice. Often this concerns the separation of normative, descriptive (explanatory and phenomenal) and prescriptive elements within a transition policy argument. We found these problems already start in the theory of the dynamics of regime shifts, such as the conventional applications of the MLP, which implies that many theoretical models are unsuitable and the newer, advanced models may require adaptation. We also concluded that within Transition Management (or governance), a better distinction is needed between descriptive, on-going activities and those actions prescribed by the policy.

8.1.2 Points of attention in connecting transition dynamics to Transition Management

With regard to the core research subject (how can Transition Management be related to the dynamic state of the transition?) we can distinguish four 'red threads' of recurring aspects on each level emerge from these points of attention: demarcation, phase, pattern and lastly structure, culture and practice aspects.

1.Demarcation
A recurring matter on each level of our framework is demarcation: at the highest level we demarcate the system from its environment (the landscape); subsequently when we study the system we also need to study its boundary dynamics; and in understanding the governance dynamics in a system in transition, we need to understand how

different actors and networks might have competing system demarcations. The policy at hand might focus on a specific subsystem (e.g. a niche), and within a programme participants might differ in their demarcations.

2.Phase
The phase of dynamics is not only relevant for the dynamics of the system as a whole, but subsystems might experience very different levels and types of dynamics. Moreover, those involved in transition governance might differ in their perception of the phase the transition is in and there might be struggles about the need to accelerate the transition into the next phase and such an acceleration may or may not also be an aim of the policy at hand.

3. Pattern (& underlying conditions)
On the system-level, the system-as-a-whole experiences patterns of transitional change, and in chapter 3 we demonstrated that these patterns also occur more localised between constellations (subsystems such as niches). Transition governance can be focused on different patterns, including 'mainstream' or 'regime' governance becoming susceptible for adaptation patterns, and there might be debate about which pattern to stimulate. At the policy, programme, and project level, we found not only the pattern to be exploited, but also that the desired pattern affected design of instruments and methods in transition policy arguments.

4. The structural, cultural and practice dimensions
At the system-level, the regime determines the dominant structure, culture and practice. We linked this to different types of transition governance that might be distinguished (structural, cultural and practice-oriented). Subsequently we linked the structure, culture, practice triplet to different types of transition governance and to different types of instruments.

8.1.3 New analytical lenses

The third category of findings, new and adapted conceptualisations that can aid analysing or developing policy arguments by providing 'analytical lenses', are mostly related to the four red threads in connecting TM to dynamics discussed in the previous subsection:
- System boundaries as contested, shifting and overlapping with other societal systems, by sharing constellations: primarily addressing demarcation.
- A framework for how multi-regime policy problems might be addressed: thus also addressing demarcation.
- An empirical method to study the dynamics of transition cases, using the multi-pillar theory; including a reflection on the Structure-Culture-Practice triplet of constellations: thus addressing this triplet, but also demarcation, pattern and phase.
- A conceptualisation of a regime adaptation pattern, through windows of opportu-

nity between transition governance and regime governance, by frustration of the latter: thus addressing patterns.

- A reframing of transition governance, as governance streams associated to the structure, culture and practice of the societal system: thus addressing structure, culture and practice.
- A reflection on Transition Management as managing the interfaces between TM-activities, transition governance, mainstream governance, and the system as a whole: addressing structure, culture and practice.
- An instrumental guideline on aligning instruments to system dynamics: addressing patterns and phase.
- A first sketch of a framework on roles and values in implementing Transition Management methods (not directly related to a red thread).

8.2 Potential applications of framework and findings

The research framework can be used to describe transition policies for scientific study, for example as first step in a comparative study. Moreover, these findings can be used in several ways with a societal aim, depending on one's view on how transition studies (and policy science) should contribute to policy. This role of science in practice has been extensively addressed in Transition Studies. Rotmans (2005, p 19) notes "research into transitions constitutes a membrane with only thin dividing lines between fundamental/theoretical work, practice-oriented research and practical experiments." Rotmans uses the concept of Mode-2 science (Gibbons et al. 1994) with scientists being actively involved in heterogeneous networks (Rotmans 2005, 20). Loorbach reflects on this as 'post-normal science':

> "Methodologically, the new research field of transitions requires new types of research that have an integrative nature, are normative in their ambitions, have a desire to contribute to societal change and are participatory. (…) This fits within the development within the sciences of the so-called 'PostNormal Science' (Ravetz 1999; Funtowicz and Ravetz 1994) that legitimates the involvement of diverse knowledge sources in science for policy through calling for extended peer communities and emphasizing the inherent uncertainties and values in policy-related science."
>
> (Loorbach 2007a).

Avelino explores the idea of transitions as a boundary project (based on Metze 2007) between science and practice: "The use of transition concept can be considered as a type of boundary work, in which actors are purposively blurring the boundaries between science, consultancy and business, between different academic disciplines, between 'technology' and 'organization', and between the 'long-term' and 'short-term'." (Avelino 2011, 100).

In contrast, some literature on the science-policy interface puts science somewhat in the role of a less engaged 'backseat driver'. Stirling (2006) for example distinguishes between 'science on top' and 'science on tap' (in plea for the latter). Spangenberg (2011) notes: "Instead of claiming the lead in policy decisions, the science of sustainability is deliberately restricted to contributing to science-policy interfaces, social processes where the exchange between scientists, decision makers and stakeholders takes place." [1]

Three ways of applying the findings

There are different levels of engagement of this type of science towards practice. These levels also appear to be related to different modes of science from descriptive informing to prescriptive intervention. We will elaborate on three typical applications of the findings in the next section (see also table 8.1).

Objectively (dis)engaged (descriptive)
In an approach refraining from any normative element, the contribution to practice may be the description, comparison and positioning of transition policy arguments.

Critically engaged in dialogue (normative)
One step further would be to not directly engage in policy practice, but to critically reflect on the quality of policy arguments. This would necessarily involve some starting points on what constitutes a 'good' policy. This would also involve adopting some basic principles from transition studies, including the very general aim of a 'sustainable' or 'future proof' system. This would thus be a normative approach. Even though in such an approach there would be no single "right policy", policies can be wrong.

Hands-on engaged in action research (prescriptive):
Closer to how Loorbach and Wittmayer describe Transition Management as action research, we could lastly envisage a pro-active role of science in practice, by being actively involved in (co)developing policies, or at least in developing the developing instrumental guidelines and tools that developers of policy should adhere to. The focus in such application is thus on prescription.

		which findings could be used			
mode of use	how findings could be used	research framework	critical points of attention	methods and conceptual models	what tool could be derived from the findings
Descriptive (disengaged) Transition Management policies as empirical phenomenon to be studied	As a structured way to gather information	X	(x)		An ordering framework (e.g. list of questions) to categorize elements from policy documents and/or interview transcriptions; and/or to structure interview protocols beforehand.
Normative (critically engaged) Transition Management as an analytical instrument for reflection on transition policies	Assessing the merits of a transition policy argument	X	X	(x)	By a 'check-list' to assess each relation and critical points of attention for each relation
Prescriptive: (hands-on engaged) Transition Management as (teaching) the art of crafting policy	Aiding policy development by design principles	X	X	X	A step-by-step guideline for developing policy.

Table 8.1 Approaches to analysing a policy argument

These different application modes, use different categories of findings from the thesis (see table 8.1). In a descriptive mode of Transition Management, the focus will be on the research framework (although the points of attention might help to not overlook elements in the description). For a critical assessment of a policy, the research framework and the points of attention could be used (and some conceptual models might aid in this). Lastly, for a prescriptive application, the framework, the critical points of attention and the conceptual models could be used.

Explorative application to current Dutch healthcare policy

In the next sections, we elaborate on each of these three typical applications further. We also illustrate how such an application might look in practice, by exploring an application to current Dutch healthcare policy. It should be stressed this is a limited, indicative application.

In contrast to other (and earlier) policy fields in the Netherlands, healthcare policy is not codified in extensive policy notes, such as those that described the Dutch energy transition policy. Instead policymaking is closer connected to political cycles, with the 'governmental declaration' (regeringsverklaring)[2] and the underlying 'coalition agreement' (regeerakkoord) in 2012 being the starting point of a number of letters to parliament, including policy documents as annexes, progressively detailing a renewed policy (based upon earlier reform proposals). Ultimately these policy documents are translated into legislative proposals (including explanatory memorandums) and less visible policy and budget decisions. In our explorative application, we will look at the following documents:

A. The regeerakoord (coalition agreement) 29-10-2012, annex to 33410-15[3]

B. Letter to parliament, 8-2-2013, "Van systemen naar mensen", 32620-78

C. Report of the council for public health and healthcare presented to parliament, December 2012, "Regie aan de Poort" Annex to 31765-72

D. Letter to parliament, 25-4-2013, "Naar een waardevolle toekomst", 30597-296

E. Policy memorandum, 25-4-2013,"Hervorming van de landurige ondersteuning en zorg", annex to 30597-296.

F. Letter to parliament, 25-6-2013, "Reactie op het RVZ advies Regie aan de Poort", 32620-89

G. Letter to parliament, 20-7-2013, "Versterken, verlichten en verbinden", 30169-29

H. Letter to parliament, 6-11-2013, "Toekomst AWBZ", 30597-380

I. Letter to parliament, 28-3-2014, "Transitie hervorming langdurige zorg", 30597-428

J. Report presented to parliament, "Mantelzorg uit de Doeken", SCP

One might wonder beforehand if the current Dutch government policy is actually a transition policy. The policies frequently refer to the word transitions, but this word appeared to have changed meaning compared to earlier healthcare policies (such as the programme of chapter 6). For transition, the word "transformation" is used, and the need for 'transformative change' is stressed. Furthermore, policies (or at least their aims) explicitly concern change for future generations and stress the need to go beyond legislative reform. We will elaborate on the extent to which the instruments are also what could be expected from a transition policy in §8.3 and §8.4.

8.3 Descriptive application: mapping policies through the research framework

For the description of policies, the levels of the research framework provide an ordering mechanism to categorize elements in transition policy arguments. For example one might, when scanning a particular field for Transition Management activities, categorize them as policies, programmes, projects and methods and describe how these are related to each other.

8.3.1 Method of application

The source material for the description will typically be a written policy document[4]. In many cases not all considerations of a policy will be written down, thus at least the underlying documents and analyses would be needed. Moreover, interviews with the policymaker could be used for further clarification. This might be especially true for more informal operating policymakers, e.g. NGOs or networked organisations, which might not have a documented policy process. For this mode of application, it would be important that such interviews do not steer or stimulate the respondent beyond the current policy. Also, interviews (long) after the policy would need to reckon that actual outcomes would influence recollection of intended effects and the presentation of these recollections. As stated, the categories for describing the policy would only be constituted by the framework, but the points of attention might still aid in identifying specific elements. A possible non-exhaustive list of research questions for describing a policy on the basis of the research framework might be:

- **Policy owner**: Who will execute the policy?
- **Problem, system demarcation:** What are the (persistent) symptoms of the problem at hand? To which societal system is the problem and solution space linked? How is the system at hand implicitly or explicitly demarcated, and how is this related to the solution and problem space?
- **Current dynamic state:** How is the present (and past) system or regime characterised in its dynamic state and by material and idealistic characteristics? How are subsystems, such as niches, described both by substance as by dynamic state? How is the environment characterised?
- **Solutions (niches and paths):** Which regime changes are deemed necessary? Are landscape trends of niches seen as (part of) the solution? Which other types of alternatives for the regime can be noted? Are possible transition paths detailed?
- **Conditions and leverage points for change:** Which conditions and leverage points do the dynamics of the transition imply for the policy? Which mechanisms of change does the policy envisage?
- **On-going transition governance:** Are on-going (or perhaps earlier) transition governance processes described and if so, how? Does the policy complement, confront or strengthen these?
- **Instruments and programmes:** Are concrete activities (such as instruments,

actions, etc.) detailed? How are activities connected cognitively and in time? Which external interfaces are planned or expected? How do these activities relate to the resources of the policymaker?
- **Methods and organisation:** Are methods, roles, and project organisation specified? If so, how?
- **Theory:** Which explicit references to theories or theoretical assumptions can be found in the policy and which might be implicit assumptions?

8.3.2 Indicative application to Dutch healthcare

The primary policy owner is clearly the Dutch national government, and more specifically the Department of Health, Well-being and Sport. Even though some actors, such as the municipalities, are stressed as crucial partners, they appear to be more the object, than the subject of the policy.

