

Transformative Government

A new tradition for the civil service in the era of sustainability transitions



Rik Braams

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Rik Bastiaan Braams

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Transformative Government

A new tradition for the civil service in the era of sustainability transitions

Transformatieve Overheid

Een nieuwe traditie voor de ambtenarij in de era van duurzaamheidstransities

(met een samenvatting in het Nederlands)

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“Originality is dangerous. If