Problem, system demarcation

The Dutch government identifies a long-term challenge to Dutch healthcare. Most problem statements start from the ever-increasing costs of healthcare relative to the Dutch economy [B,p1] which threatens solidarity between and within generations [B,p3; D, p1] and is driven amongst others by an ageing population and medical innovation [B,p6]. The policy also perceives a too fragmented, too bureaucratic healthcare [B,p5]. However, more fundamental problems are also mentioned such as over-medicalisation: "we have more and more drawn [matters] into the medical circuits," [B,p6] and lack of attention to individual circumstances: "unequal cases are treated equally"[5] [B, p1] and "the underlying needs of patients are insufficiently addressed" [E, p2]. The policy also explicitly addresses issues of efficiency versus ethics: "do we have to do everything we can do?" [B. p7]

Although not explicit, the policies also contain some notions of persistency. Not only by phrases such as "more and more", but also by noting that innovation in process and organisation is insufficient to address the challenges [B, p6], by noting "alienation" in the system, and that "the gap" between society and the medical sector is widening [B, p7].

The system to be transitioned is primarily identified as 'zorg' (care)[6]. This is a somewhat diffuse definition, with apparently healthcare (consisting of nursing and curative care, amongst others) at its core, but also encompasses (or relates to) 'support'[7]. Occasionally, the older framings of government responsibilities as "public health" also appear to influence the demarcation [B, p7]. Other discussed related societal systems (or phenomena) are housing, lifestyle [A, p 20], and sport [A p 24].

Non-professional, informal care (by oneself or by family, friends or neighbours) does not appear to be included in the present system[8]. But the interrelation between the formal care system and informal care system is discussed, for example the tendency

of the formal system to provide professional care in situations where informal care is possible, pushing informal care in a background role [E,p2].

Current dynamic state

The policy documents give insight into perceived developments and dynamics in the (health) care system and its environment. The following main trends are noted [B,p5]:
- A more individualistic society
- Progress in medicine: transforming lethal diseases into chronic diseases amongst others
- A change in lifestyle (apparently to a more unhealthy one)
- An information paradox: publicly available information on quality of healthcare improves that quality and informs choices of patients, but knowing about quality differences also erodes confidence in healthcare in general
- An ageing population

These trends have led to these noted problems: medicalisation, dominance of professional care over informal care, and an unstoppable growth in expenses. The fear is that these trends will continue into the future and continue to increase the problems. The recent financial crisis is seen as a shock to the system that has greatly increased the urgency for fundamental change [B, p1].

A number of more favourable continuing and emerging trends are also noted [D, p1]: prevention is gaining in importance; the importance of quality (of life) is increasing; the elderly are not (as sometimes feared) becoming less vital (although the number of less vital elderly will grow in an ageing population); volunteer and family care is still relatively strong; and people want to receive care at (or closer to) home.

The dynamics within the healthcare system are also discussed, mainly in reflections on the relationships between pairs of subsystems, such as:
- **Prevention – curative care:** the need for preventing instead of curing is gaining importance, even though not yet successful. We might interpret this as an idealistic, or cultural gain without yet a match in material or structural change.
- **Cure – chronic care:** cure, in the analysis of the government, is driving costs in chronic care, as progress in medicine enables people to live longer but with remaining chronic diseases. They also note an on-going merger of chronic care and cure, even though it is not entirely clear if this is fully an autonomous trend or a policy desire.
- **Centralised – localised care:** people are believed to prefer care at home and close to home. Specifically in curative care a change towards more specialised, centralised centres seems to be strived for
- **(Informal) – formal care:** although it is not entirely clear if informal care is within the system, the dynamics of the relation are described: formal care dominates and informal care now only fills the voids where formal care is not provided. It is thus presently of a different nature than formal care.

As mentioned, the professional and medical care dominates in this system, and thus could be considered a 'regime'. Boundaries between these subsystems are blurring (which appears as both a normative and descriptive statement).

De-institutionalisation and small scale living arrangements are noted as counter-trends in the system that have been on-going for decades [E, p5-6]. Other than these counter-trends, the policies do not describe niches.

Solution directions (paths and niches)

In the policy documents, we can find three main routes that could be considered desirable transition paths:

- **Defragmentation within and between subsectors** (such as cure-care or cure-prevention): this appears to be already occurring autonomously but more adaptation from the regime appears necessary.
- **New balance between formal and informal care:** although medical care and care involving direct body contact should remain with professionals, the informal care should where possible take over the support functions. A transition from informal care filling the voids left by formal care, to formal care filling the voids for those who need (more) support than family, the social network and volunteers are able to provide. Informal care as niche (or niche-regime) is characterised in numbers by a report by a government agency [K].
- **De-institutionalisation and decentralisation (but curative upscaling):** a transition away from large institutional care facilities which are organised nationally (or regionally), towards local organised home care, local health centres etc. On the other hand curative care should also further specialise and upscale. The de-institutionalisation is considered to be on-going for decades.

Dynamic conditions, leverage points and mechanisms of inducing change

There is no description of the transition phase, but the lack of 'process innovation' perceived could be interpreted as signifying little currently on-going transition dynamics. However some new paradigms already seem to gain some ground. So the transition might have started, but be in an early stage. The envisaged transition appears to occur in a couple of years (one political term): "curative should be truly differently organised in four years time" [B, p15].

We could interpret the dominance of medical paradigms as a regime growing stronger, but some of the counter trends in the system also points to some regime adaptation (or niche empowerment).

The envisaged mechanism to accelerate the transition appears to be an adaptation-like pattern. The documents stress the need for all healthcare providers to change and "we need the whole healthcare field to help us" [B, p15]. Convenanten (voluntary agreements) are considered an important instrument [A, p20] as well as dialogue with the

field [d2] possibly because "primary those parties directly involved [in healthcare] have a responsibility" and: "finding solutions with the sector [healthcare service providers] will produce better results and more support [for change]" [B, p 15].

On-going transition governance

There is little to no reference to on-going transition governance processes or earlier processes. Exceptions are the noting that "many good ideas have been developed for the improvement of nursing care outside of institutional care" [A, p 22] and the existing "national agenda e-health" in which the government can join an initiative 'from the field'

Instruments and programme(s)

A large number of instruments are introduced in various policy documents. In an early document five themes are identified: healthy growing up, healthy aging, complaints, information, and finances. In later documents, the primary instruments are legislative changes, mostly closely related to the financing of care. The instruments thus have a structural focus. These are implemented through an agreement with trade associations of healthcare providers in the spring of 2014.

More peripherally, a number of more specific transition instruments are mentioned, such as the "future agenda for informal care." In this process, representatives of the main players in the field participate, thus following an adaptation pattern.

Methods, roles and organisation

The instruments appear quite close to the normal mode of operation of the department. Few organisational and role considerations are present in the original policy. A quality institute for improving quality and quality information is explicitly given an important role.

Theory

There are no explicit references to any theory of change. The difference between process and product innovation might have some theoretical basis. The advisory reports from the council for healthcare and public health appear to use a barrier model for change (focusing on structural barriers).

8.4 Normative application: policy assessment

If one moves beyond mere reflection, and wishes to critically engage with policy (and policymakers), the findings of this thesis can be used to systematically scrutinize transition policy arguments, although this will be limited to the merits of a policy, which is only one aspect of the legitimacy of a policy[2]. The description approach outlined in the previous section can be the basis for such a critical examination, for example for making recommendations to policymakers and other practitioners on improvement for a specific policy, or future policies. Of course, if the policy contradicts TM theory, this could also be reason to revise TM theory.

8.4.1 Method of application

A basic approach might be to see if every relationship is addressed (completeness); if actions or perceptions on different levels and relationships between these levels do not contradict each other (consistency); and if there are implicit or hidden additional assumptions (transparency). To do so, these policies could be scanned on the identified critical points of attention in this thesis. A possible list of critical questions for such application could be:

1. **Is the policy at hand a transition policy argument?**
   - In the sense of motivated courses of coordinated action by an actor (persons, (parts of) governments, other organisations or networks) within a given environment in an effort to influence the course (pace, direction and/or substance) of transitions in order to address 'persistent problems'

2. **Is a persistent problem identified, which (potential) can be addressed by a transition of the regime in a single functional system within society and are demarcations and foci motivated?**
   - Including attention to: if a societal system is selected with an explicated societal function; if the scope and scale of this system is consistent with the (apparent) problem and solution space; if the system is (in a sensible way) demarcated from its environment; Are competing demarcations by other actors addressed?; Are choices to focus policy efforts on certain parts of the system explicated?

3. **Is the dynamic state of the system characterised at least with respect to turbulence/pace (e.g. phase) and type of on-going change (e.g. patterns & conditions)?**
   - Is this characterisation independent, except scope and demarcation, from the desired transition?

4. **Are perceptions and strategies of other actors and on-going processes of transition governance identified and related to the policy?**
   - And is the policy consistent in re-enforcing, complementing or confronting these in various aspects?

5. **Is a credible mechanism provided for either the further empowerment of an alternative or the adaptation of the regime to alternatives and is this related to the policy?**
    - Or rarely, inducing a reconstellation pattern? Are instruments adjusted to the pattern they aim for?

6. **Are the system and constellations characterised (e.g. by structure, culture, practice, power) and related to the problem and solution direction in the policy?**
    - Does the policy define which aspect(s) of the system or niches it aims to address, why and how?

7. **Are activities, if part of the policy, connected to each other and to other actors, processes and networks; and is their organisation consistently planned?**
    - Including addressing competences and roles and mitigating possible role conflicts between methods and instruments.

8. **Does the policymaker appear to have (potentially) (access to) the resources needed to conduct the instruments and programme(s)?**
    - Or at least the resources for the first activities and access, or a plan to gain access, to further resources for the next activities?

9. **Are positions on (transition) governance and ideological starting points explicated?**

10. **Are the main theoretical assumptions in line with the core assumptions and theories of Transition Studies?**
    - Does the policy accept a middle range approach to the dynamics of societal systems, including the general assumptions contained within transition studies on the dynamics of transitions (amongst which the role of the regime) and the basic assumptions of TM (amongst which the starting points of complexity management and the partial malleability of societal problems)?

8.4.2 Indicative application to Dutch healthcare

If we would undertake such an exercise for the Dutch healthcare policy described in the previous section, what might our conclusions be? First, in its aims and high-level problem and solutions setting, the policy appears truly a transition policy. The title of the first policy document "from systems to people" could as well have been the title of a transition arena document. The policy argument starts out from a long-term, multi-generational challenge. It explicitly aims for a turning point (omslag) in 'thinking' about healthcare [B, p1]: "more than a list of measures, we want to sketch the movement and our vision." Some basic ideological principles are explicated, such as (limited) solidarity, austerity, and a shift of responsibility from government to care providers and citizens.

The documents explicitly aim to broaden healthcare towards informal healthcare and address overlaps, tensions and opportunities with adjacent societal systems. The documents describe a brief history of developments in healthcare during the last decades and a sketch of the regime, its persistency and its dominance over the system. A number of motivated transition paths are also sketched (even though there appears some contradiction between integral local care and curative specialized centers). There is even recognition that the government cannot make this change on its own.

However, this framing of the policy problem as a transition policy, including a much broader scope than conventional policy, is not followed through in the remainder of the policy argument. There is very little analysis or even acknowledging of transition dynamics. In particular, the dynamics of alternatives (also in relation to the regime) are not thoroughly analysed. For example, the relationship between formal care and informal care is addressed from the point of view of formal care, but the analysis of informal care is much weaker: it remains unclear what the potential, internal dynamics, weaknesses etc. of informal care are.

Moreover, an adaptation pattern is sought without much motivation, even though the reluctance and resistance to change of the incumbent actors in the sector is recognized. How they will convince these actors to change or how this will happen autonomously is not clear. It appears there is the threat of top-down change as they "**prefer** not to use legislation and other regulation to enforce [addressing the challenge in curative healthcare]" [B, p15, emphasis added].

Perhaps because of the quick choice for an adaptation pattern, the documents appear largely ignorant of the on-going and earlier transition governance processes, even those the department is actually involved in (for example the transition programme of chapter 6). Thus, although the department underlines the impossibility of top-down implementation, their actual approach is quite close to such a mechanism.

With regard to phase, a situation is sketched of a transition that is only just beginning, but is also assumed to be finalized in a few years; perhaps taking a political term or a typical implementation window for a conventional policy. This might be related to

the underdeveloped reflection on change: we find some reflections on product-process innovation and some reference to barriers, but these models are inadequate for the scale of change set out by the policy aims.

As the policy is fleshed out in subsequent policy documents, the focus is firmly on legislation and other regulation, especially in relation to financing and measures related to the effects of these financial reforms. These instruments appear well adjusted to the adaptation pattern sought, for example by seeking voluntary agreements for regulation; strengthening a special innovation programme focused on incremental innovation and adaptation ("InVoorZorg!"); or setting a 'future agenda' for informal care. Although these legislative measures are carefully related to each other in the documents, the more programmatic, thematic approach in the first few documents is abandoned. The ambitions to achieve a paradigm shift are also not translated into instruments. Or the structural change is expected to induce a paradigm shift: for example limiting formal care is expected to lead to more informal care. Perhaps because virtual all of the instruments are conventional policy instruments, the roles and competences of the department are not questioned at all.

We thus, tentatively, conclude that the 'red threads' in the policy at hand are inconsistent: the transitional ambitions are not followed through in instruments, the dynamics are not fully analysed and on-going transition governance efforts are largely ignored. Kern and Howlett (2009), discuss incoherent policies and specifically the relationship between aims and instruments. For the Dutch energy transition they similarly conclude that the transition policy is (or was) 'layered' upon the old policies leading to inconsistencies. For Dutch healthcare policy, the aims appear new but the instruments conventional, leading to incongruities between policy elements, which are in themselves quite well motivated.

8.5 Prescriptive application: design of transition policies

Taking the engagement of science into practice one step further, we could also consider scientific applications of Transition Management as designing (and subsequently adapting) transition policy arguments. This could be interpreted in TM as a combination of policy science and the craft of policy; close to Mode-2 science (Gibbons et al. 1994). In such an approach, we no longer reflect on TM in practice, but actively develop and prescribe; or at least we develop concrete guidelines for those who do. In Stirling's (2006) terms this would no longer be "science on tap", but either "science on top" or science in co-production with practice.

8.5.1 Method of application

One approach might be to simply use the previous list for critical assessment as points of attention in writing a transition policy. However, we could also use the concepts and methods developed within this thesis in a more integrated and systematic way. Figure 8-1 depicts such a design guideline[10]. The levels are similar to the levels of framework, but they have been restructured to represent analytical and design steps. These steps move from more analytical, descriptive conventional scientific 'Mode-1' activities to more design and 'policy as a craft' type of 'Mode-2' activities. Recurring on each level are the four red threads we identified in §8.1: demarcation, phase, pattern and the structure, culture, practice triplet. The following are suggested steps in such a methodology:

Step 1. (Initial) Demarcation
A first step in the analysis would to set an initial demarcation: what is the apparent problem, what are first ideas about solutions? Is there indeed a need for a transition policy? Who would be the enacting policymaker(s)? In this step, answers would only need to be indicative and would not require extensive research (in medical jargon we could say an 'anamnesis'). An early check on demarcation can reduce the chance of 'answering the wrong question'. At the same time, such demarcation should be overly broad to reduce the chance of missing critical aspects from initial biases and omissions (as noted in chapter 2 and 3).

Step 2. Analysis of (recent) historical dynamics and characterisation of the present dynamic state
Policymaking is typically forward looking, but as we discussed in chapter 3, historical analysis can inform the policy about the present dynamics. The method developed in chapter 3, is well suited for analysing historic trends for the purpose of characterising the current dynamic state of the system. One caution might be to not assume that future developments will remain within these limits and dynamics may play out on new dimensions. For example the future energy transition appeared to entail the shift from fossil to non-fossil technology, but 'large scale-small scale' has emerged as another dimension of transitional change.

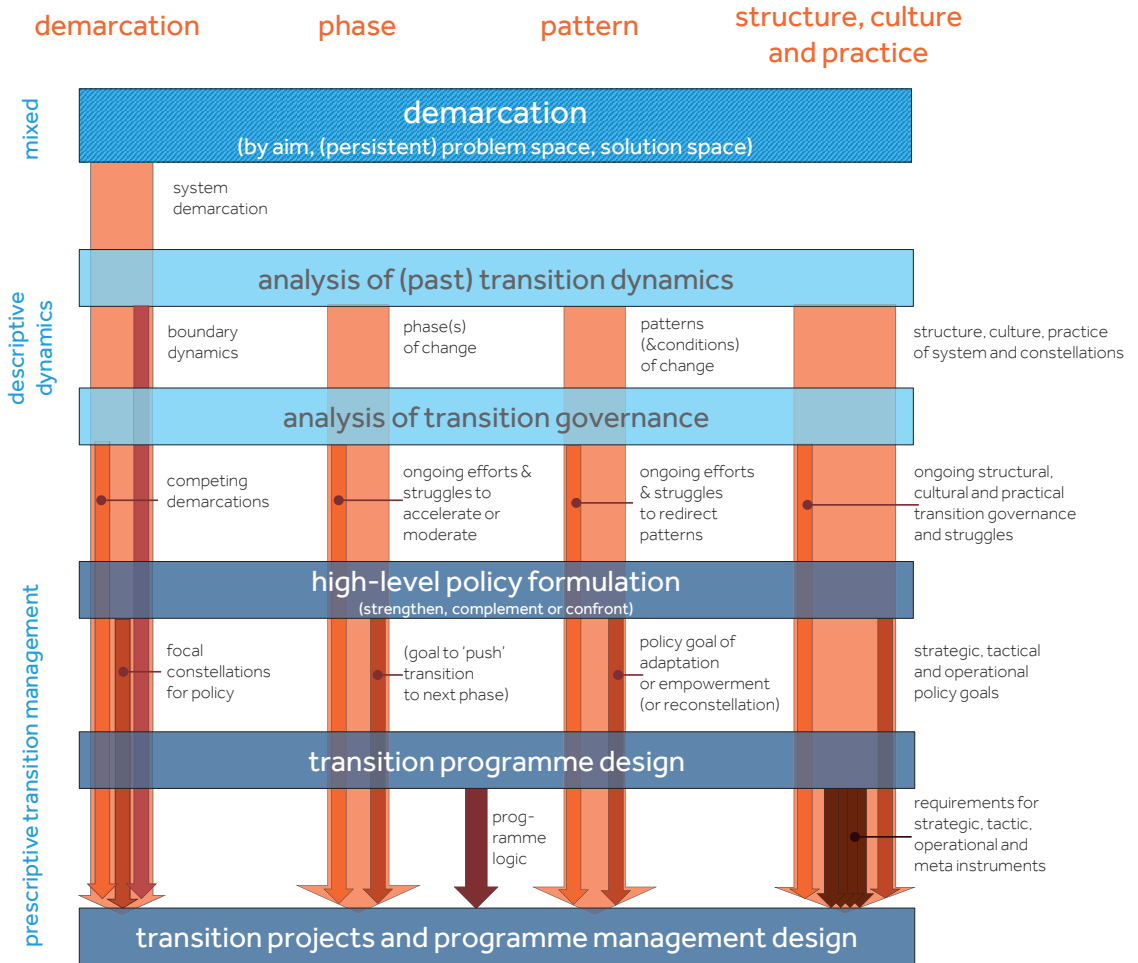demarcation phase pattern structure, culture and practice

Figure 8.1 Multi-level analysis and design of a transition policy argument. Descriptive steps are light grey, prescriptive steps in dark grey (and demarcation has elements of both)

Step 3. Analysis of on-going transition governance

In the next step, analysis is conducted on how other actors and groups are already engaged in transition governance, as it is unlikely in any societal system of significant size that someone is not already undertaking (or recently undertook) any effort towards long-term change. This can be challenging, as these governance efforts might not be directly visible (especially during the predevelopment phase) and snowballing from first contacts might result in only mapping a specific community involved in the transi- tion. The method developed in chapter 5 does not have such risk of a bias, but can be too coarse grained to find small (but often significant) initiatives; thus a combination of

a general survey through, for example, news sources and a more focused snowballing through interviews might generate the best results.

Step 4. High-level policy formulation

The first prescriptive step involves the global choices on how, within all identified constraints, a contribution can be made towards furthering a transition that addresses the persistent problem. This includes decisions on the four red threads:

- **Demarcation:** should the policy aim at change in specific constellations, for example the regime or a niche-regime?
- **Phase:** what does the current phase of the transition imply for the style of transition governance? Should the policy aim to (contribute to) move the transition to a next phase and is this indeed feasible?
- **Pattern:** which pattern should the policy aim for: adaptation (typically of the regime or niche-regime), empowerment (typically of the niche or niche-regime), or (atypically) a reconstellation pattern? How do these patterns relate to on-going transition governance (competing, confronting, complementing)?
- **Structure, Culture, Practice:** which aspects of the regime have leverage opportunities to induce change and does the problem, and system analysis, conclude the need for change on these points?

Moreover, at this level, the policy should also outline a general strategy: which parties to involve, which resources can be initially mobilised, etc.

Step 5. Programme design

After the general aim and strategy are set, this can be translated in a general framework of activities in the programme, for example through a flowchart or timeline. But, besides the technical planning of individual activities, it is at least as important to design the interfaces to the outside world, by specifying, for example, the general learning mechanisms, key objectives, and principles in organising the programme.

Step 6. Transition projects and programme management design

From the general aims and programme structure, specific activities to be undertaken can be detailed, including instruments, projects and methods. Specific instruments and methods can be found in TM-literature, for example transition experiments (Van den Bosch 2010), monitoring (Diepenmaat and Taanman 2009), or scenarios (Sondeijker 2009; Sondeijker et al. 2006); but the instruments might also include conventional policy instruments. It should be realised that these activities will be part of the programme, but also develop autonomously in their own context. Some of the analyses and choices for the whole programme thus need to be repeated per project (as we saw for the arena in chapter 7); including tuning the instrument design to the pattern and phase of the (localised) dynamics.

One of the concrete activities to be further detailed is the programme management,

which requires a management structure and especially the composition of a programme team, including attention for role conflicts in different methods for individuals or the team as a whole.
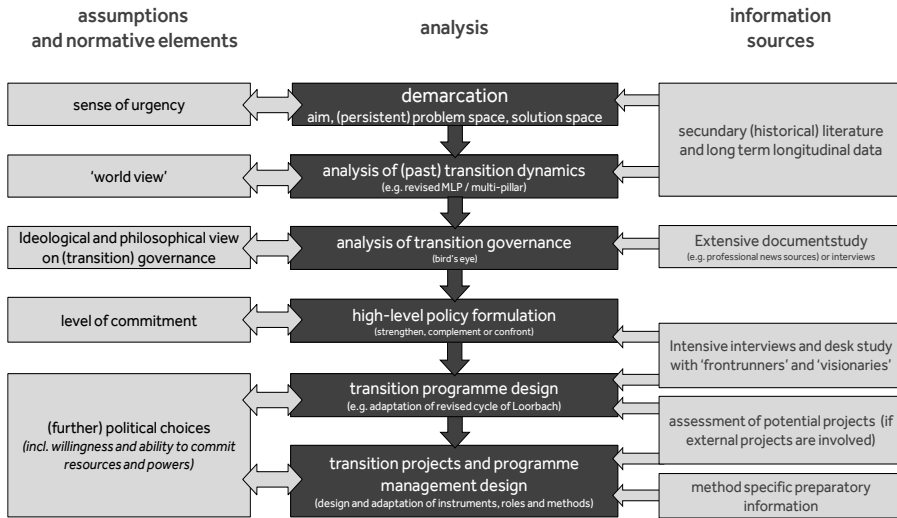

figure 8.2 Information and (normative) assumptions flowing into the analysis

Information sources and (normative) assumptions

Throughout the analysis and design process, external information will need to be integrated. As with the nested case study, various methods of information gathering would need to be used at the various levels of analysis and design (see figure 8-2). On the other hand, normative and other assumptions not based on analysis will also shape the policy (the flows on the left in figure 8-2).

Iteration, recurrence and stopping rule

In figure 8-1 and 8-2 the arrows only flow in one direction to represent the sequence of logic. The actual analytical and design process would however necessarily be iterative (see figure 8-3), especially as findings on lower levels might necessitate a new demarcation on a higher level.

It should also be noted that the outcome of the process can be that, given the constraints and other starting points, no strategy can be formulated to significantly contribute to the transition (or the strategy cannot be translated into action). This might lead to reconsidering the constraints or the conclusion that for the particular actor or network it might be wiser not to engage in Transition Management for the moment.

Lastly, it is important to note that a particular combination of design method's (or designers) failure to find a feasible and meaningful contribution does not prove such a strategy does not exist, as the elements of the process are not all of an analytical nature[11]
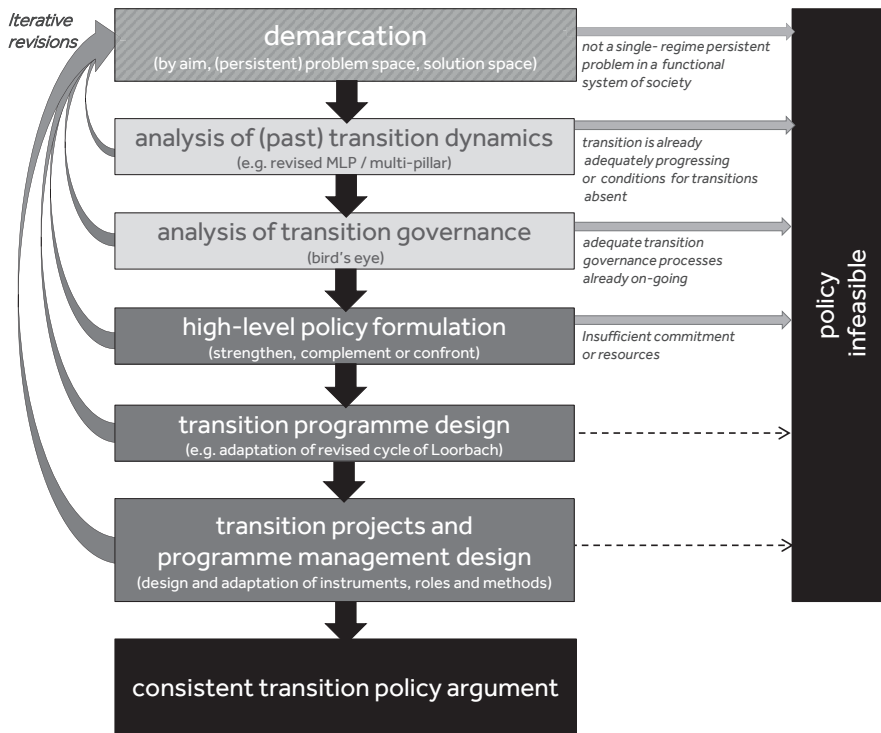
. Figure 8.3 Flow of activities in analysis and design process of
developing a transition policy argumen

8.5.2 Use of the guideline for Dutch healthcare policy

To apply this guideline to Dutch healthcare policy is, even for an exploration, beyond the scope of this thesis. But we might reflect upon the improvements it could provide to current policy. At the highest levels, actually, the guideline might not significant change the policy, as we concluded at this level the policy is in line with general principles of a transition policy argument.

The analysis of transition dynamics could be done much more systematically and should involve the dynamics of the alternatives and niches as well. This might also better inform the choice for the mechanism of change, leading to either to a better motivated choice for the adaptation pattern, including the leverage points to change the regime, or the choice for (additionally) aiming for an empowerment pattern of niches. It would almost certainly lead to a more realistic timeframe for the whole transition, which would also allow to better design instruments for the current, early phase of the transition. The current policy is positioned as if this policy is the only on-going transition governance process. An analysis of on-going governance dynamics could also aid in

finding leverage points, in line with the ambition of the department to 'together' make the transition happen, instead of relying on the threat of top-down regulation. It might also provide a more positive view from the department on the innovative capacities of frontrunners in the field, whereas now mainly a lack of innovation is noted without differentiation.

In the design at the programme and instrument level, a balance could be found between structural and cultural activities, instead of focusing on the structural. This cultural aspect should not be addressed by a conventional PR campaign, but by stimulating dialogue and paradigm shifts in the sector, requiring non-conventional policy instruments. Other non-conventional policy instruments might be used as well, to scale up and set up transition experiments for example, instead of one large implementation of new structures.

Moreover, applying the guideline might not only improve the policy in specific aspects, but also ensure a better integration of these aspects and reduce the noted incongruities between aims and instruments. This would typically also involve confrontations between the new aims and the infeasibility of reaching these with conventional instruments.

It would require an extensive, in-depth study in interaction with policymakers and others to develop an alternative policy, but some elements very likely to be added to present policy for such an alternative are:
- Policy elements aimed at empowering those niches that already exist and are in line with the transition paths the department identifies, or, more generally, complementing the adaptation-oriented policy with an empowerment-oriented policy. Or at the very least differentiating those who are more and less willing to transform their structure, culture and practice within the regime actors.
- A distinction between short-term reforms and the long-term fundamental transition on a more realistic time scale, including attention to the stress created by structural reforms that do not match current practices and culture.
- Starting a new transition programme for those more fundamental changes, including a new shadow track, with larger scale experiments, visioning (with more focus on authority), and lastly tuning the structural reforms based on the lessons learned in this shadow track.

8.6 Reflection on position, methodology, and application

In this penultimate section of the thesis, we will reflect on the theoretical position, the empirical methodology and lastly on the application in practice.

8.6.1 Reflection on empirical methodology: benefits and drawbacks of a nested approach

We developed what we coined 'a nested case' approach, to align the empirical research with our multi-scale theoretical framework. It proved difficult to consistently select cases that both matched the theoretical issue to be explored and fitted in a series of nested cases. Three times, an additional case from outside the overarching case of Dutch healthcare, was sought. Moreover, conducting a multi-level case study as a pro-active action researcher[12] turned out to be challenging. One of the explanations might be that converging action research information in the later chapters and more traditional research in earlier chapters[13] is challenging (see for an argument on this, in atypical form Fisher and Phelps 2006).

Notwithstanding these draw-backs, the methodology was successful: it allowed the exploring and sometimes deepening of the theoretical issues in analysing and/or developing multi-level transition policy arguments. To have each case function as context for the subsequent case allowed some economy in research efforts, as fewer contexts had to be investigated separately. Moreover, sometimes, when specific details were lacking in one case, we could zoom further into the subject in the next case.

8.6.2 Reflection on theory: contrast to theories on planning in policy science

In the mid-1970s, when a number of scholars challenged the then (more) dominant approach of solving policy problems by thorough, decisive analysis, various related notions were developed such as Rittel and Weber's (1973) "wicked problems" or Ackoff's (1974) "messes". In the 1950's already the notion of bounded rationality (Simon 1957, 1955) was introduced, which Simon himself (1973) developed into ill-structured problems. Although from different angles, these theories all have in common the notion that some (policy, planning, design) problems cannot be fully analytically grasped. Common elements include: contradictory, shifting problem-solution perceptions that cannot be analytically reconciled, an infinite solution and problem space, interwoven factual uncertainty and normative differences, no clear standard of 'solving' a problem or a 'stopping rule', and a lack of comparative cases or a stable problem over time, so instead of learning by trial-and-error, they are one-shot operations.

Loorbach (2007a) refers to 'persistent problems' as a specific type of unstructured problems that "originate from patterns of thinking and acting that have rooted deeply within existing institutions and structures" (p. 14). Rotmans (2003, 8) even considers a persistent problem to be the "superlative" of wicked problems. Hisschemöller and Hoppe (Hisschemöller et al. 2001) have studied such problem structuration challenges for sustainability policy and conclude that in ill-structured problems, science can take at best a modest role of mediating in policy debates. Somewhat more structured problems allow a more substantive role for science, but often only policy advocates whose position the contribution fits will pick up such science contributions. This is at odds with most of the possible applications we discussed in the previous chapter, in which science, either 'on top' or 'on tap', makes a more substantive contribution to a policy.

We could thus critically reflect on whether an elaborate seven-relationship planning framework to support rigorous policy argumentation in order to address 'persistent problems' is at odds with literature indicating clear limits on addressing such policy problems by analysis. I would argue this thesis is not at odds with such literature on four grounds.

First, in so far as persistent problems are wicked problems, they are a specific subset of problems. Rotmans argues they are a 'superlative' of conventional wicked problems, as they involve breaking through a lock-in of ingrained patterns of thinking (such as regimes) that need to change. This might be, but, as we reflected on in chapter 2, the regime-based nature of typical persistent problems makes it somewhat easier to grasp them analytically. The regime can function as a pivot point for analysis and to rally forces for change. In this sense they might not be a superlative but a special subclass of wicked problems.

Second, continuous adaptation and exploiting small opportunities as they emerge does not preclude having a thoroughly thought through strategy that is connected to a longer-term perspective. Even Lindblom cautions against "confusing incremental politics with incremental analysis." (Lindblom 1979, 517; see also the approach of Perspektivischen Inkrementalismus in Sieverts and Ganser 1993 asnd Ganser et al. 1993).

Third, we could wonder what the alternatives are for the complex framework and if these are less problematic. The existing instrumental concepts for Transition Management are more straightforward, but we did identify serious flaws and limitations to using these concepts to develop and/or analyse transition policy arguments. Abandoning long-term policy ambitions and reverting to a pure incremental strategy might be an alternative for local, short-term problems that never required rigorous top-down planning in the first place (for example letting a new city district grow organically). But persistent problems are long-term problems often involving global causes and effects, for which an incremental strategy without attention to wider dynamics will readily result in local optimisation and thus strengthening the lock-in. Of course, we should avoid applying Transition Management when better policy approaches are feasible. For this reason we proposed a phase-dependant TM approach, in which conventional policy

plays a large role in later phases of the transition, and we prescribe a critical examination beforehand if a problem is indeed persistent and associated with a regime. Fourth, this framework focuses on the substance of the policy, but does not prescribe or describe policy development to take place in a vacuum. In practice, the approach might well be, and is, used in a participatory setting; for scientific study it should be seen as complementary to a process perspective on policy development (see next subsection).

8.6.3 Reflection and application in practice: communication

One might also question if the complex framework is an appealing, activating perspective for those striving for transitions in practice. This might aggravate the existing difficulty of policymakers and other stakeholders to comprehend the complex system based ideas from TM[14].

I would argue this question raises a more fundamental question on communicating the science of TM into action; which relates to the literature on TM as action research (Wittmayer and Schäpke 2014). Adaptations of the theory when put in practice are inescapable and desired. If not the action researchers themselves, practitioners will re-interpret scientific texts within their own context. But to which extent should we simplify TM theory in counselling practitioners (or action researchers)? Do we risk losing our message of complexity if we oversimplify? For example, in my personal experience, the TM cycle has a strong appeal to policymakers, yet we concluded it to be a very simplified view on actual Transition Management in practice by action researchers.

TM is explicitly positioned as a trans-disciplinary approach (Rotmans et al. 2004), but the question of if the theory is accessible for practitioners (even if they are visionary frontrunners) is not addressed in TM literature, even though more popular publications (Rotmans 2003, 2007, 2012, 2014) do seem to translate the ideas of transition studies and TM to a wider audience.

We might even question if we are always driven with how we most truthfully translate academic insights into practice. Do we in some circumstances deliberately overstate advantages and understate uncertainties, disadvantages, limitations and risk in TM theory? An ethical reflex might be to immediately denounce such practices, if they should occur. But we should realise that action research in the sense of pro-active intervening (instead of participation as a way to better observe), makes action researchers active practitioners as well. Action researchers, especially in early phases of an intervention, are frequently also policy advocates, competing with their policy approach of TM to many other alternatives. Moreover, we have seen that entrepreneurial competences are involved throughout the TM process, and 'spinning' is a typical entrepreneurial instrument. I would argue that an in-depth discussion of such matters and an empirical description of the politics of TM action research is long overdue, and its outcome would be decisive in how to communicate this framework to practitioners. A starting point might be the recent publication on TM and action research (see note 1).

8.7 Conclusion and recommendations for future research

In this chapter we recapped the research findings on the connection between transition dynamics and Transition Management from a policy argument perspective and synthesized these findings for descriptive, normative and prescriptive uses. On some aspects we suggested additions and improvements to existing theory and concepts, but the main contribution of this thesis is its systematic approach to the connection between dynamics and TM.

The scientific added value of this systematic approach is in allowing a better comparison and positioning of how transition policies address dynamics. Moreover, it can structure scientific debates on various aspects of this connection and help to identify missing links, which we already touched upon in this thesis. The findings also provided some insight into Transition Management beyond transition policy arguments. The perspective of this thesis bridges the complexity and network governance philosophy of TM on one hand and the more instrumental frameworks, such as the cycle of Loorbach, on the other hand. This allowed us to describe Transition Management as network governance on a more instrumental level. In addition, the 'nested case' approach is a methodological innovation building on the embedded case methodology.

The societal added value of this systematic approach is in providing a better motivation and more transparency in policy choices for Transition Management. Providing transparency on ideological positions, ideas on mechanisms of transitional change, and other starting points could be considered a value in itself. But it might also be necessary to continue to convince policymakers to use Transition Management in developing policies, as transition policies are becoming not only about small scale visioning and experimenting but increasingly about large-scale investment and fundamental regulatory changes. In such a context, the demands for a thorough motivation of policies will increase.

Recommendations for further research
This research has been of a multi-level and explorative nature, thus recommendation for future research could be given in many directions. We could make specific suggestions on the basis of findings on each level and relationship:
- In chapter 2 we identified multi-regime policy problems, and proposed a framework to address these. The case we applied this perspective to was atypical. It would be interesting to apply the method to policy problems that are undoubtedly persistent problems and undoubtedly rooted in many regimes (e.g. climate change).
- In chapter 3 we developed a method (on the basis of the multi-pillar theory) for empirical analysis of transitions. This method could be applied to other cases. Specifically for the history of Dutch healthcare, we identified key events, possibly also shedding light on crucial points to influence transitions.
- In chapter 4 we explored the adaptation paradox. Theoretically, we hypothesised a specific double cycle concept of policy cross fertilisation, which could be tested empirically. In our empirical case, we concluded that elements adapted during an adaptation pattern risk being expulsed from mainstream policy after the window

of opportunity closes. This observation warrants further empirical verification, as it would have implications for the effectiveness of a regime adaptation strategy.

- In chapter 5 we developed a framework for mapping on-going transition governance. Although some first results were obtained, a comparison to other periods or other industries/services would determine if these results are typical for healthcare in this period, or reflective of a more general pattern.
- Chapter 6 pointed to the difficulties of a programme in feeding results back into institutional processes, whereas chapter 4 hypothesised some conditions for success. These could be combined in new action research into institutional change. We also identified less formal, more networked programme organisation as a subject for future research.
- From chapter 7 we postulated a dynamics-instrument design framework that needs further empirical substantiation. We also identified rhetoric value of certain patterns and dynamics that might influence policies (and their communication) as an interesting starting point for additional research. We also postulated a role and value framework in Transition Management that requires further empirical and theoretical substantiation.

But more importantly, the developed framework itself can be tested and further developed in future (action) research practice, in which I personally hope to contribute from activities in consultancy, practice and education in the coming years.

The framework focuses on the substance of a policy. Although this is a useful perspective on Transition Management, the added value of the framework could be greatly increased if it also addresses the policy process; especially as transition policy arguments are not only developed in policy processes, but a specific policy process can also be what the policy argument prescribes. This interaction between process and substance should be studied in a systematic fashion.

The further development of the framework will also be in developing the applications (describing, assessing and prescribing) we sketched in this chapter. Applying the framework to more and in-depth cases is crucial: this would build a body of knowledge on systematically undertaken cases, but also allow the methods of application to be refined. For example, we might find additional critical points of attention for use in policy assessment.

I have studied mostly non-technological societal systems in this thesis. It would be interesting and important for the credibility of the framework and application of methods to also study (known) socio-technical cases. In this way, it could be established that the framework does not only contribute to the shift from socio-technical to societal system, but also is still able to address highly technical contexts.

This thesis focused on connecting dynamics to instrumental Transition Management, but we found out that it is as least as important to systematically connect a specific instance of Transition Management to the on-going transition governance efforts of others. This thesis has proposed methods for this, but this topic also constitutes a much broader area for further research, including how we can capture the more entrepreneurial and political TM activities in a systematic model.

Notes

1. A number of publications applied the related issue of sustainability science-practice interface to a process perspective on Transition Management, drawing conclusions about, amongst others, on the normative aspects of engaging with society from a sustainability starting point and the role in the process of the action researcher, see:

    Wittmayer, J. M., Schäpke, N., van Steenbergen, F., & Omann, I. (2014). Making sense of sustainability transitions locally: how action research contributes to addressing societal challenges. Critical policy studies, 1-21.

    Rauschmayer, F., Bauler, T., & Schäpke, N. (2015). Towards a thick understanding of sustainability transitions—Linking Transition Management, capabilities and social practices. Ecological Economics, 109, 211-221
    .
    and: Wittmayer, J. M., & Schäpke, N. (2014). Action, research and participation: roles of researchers in sustainability transitions. Sustainability science, 9(4), 483-496.

2. This is the declaration made by a newly formed administration, often backed by a coalition of political parties, outlining the policy for the political term; it should not be confused by the 'speech from the throne'.

3. These numbers refer to the index used by the Dutch parliamentary system, see http://www.tweedekamer.nl/kamerstukken. If two indexes are used, only the primary index number (hoofddossier) is referred to here.

4. Transition policy arguments are not necessarily worded according to the academic discourse from Transition Studies, and it is very possible that not all aspects identified in our framework are addressed. In a description, interpretation will thus be necessary, although this should not involve actually filling-in unaddressed aspects or 'thinking for' the policymaker (as this would amount to actually developing policy).

5. This is probably a wordplay on the first article of the Dutch constitution, which core phrase is "those in equal cases, are treated equally".

6. As discussed before, "care" is used as English word in the Dutch professional/policy vocabulary to denote a subset of "zorg" (which confusingly literally translates into care in English), see chapter 1 and chapter 5.

7. Dutch: ondersteuning, this relates to non-medical care and social services, for example the 2015 law on 'societal support' includes social/well-being services, household support, some medical devices (e.g. wheelchairs), accessibility adaptation to homes, care for the homeless and domestic violence services.

8. For example I would interpret "care and support is passionately provided by driven physicians, nurses and many other professionals in care and well-being services. Millions of informal carers (mantelzorgers) are actively taking care of those around them and numerous volunteers are active. Dutch healthcare and Dutch society have a lot to offer," [B, p3] to mean that informal carers and volunteers belong not to 'Dutch healthcare', but to Dutch society in general.

9. A critical assessment of the merits of a policy, takes a position on what could and/or should legitimize policy. Bekkers (Bekkers et al. 2007; especially the section by Bekkers and Edwards 2007), uses an Eastonian model (Easton 1953) to distinguish between four typical approaches (or sources) of legitimacy: (1) input legitimacy, (2) throughput legitimacy, (3) output legitimacy, and (4) outcome/effect legitimacy. From this perspective, our approach on the substance of the policy, largely confines us to the output sta-

ge (or perspective) on policy. But the framework might aid in the three other approaches to legitimacy: one might for example critically ask if the demarcation of the landscape level was done a priori by policymakers in a participatory process (input and throughput legitimacy).

10. This is not only a guideline for design, but by itself is also a design, not a deduction; there thus might be many other equally valid approaches. Note we discuss the cognitive method, not the actual process (see ch. 1 on this starting point).

11. Thus, potentially indicating that plurality and/or diversity be built-in to the process Janis (1991) make this suggestion from a process perspective, thus for independent groups, instead of independent design sequences.

12. Such action research can be defined as cases that "seek to bring together action and reflection, theory and practice, in participation with others, in the pursuit of practical solutions to issues of pressing concern to people" (Reason and Bradbury 2001, 1; see for a specific plea for action research for future health care Bradbury-Huang 2012).

13. The line between action and traditional research was also blurred: the cases on history of healthcare (incl. boundary dynamics), the Amstelland case, and the transition governance field 2005-2010 were clear traditional research, but the particulate matter and TPLZ Programme (incl. initiation) had elements of traditional and action research. Only on the lowest two scales in our framework did we reached the typical scale of action research, and moved from the "third person" to the "second person" (or even first person) perspective (Torbert 1998; in Reason 2001; Reason and McArdle 2004).

14. A personal observation and experience in education and consultancy.

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OED: Oxford English Dictionary, online, www.oed.com

WNT: Woordenboek der Nederlandsche Taal, gtb.inl.nl (the Dutch equivalent of the OED)

About the author

Roel van Raak (1979) has an engineering degree in Systems Engineering, Policy Analysis and Management from Delft Technical University. His research interests are in connecting transition modeling to transition management and applying theory to the (policy) practice. He has extensive experience connecting practice and science in various industries and services, with a focus on water (management) and especially healthcare, both as a university researcher and commercial consultant. He is currently completing his Ph.D. of integrating various conceptual frameworks and scales in transition studies for policy purposes applied to the Dutch healthcare system and working as a senior consultant, researcher and management team member at DRIFT.

Appendix A:Samenvatting

Transition Studies is een interdisciplinair veld in ontwikkeling dat zich richt op transities: "radicale transformaties naar een duurzame samenleving in reactie op een aantal persistente problemen waarvoor hedendaagse, moderne maatschappijen zich gesteld zien" (Grin et al. 2010). Binnen Transition Studies is Transitiemanagement (TM) een van de belangrijkste onderzoekslijnen die zich richt op het beïnvloeden van deze transities richting duurzaamheid. TM baseert interventies op de dynamische toestand van het maatschappelijk systeem in transitie. Dit gebeurt bij TM op twee manieren: (1) via abstracte, algemene principes en (2) via concrete case studies. Dit proefschrift verkent hoe specifieke dynamische toestanden van het systeem gekoppeld kunnen worden aan specifieke strategieën in 'beleidsargumenten' om zo de algemene principes en de concrete situaties systematisch aan elkaar te verbinden. Een argument in de zin van Toulmin (1958) is een vorm van 'praktische logica' en een transitiebeleidsargument wordt in dit proefschrift gedefinieerd als:

> **gemotiveerde, samenhangende handelingen, door een actor (personen, (delen) van overheden, andere organisaties of netwerken), onder gegeven omstandigheden, gericht om het verloop (tempo, richting en/of inhoud) van een transitie te beïnvloeden om zo 'persistente problemen' te adresseren.**

Onderzoeksraamwerk

Transitiebeleidsargumenten kunnen alleen goed worden bestudeerd, door rekenschap te geven van de multi-level aard van zowel transitiedynamiek als TM zelf. Het zogenaamde Multi-Level Perspective (MLP) maakt het volgende onderscheid:
- Op het meso-niveau bevindt zich het 'regime': de gevestigde structuur, cultuur en werkwijze (praktijken) van het maatschappelijke systeem in kwestie. Het regime heeft meestal (ongeveer) dezelfde grootte als het maatschappelijke systeem zelf, dus we kunnen dit ook het systeemniveau noemen.
- Op het hogere macro-niveau bevindt zich het 'socio-technische landschap' dat buiten het bereik van de betrokken actors ligt.
- Op het lage, micro-niveau bevinden zich 'niches': de typische bronnen van radicale vernieuwingen in het maatschappelijke systeem.

De niveaus binnen Transitiemanagement zijn:
- Transitie Governance: het relatief hoge beschouwingsniveau van sturing op transities, inclusief reflecties op het niveau van de dynamiek van het hele systeem. Sommige van deze benaderingen nemen een vogelvlucht perspectief, terwijl anderen zich richten op een individuele actor die een TM proces initieert in een multi-actor context.
- Transitie instrumenten: een meer operationele benadering van Transitiemanagement, die zich richt op het project-ontwerp, maar ook opmethoden binnen projecten.

Voor het onderzoeksraamwerk van dit proefschrift zijn deze niveaus gecombineerd en gegroepeerd, leidend tot een raamwerk van zeven relaties (zie figuur 0.1):

- Binnen transitiedynamiek, van landschapsniveau naar systeem-niveau
- Van het systeemniveau naar het niveau van de niches: dit is in het onderzoek geherinterpreteerd als de relatie tussen het niveau van subsystemen of 'constellaties' (waaronder niches) en het systeem-niveau.
- Van transitiedynamiek naar transitie governance.
- Binnen transitie governance: van transitiepolitiek naar transitiebeleid.
- Van transitie governance naar transitie instrumenten
- Van transitiedynamiek naar transitie instrumenten
- Binnen transitie-instrumenten, van projecten naar methoden.
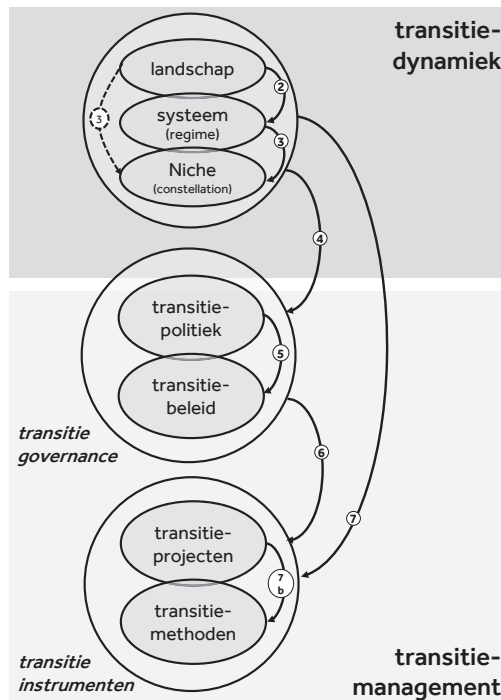
Figuur 0.1 Onderzoeksraamwerk

Methodologie

Elke relatie in het raamwerk is bestudeerd door iteratief te reflecteren op de relevante literatuur, kritische punten te identificeren en waar nodig concepten aan te passen of nieuwe 'analytische lenzen' die (deel)oplossingen voor deze kritische punten bieden. Voor elke relatie in het raamwerk is vervolgens een exploratieve case study binnen de Nederlandse zorg uitgevoerd. Elke casus 'zoomt in' op de vorige casus en zo is op meta-niveau een 'geneste' casus ontstaan. In een dergelijke geneste casus 'schalen' de methoden mee: casussen met lange tijdschalen worden onderzocht via literatuur, terwijl korte, instrumentele casussen bestudeerd worden door interviews en actie-onderzoek.

Figuur 0.2 Onderzoeksaanpak
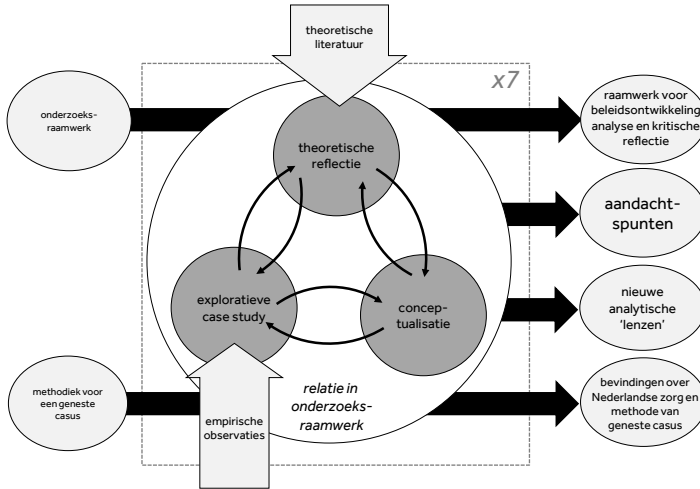
Relatie 1: Van het landschap naar het systeem

De dynamiek tussen het landschap en het systeem zijn uitgebreid beschreven in de literatuur, maar de demarcatie tussen landschap en systeem is juist onderontwikkeld. Voor beleidsproblemen, is demarcatie juist een belangrijk thema, zeker de demarcatie van de probleem- en oplossingsruimte. Het toepassen van TM op beleidsproblemen die geworteld zijn in vele verschillende regimes, leidt tot fundamentele complicaties. Een nieuwe methode voor het analyseren van dit soort multi-regime problemen wordt in dit proefschrift voorgesteld. In deze methode worden alle significante betrokken regimes en hun niches geïdentificeerd, waarna hun deels gezamenlijke en deels individuele landschap in beeld wordt gebracht. Hierdoor kunnen sector-doorsnijdende kansen worden geïdentificeerd die het persistente probleem kunnen mitigeren (zie figuur 0.3). De methode faciliteert het ontwerpen van mitigatie-strategieën voor dit soort multi-regime problemen. Deze strategieën richten zich op het incrementeel pakken van kansen waar ze zich voordoen, in tegenstelling tot de meer visie- en doelgedreven typische stijl van Transitiemanagement. Deze methode is toegepast op het vraagstuk van fijn stof vervuiling in Nederland.
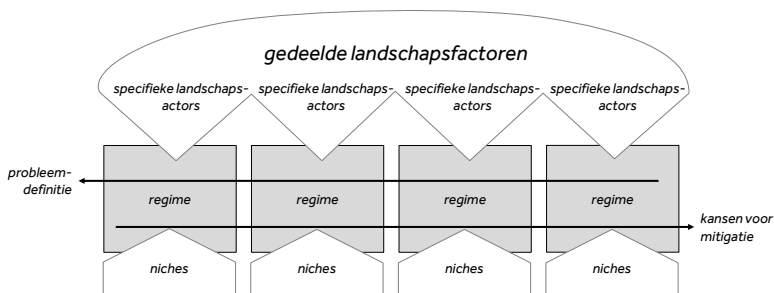

Figuur 0.3 Multi-regime problemen en oplossingsrichtingen

Relatie 2: van systemen naar subsystemen

De niche-regime interactie is de voornaamste interactie in de meeste conceptualisaties van de dynamiek binnen maatschappelijke (of socio-technische) systemen. De niche-regime interactie wordt meestal beschouwd als onderdeel van het eerder genoemde Multi Level Perspectief (MLP). Dit MLP is succesvol toegepast op vele verschillende casussen, maar binnen het veld ook bekritiseerd om methodologische zwaktes, waaronder: (1) te weinig aandacht voor agency; (2) te weinig aandacht voor consumentenpraktijken; (3) willekeurige afbakening en (4) achteraf de winnaar voorspellen. Er zijn dan ook vele adaptaties en uitbreidingen van het MLP ontwikkeld.

Figuur 0.4 Methode om transities te analyseren (links), inclusief aandacht voor structuur, cultuur, werkwijze (rechts)
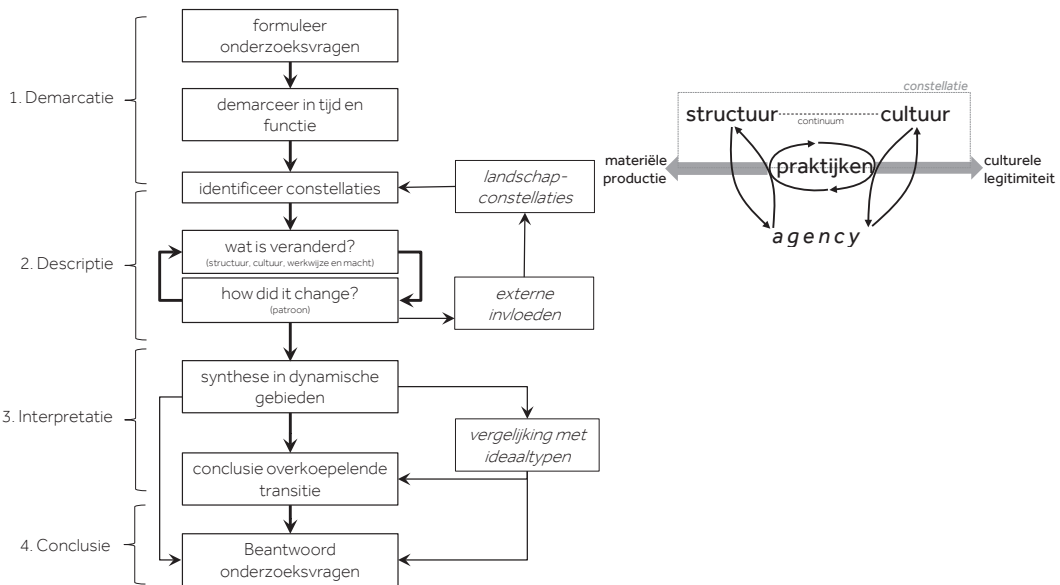
Deze adaptaties en uitbreidingen helpen in vooruitkijkende toepassingen, hetgeen transitiebeleidsargumenten typisch zijn. In dit proefschrift is de multi-pillar theorie (van De Haan, deels gebaseerd op het MLP) overgenomen en uitgebreid voor beleidstoepassingen. De Haan onderscheidt drie typische patronen van verandering:
- De empowerment van niches, die groeien ten koste van het regime
- Adaptatie van het regime aan een veranderend landschap en druk vanuit niches.
- Reconstellatie: de top-down interventie in het regime, zonder dat het regime daar zelf een rol in heft.

Deze methode is uitgebreid door er een empirische methode aan te koppelen en een methode om constellaties (zoals niches en het regime) te beschrijven aan de hand van hun structuur, cultuur en werkwijze (zie figuur 0.4). In deze benadering zijn structuur en cultuur allebei structurerende elementen en is er een continuüm tussen structuur en cultuur. Beide structureren agenten die gerelateerd zijn aan de constellaties (maar er

geen onderdeel van uitmaken) in praktijken en de agenten geven ook de structuur en cultuur vorm via deze praktijken. De praktijken vormen dus het raakvlak tussen agency en structurerende elementen en zijn gepositioneerd op de grens van de constellatie. De praktijken genereren culturele legitimiteit en materiële goederen en diensten (zie figuur 0.4 rechts) Deze empirische methode is toegepast op de geschiedenis van de Zorg (1800-2000). Deze casus begint met de beschrijving van de geschiedenis van elk van de constellatie met de methode zoals weergegeven in figuur 0.4 (links); aan de hand van o.a. hun verandering in structuur, cultuur en werkwijze. Vervolgens worden een aantal systeem-brede 'dynamische gebieden' geïdentificeerd:

- Groei van vele alternatieven (1840 – 1875/1940): in de tweede helft van de 19e eeuw kwam Nederland in een nieuw tijdperk. De economie trok aan en gaf niches de ruimte om te groeien. Nieuwe godsdienstige en liberale opvattingen beperkten armenzorg tot ziekenzorg en maakt zo het hospitaal tot een medische faciliteit. Rond de eeuwwisseling dreven industrialisatie, urbanisatie en later verzuiling een nieuwe golf van veranderingen. Vele nieuwe benaderingen ontstonden (zoals Kruiswerk) of groeide in kracht en de verschillende benaderingen versterkten elkaar.
- Empowerment van de arts tot regime (1840 – 1900/1940): de cultuur, structuur en werkwijze van de arts werden de spil van de Nederlandse gezondheidszorg. Behalve het beoefenen van geneeskunde, adviseerden en lobbyden ze in vele andere maatschapplijke domeinen. Hun macht was grotendeels het gevolg van een succesvolle fusie van de academische doctor en chirurgijn tot één professie.
- Empowerment van de arts, het ziekenhuis, de specialist en het financeringssysteem tot een 'samengesteld' regime (1930 - 1970): het zwaartepunt van de zorg verschoof in deze periode van de individueel praktiserende specialist binnen het grootschalige ziekenhuis. Het ziekenhuis (en de verpleegkundigen) warden als het gevolg van een langdurig co-evolutionair proces ondergeschikt aan de specialist en zijn praktijk. In deze periode ontstaan de nu nog steeds dominante cultuur, structuur en werkwijze en machtsverhoudingen. De rol van de staat neemt sterk toe, financieringsregelingen worden verplicht en de verschuiving van preventie naar genezing en van de algemene dokter naar de specialist voltooit zich.
- Verlies van macht en conformatie aan het regime van niches (1925/1950 – 1970/1980): vele alternatieve benaderingen verliezen macht aan het regime (waaronder Kruiswerk, de huisarts en publieke gezondheidszorg). Alternatieve benaderingen gingen zich ook aanpassen aan het regime. Geestelijke gezondheidszorg ging bijvoorbeeld het ziekenhuis en de specialist imiteren.

Deze nieuwe methode zorgt voor een transparantere demarcatie, classificatie en interpretatie. Bovendien geeft het een heel ander beeld van de transitie. Waar het gebruikelijke MLP één transitiepad schetst dat dominant wordt, ontrafelt dit perspectief een gecompliceerde 'spaghetti' van vervlochten ontwikkelingen vanuit een vogelvluchtperspectief, waaruit een dominante combinatie van constellaties emergeert. Dat perspectief laat majeure wendingen zien in de ontwikkelingen op systeemniveau (bijvoorbeeld

de verschuiving in de dynamiek van preventie en universele medische kennis naar curatie en specialisatie). Het nadeel van de methode toegepast in dit proefschrift, is dat het slechts de oppervlakkige geschiedenis analyseert, niet tegemoet komt aan kritiek op het ontbreken van agency in dit soort beschrijvingen en erg afhankelijk is van secundaire en grijze literatuur. Om deze punten te adresseren, kan de methode juist ook gebruikt worden om belangrijke gebeurtenissen en ontwikkelingen te identificeren om wel diepgaand te onderzoeken. In deze casus hebben we zes van dit soort gebeurtenissen geïdentificeerd.

Het gebruik van dit helikopterperspectief met de vele interacterende alternatieven (i.p.v. het perspectief van een individuele 'innovatiereis'), is geschikter om beleid mee te ontwikkelen of voor organisaties om zich te positioneren in een transitie. We concluderen dat aandachtspunten in de systeem-subsysteem relatie in transitiebeleidsargumenten zijn: (1) het transitiebeleidsargument is bij voorkeur gebaseerd op een brede analyse van alle dynamiek in het systeem, dat het beleid probeert te beïnvloeden als onderdeel van de 'gegeven omstandigheden' in dat beleidsargument; en (2) indien het beleidsdoel een breed, publiek belang dient, is een brede strategie (en niet het stimuleren van een enkel pad of niche) consistent met een dergelijk doel.

Relatie 3: Van systeemdynamiek naar governance: de regime adaptatie-paradox

Transitie governance is een opkomend veld binnen transitiestudies en omvat benaderingen die onderling aanzienlijk verschillen. Die verschillen betreffen o.a.: (1) of governance gelokaliseerd in het maatschappelijk systeem in kwestie is, in een politiek systeem of diffuus door de hele maatschappij plaatsvindt; (2) of duurzaamheid een bijzondere ideologie of slechts één van vele rivaliserende ideologieën is; (3) in hoeverre coördinatie in de transitie mogelijk is; en (4) of de theorie zich vooral op materialistische of idealistische verandering richt. Deze fundamentele verschillen impliceren dat een transitiebeleidsargument dus niet simpelweg onderbouwd kan worden met een algemene verwijzing naar transitiestudies of transitie governance.

We concluderen dat de meeste relaties tussen transitie-dynamiek en transition governance afdoende behandeld worden in de literatuur (zie voor specifieke interacties met instrumenten hierna). Er is echter een paradox tussen de weerstand biedende rol van het regime en de diverse mechanismen waarmee transitie governance juist adaptatie van dat regime zou kunnen bevorderen. In dit proefschrift wordt een nieuw, aanvullend mechanisme voorgesteld, met de volgende hypothese:

> in een governance proces dat zich normaal conformeert aan het regime (en dit regime versterkt), opent zich alleen een 'window of opportunity' als een persistent fenomeen vanuit het regime-paradigma als een onacceptabel probleem (volgens zijn eigen standaarden) wordt gezien en niet binnen de oplossingsruimte die het paradigma biedt opgelost kan worden.

Deze casussen bevestigen enkele van de mechanismen die al bekend waren uit de literatuur, zoals de rol voor entrepreneurs en het belang van losjes gekoppelde processen. De nieuwe hypothese kan echter ook verklaren waarom transitieprocessen gesteund worden door regime processen en waarom regime processen dit soort ideeën opnemen.

We verkennen deze hypothese door middel van een case study in Nederlands waterbeheer: het regionale 'Amstelland'visie proces dat van 2002 tot 2007 plaats vond. De casus beschrijft hoe een team van ambtenaren en adviseurs met een revolutionaire visie op waterbeheer kwam, die conflicteerde met het (toenmalige) regime, maar toch formele status en opvolging in lokale plannen kreeg. En we reflecteren op het begin van het Transitieprogramma in de Langdurende Zorg vanuit het perspectief van de hypothese.

Relatie 4: van transitie-politiek naar transitie-beleid

Transitiemanagement richt zich meestal op de acties van een individuele actor in die een TM process initieert in een multi-actor situatie. Dit is consistent met een beleidsperspectief, maar we concluderen ook dat door zo'n actor geinitieerde TM activiteiten (gecategorizeerd in een strategisch, tactische en operationele TM laag) beter gerelateerd kunnen worden aan al lopende transitie governance processen. De structuur, culture, werkwijze trits, die we eerder gebruikten om transitiedynamiek te beschrijven, is hiervoor gebruikt (zie tabel 0.1):
- Strategisch TM omvat "processen van visie-ontwikkeling, strategische discussies, lange termijn doelontwikkeling, gezamenlijk doelen en normen ontwikkelen en lange termijn voorbereiding. IN essentie, alle activiteiten en ontwikkelingen die primair relateren aan de 'cultuur' van een systeem" (Loorbach 2007, 104). Dit strategisch TM wordt gepositioneerd in de context van bredere, al lopende processen van 'culturele transitie governance'
- Tactisch TM omvat "sturende activiteiten die gedreven zijn door belangen en gerelateerd aan de dominante structuur of regime van een maatschappelijk systeem" (ibid, p. 107). We positioneren dit tactisch TM in de context van bredere, al lopende processen van structurele transitie-governance
- Operational TM encompasses "all short term actions and experiments of individuals and organizations that have an innovative potential. At this level the focus is primarily on practices."(ibid, p. 109). We propose to consider practical TM to be part of on-going 'Practice-oriented Transition Governance'

TM activiteitslusters (segmenten v.d. cyclus)		Transitiemanagement laag		Transitie governance aspect		Aspect van maatschappelijk systeem of constellatie
Probleem structureren en visie-vorming		Strategische Transitie-management		Culturele Transitie Governance		Cultuur van een maatschappelijk systeem
Coalities en agenda's	...zijn instrumenten gebruikt in...	Tactisch transitie-management	...is specifieke een instantie van...	Structurele Transitie Governance	...is een proces gericht op systeem-verandering via de...	Structuur van een maatschappelijk systeem
Experimenten en netwerken mobiliseren		Operationeel transitie-management		Praktische Transitie Governance		Praktijken van een maatschappelijk systeem
Monitoring en evaluatie		Reflectief transitie management		(Reflectieve Transitie Governance)		nvt

Tabel 0.1 TM activiteiten, TM lagen, governance aspecten en aspecten van maatschappelijke systemen

Vervolgens ontwikkelen we een methode om deze drie categorieën van transitie governance empirisch te bestuderen. Daartoe combineren we een bottom-up met een semi-kwantitatieve top-down codeerbenadering en passen deze methode toe op vakbladartikelen over de Nederlandse langdurende zorg in de periode 2006-2011.

We constateren dat in deze casus de transitie governance zich richtte op geleidelijke aanpassingen in lopende structurele veranderingen om ze zo beter te laten aansluiten bij een lange termijn transitieperspectief of een niche ruimte te bieden. Bijvoorbeeld een experimentele leefvorm ook onder nieuwe financieringwetten mogelijk te maken. De belangrijkste transitie-onderwerpen waren: (1) herdefiniëren van de markt (2) de professional empoweren (3) de cliënt empoweren en (4) kleinschalige oplossingen. Het moet wel opgemerkt worden dat deze bevindingen beperkte betrouwbaarheid hebben, omdat ze op een enkele nieuwsbron zijn gebaseerd.

In het algemeen constateren we dat een specifiek beleid met betrekking tot al gaande zijnde processen drie doelen kan hebben: (1) versterken (2) complementeren en/of (3) confronteren (in een poging om lopende processen bij te sturen).

Relatie 5: Van transitie governance naar transitieprojecten

Een algemeen transitiebeleid en individuele activiteiten daarin zijn, volgens de TM literatuur, verbonden met elkaar door de TM-cyclus (waarbij de cyclus gezien kan worden als een specifieke volgorde van het doorlopen van de TM-lagen): visievorming, agenda-ontwikkeling, experimenteren (en mobiliseren), en reflecteren. De TM-cyclus beschrijft echter niet de volgorde van processen of activiteiten, maar een cognitieve ordening van inzichten, verkregen vanuit deze activiteiten.

We conceptualiseren de ideaaltypische volgorde van activiteiten door aan te nemen dat TM-activiteiten parallel lopen in de context van bredere, al gaande governance processen. In een dergelijk perspectief, wordt het managen van interfaces nog belangrijker in TM. TM op het raakvlak tussen instrumenten en het algemene beleid wordt dan een kwestie van: (1) initieren, faciliteren en sturen van instrumenten; (2) het managen van de interfaces tussen deze activiteiten in verschillende stromen en (3) deze geïnitieerde activiteiten te verbinden met al gaande zijnde transition governance processen. De verschillende sporen in bijvoorbeeld een TM-programma zijn dus slechts losjes gekoppeld en vooral gericht op hun eigen omgeving en doelen.

Vervolgens wordt beschreven hoe dit nieuwe concept succesvol is toegepast bij het ontwikkelen van het grootschalige 'Transitieprogramma in de Langdurende Zorg', waarmee het nu van een dergelijk concept om de samenhang tussen instrumenten inzichtelijk te maken is bevestigd. De casus laat ook zien hoe uitdagend het tactische spoor (en verbindingen vanuit het tactische spoor) kan zijn en dat het ontwikkelen van een specifieke transitie-agenda instrument zou kunnen helpen in het overkomen van deze uitdagingen.

Relatie 6: Van systeemdynamiek naar instrumenten: ontwerp-karakteristieken aanpassen

Transitie-instrumenten zijn de beschreven acties in beleidsargumenten die de strategie effectueren. Deze acties kunnen analytische en/of procesinstrumenten zijn en het kunnen speciale TM instrumenten, algemene netwerk-instrumenten of reguliere beleidsinstrumenten zijn. Verschillende transitie-instrumenten delen bepaalde ontwerpparameters, die afgestemd kunnen worden op de specifieke situatie, waaronder de transitie-dynamiek. Deze parameters zijn: (1) wie is betrokken; (2) hoe open is het proces; (3) wat is de ordegrootte van de activiteiten; (4) hebben de instrumenten gezag; (5) hoeveel commitment vragen de instrumenten; (6) hoeveel diversiteit laten de instrumenten toe; en (7) zijn de instrumenten gericht op opbouw of afbraak.

De relatie tussen instrument-ontwerp en transitie-fase is deels al beschreven in de transitie-literatuur, maar de relatie tussen instrument-ontwerp en transitiepatroon nog nauwelijks. Tabel 0.2 laat een mogelijk raamwerk zien om deze relaties vollediger te beschrijven.

instrument parameter	patroon		
	empowerment	adaptatie	reconstellatie
wie	mostly niches	vooral regime	vooral buitenstaanders
openheid	laag-middel	middel-hoog	laag (elite interventie) of hoog (maatschappelijke beweging)
gezag	laag	hoog	hoog
(destructiviteit)	(laag of hoog)	(laag-middel)	(laag of hoog)

instrument parameter	fase			
	voorontwikkeling	take-off	acceleratie	stabilisatie
openheid	laag	laag-middel	middel-hoog	hoog
omvang	klein	middel-groot	middel-groot	middel-groot
commitment	laag	middel-groot	middel	hoog
gezag	laag	laag-middel	middel	middel
diversiteit	heel hoog	hoog	middel	laag

Tabel 0.2 Instrument-ontwerp en fase/patroon

Dit raamwerk is in een actie-onderzoek casus getest, namelijk the Arena Langdurende Zorg. Het raamwerk is voor het betroken transitieteam vertaald in een typologie van narratieven. Dit hielp de teamleden en heeft de arena mee vormgegeven; toch bestond er in het team en in de arena ook ambiguïteit over welk transitie-patroon men wilde stimuleren. De focus leek gedurende het arena-proces te verschuiven van empowerment naar adaptatie. Verschillende verklaringen zijn mogelijk, waaronder dat het 'empowerment' patroon een retorische aantrekkingskracht heeft.

Relatie 7: van projecten naar methoden

Binnen instrumenten maakt het raamwerk van het proefschrift onderscheid tussen twee niveaus van acties: de projecten die het instrument implementeren en de methoden die binnen het project gebruikt worden. In een casus rond de arena Duurzaam Wonen en Bouwen in Vlaanderen vonden we rolconflicten in het TM-team die uiteindelijk door-werkten in de bredere groep. Vanuit de theorie leren we dat rollen veel meer omvatten dan de taakverdeling die in TM literatuur beschreven is. Rollen zijn verwachte gedrags-patronen die nauw samenhangen met onderliggende waarden. Vooral de lobbyende, creatieve en interpersoonlijke rollen enerzijds en autoriteits- en kennisrollen ander-zijds, hebben tegenstrijdige waarden. Rolconflicten in TM kunnen mogelijk verminderd worden door: (1) aandacht en dialoog rondom rolconflicten; (2) rollen scheiden, door conflicterende rollen aan verschillende personen toe te wijzen of (3) rollen aan verschil-lende organisaties toe te wijzen; en (4) niet meer rollen op te nemen in een TM-proces dan noodzakelijk.

Conclusie, toepassing van resultaten, aanbevelingen

Het directe doel van dit onderzoek was TM beter in te bedden in transitie-dynamiek, het bleek echter dat theorie over transitie-dynamiek zelf ook aanpassing behoefde om in beleidsargumenten te worden toegepast (of beleid te analyseren). In de bevindingen die direct over de relatie tussen systeemdynamiek en TM gaan, zijn vier rode draden te onderscheiden:

- Demarcatie (van de dynamiek): dit gaat niet alleen om de analytische afbakening van het systeem, maar ook over de politiek van afbakening en de vele afbake-ningskeuzen in specifieke aandachtsgebieden en instrumenten.
- Fase: fase is niet alleen een kenmerk op systeemniveau, maar ook van subsyste-men. Bovendien kunnen betrokkenen bij transitie governance verschillen in hun perceptie van de fase waarin het systeem is. En er kunnen brede discussies ont-staan over de vraag of de transitie naar een volgende fase gebracht moet worden. Specifiek beleid kan zich hier ook op richten.
- Patroon (en onderliggende condities): patronen blijken niet alleen zich op sys-teemniveau voor te doen maar ook aanzienlijk te verschillen tussen subsystemen (constellaties). Transition governance processen kunnen zich op verschillende patronen richten, inclusief op het ontvankelijk maken van het regime voor adap-tatie. Op het niveau van een beleidsargument, beleidsprogramma of projecten daarbinnen, zijn keuzes mogelijk over welke patronen gestimuleerd (of benut) kunnen worden en hoe programma's en instrumenten hier voor ontworpen kunnen worden.
- Structuur, cultuur, werkwijze (en macht/vermogen): hoewel strikt genomen geen dynamische eigenschappen, bleken deze concepten wel essentieel om aspecten van verandering op systeem- en constellatie niveau te verbinden met transitie governance stromingen en TM activiteiten.

Hoe deze resultaten toegepast kunnen worden, hangt af van het doel van de toepassing. Na een reflectie vanuit o.a. de literatuur over de beleid-wetenschap interface, worden drie typische toepassingen uitgewerkt: (1) beleid beschrijven, (2) beleid beoordelen, en (3) beleid ontwikkelen. Deze toepassingen zijn verkend in een eerste toepassing op het huidige zorgbeleid. De voorlopige conclusie is dat het Nederlandse transitiebeleid in de zorg niet consistent is in het vertalen van haar doelen naar instrumenten en zich te weinig rekenschap geeft van de transitiedynamiek en al gaande zijnde transition governance processen.

Dit proefschrift heeft een systematische aanpak ontwikkeld voor een categorie beleidsproblemen die in de literatuur gezien worden als bijzonder moeilijk om analytisch grip op te krijgen. Dit lijkt wellicht een tegenstelling maar is dit het niet omdat: (1) persistente problemen hangen typisch samen met een regime, dat behalve weerstand ook een analytische focus biedt; (2) het raamwerk laat incrementele adaptatie toe; (3) het raamwerk laat participatie en coproductie van beleid toe; en (4) een niet-systematische aanpak is ook geen optie.

De wetenschappelijke waarde van dit proefschrift zit in het mogelijk maken van een systematische beschrijving van transitiebeleid, de maatschappelijke waarde in het bieden van meer transparantie en een betere aanpak voor het ontwikkelen van transitiebeleid. Tot slot bevelen we voor toekomstig onderzoek aan om het raamwerk verder te ontwikkelen (vooral met betrekking tot het beleidsproces rondom beleidsvorming) en het raamwerk op andere casussen toe te passen.

Appendix B   Recap of the healthcare cases in a single narrative

The traditional Dutch healthcare system - based on religious hospitals and guild based surgeons - was all but destroyed in the turmoil of the French presence in the Netherlands. The remaining system of healthcare, if it could be called a system, was fragmented and lacked any large scale organisation. Slowly over the middle and late nineteenth century, a new 'system' started to emerge, even though still very fragmented. Organised healthcare remained mainly part of general poor care. As laws were passed to keep the non-sick out of the hospitals, the hospital became a medical institution (and thus now clearly part of the healthcare system). Still, the hospital played a marginal role for caring for those with no other options.

Two complementary approaches to healthcare emerged at the same time: the surgeons who would continue as a 'free profession' after dissolving the guilds and the academically trained 'doctores'. The surgeons became slowly more organised (especially in professional licenses) and the doctores became more empowered through the general esteem for science in society. The two professions slowly and with much conflict recognised each other's complementarity and constituted a new profession of the 'physician' (arts), which would become the new regime. The first strong laws on medical professions further empowered them together with other medical professions (e.g. pharmacists, midwives, dentists, etc.) at the expense of others (e.g. drug stores and the nurse which was not yet a profession). This physician as a profession was a physician with 'universal' medical knowledge; as well as a 'friend of the family', whose role was primarily diagnosing, reassuring and mitigating, as actual curative options were limited. This regime of the 'universal physician', and especially a group of 'radical hygienists' played also a crucial role in introducing medical knowledge – and political and societal influence - into other societal systems, such as food, and especially public water works (first through a later invalidated, but effective theory of 'bad odours' and later through still valid germ theory). This lead to an impressive preventive infrastructure (which only briefly and never fully was perceived to be part of the healthcare system). Also in other preventive fields, such as food safety, physicians played an important role.

At the backdrop of further urbanisation, but also a renewed interest in 'good works' in the protestant 'Reveille', new approaches to healthcare developed. As a civic society initiative, the 'Crosswork', would become pivotal in reintroducing 'nursing' as skilled professional into the healthcare system and building a community based system (including funding). After initial resistance, this new 'nursing' approach was introduced into the existing hospitals, transforming these from most unhygienic to the most hygienic facilities, which later led to a broader group of clients. Some physicians that could not establish a private practice worked as poor doctors or 'specialists'. They moved in the new, hygienic hospital with professional staff, teaching opportunities against the backdrop of increasing therapeutic options. They became another strong alternative

for the regime, whilst at the same time making nursing (at least in hospitals) into a profession to assist the physician. Together with other alternatives, such as a public health systems, in the 1920s many alternatives competed to be the next regime. In the end, the specialists would gain dominance in a compound regime with the hospital and especially empowered by interaction with the newly emerged collective (and later government regulated) insurance funds. This compound regime inherited an inherent tension between individual healthcare and collective financing.

This new emblematic physician, stressed its specialist knowledge (till the point the 'general doctor' became a 'specialist' in family medicine) and curative, high-tech therapies. This had serious consequences for the constellations that were incongruent to these new paradigms. Caring used to be the raison d'être of hospitals, but now clients with no curative prospects and only care needs were considered to keep places occupied in the hospital system. Especially after the second world war, a separate system to nurse those who need caring but not (anymore) curative care was established as nursing and 'caring' homes (Verpleeg- en Verzorgingshuizen). Nursing would slowly become a profession instead of a 'calling', including recognition as a medical profession in the mid-nineties. The new 'care' constellation in a sense was created to be a more efficient, less resource-intensive alternative to curative care (and especially the specialist-hospital), even when many conditions could not be cured. The progress in curing conditions – despite continuing advances in modern medicine - would slow down in the last decades of the twentieth century.

Anoter development in the mid-twentieth century was government becoming heavily involved, against the backdrop of the welfare state. National government had long tried to not become involved in healthcare. However once it slowly became involved in some constellations, it often entered into a positive feed-back loop of an ever greater interest, thus an increasing need to control, which would only result in a greater government interest. A clear example was the fate of the Crosswork constellation, once the poster child of local, community based care and combining care with preventive and social medicine. As society individualised and expenses grew, government started to partially fund activities of Crosswork, at the same time demanding more 'efficiency' and less fragmentation, but this more professional, large scale organisation would only drift Crosswork further away from their community-basis. Around 1980 Crosswork effectively became part of the nursing homes constellation, even though it would take decades before this merger was completed (e.g. only in 2006 did the trade associations merge).

This colossal nursing niche-regime would eventually overshadow the hospital-specialist constellation in sheer numbers, it still felt the pressure from the regime. For example the demands for evidence-based methods developed in medical care, for non-medical care; the still largely medical interpretation of the function of 'care'; or the individual approach (instead of taking partners and family into account). With budget constraints, the inherent stress between collective financing and the individual right for care would be urgently felt.

For a long time, a young population, strong support for the welfare state, and increasing wealth mitigated the urgency of this stress within the care constellation. Towards the end of the twentieth century however all these landscape factors turned unfavourable and an ever increasing burden on a shrinking working population and collective budget projected, whilst at the same time a lack of 'quality of life' in nursing homes was noticed, in a society where individual rights had become important.[1]

The sector was (and perhaps is) dominated by the short term effects of this stress, such as budget-cuts, financial reforms, efficiency pressures, pressure on access to care etc. Yet, the urgency of financing and staffing issues in the light of an ageing population, becomes a significant theme in the governance processes for long term care. The debates are however overwhelmingly reactive to the structural short and middle terms problems the sector faces and aim to transform these debates to long term structural solutions. They barely address the role of current paradigms on health and healthcare play in the increasingly perceived persistent problems. Innovations were limited, not adopted by others and especially aimed system optimisation. Radical innovations were non-existent or at least not visible in trade press (with the exception of Buurtzorg later on) and to less extent remote care solutions.

Against this backdrop, representatives from the healthcare providers and the ministry negotiated in 2004 over new budget-cuts and jointly agreed the long term solution would be innovation to increase 'labour productivity' and 'efficiency' in the sector, which lead to a compromise of accepting budget-cuts but in exchange the start of a large innovation fund for the sector. Those responsible for the design of such a fund found it very difficult to develop an innovation programme that would be credible in furthering innovation to meet future needs, as conventionally innovation funds were being fragmented equally among providers for very modest innovations. This frustration opened a window of opportunity to acquire resources for Transition Management as a shadow track, which was exploited by action researchers and key players in the sector. They were largely successful to transform the idea of an innovation programme into a programme centred on frontrunners and their transition experiments, as well as adding a cultural dimension by establishing a transition arena. The specific window-of-opportunity also furthered the revision of the classic TM-cycle into an approach in which activities run in parallel. This also meant tracks were only loosely coupled and especially focused on their own context (resp. innovating in practice, developing a new vision and keeping the institutional window of opportunity open). Although the programme was successful in developing and propagating new practices and new ideas, it did not succeed in connecting these successes to the already on-going governance processes on structural adaptation of the system. One of the many reasons for this might have been that those involved in the programme at various levels were themselves ambiguous if they sought an adaptation or empowerment pattern, not only because this was not explicitly discussed, but also because 'empowerment' appears to have a certain ideological appeal, whilst in the end most of those involved would expect the existing regime to be adapted (instead of 'overthrown').

This ambiguity also occurred in the 'arena long term care', one of the instruments of the Transition Programme Long Term care. For this arena, a preparatory analysis and selection of participants (through interviews) was conducted, which also featured an explicit choice between possible transition patterns. On the basis of the choice for an empowerment pattern, specific participants were sought for and the discussion moderated. Over many sessions, this aided in forming a group of persons with very diverse views on the future of healthcare, but that trusted each other to come to a synthesis of perspectives, by using a specific visioning methodology. The resulting vision analysed the persistent problems and set 'leading principles' for future healthcare: (1) human centred; (2) economically sustainable and (3) societally embedded. The vision also suggested paths for this transition and short terms steps to start a movement towards future care. This vision had a considerable impact not only through dissemination of thousands of copies, but also through the follow-up actions of a number of arena participants.

Note

1. Note that this paragraph falls in scope somewhat in between the case of chapter 3 on one hand and the case of chapter 5 on the other hand, and should be considered no more than an impression of the author.

Transition Policies

Connecting System Dynamics, Governance and Instruments in an Application to Dutch Healthcare

Transition Studies is an emerging, interdisciplinary field concerned with long-term, radical transformations in our societal systems, towards sustainability. Such transitions have complex dynamics that play out over decades. This thesis explores the relation between these dynamics and Transition Management (concerned with steering transitions): how we can adjust policies and policies instruments to the transition and governance dynamics we both observe and aim for? Theoretical reflections, conceptual models and action research is combined in a multi-level framework from the perspective of a policy argument. These insights are applied to Dutch healthcare ranging from a case of 200 years healthcare history to a transition programme and 'transition arena' visioning process. Findings are synthesised into a method for developing transition policy arguments.

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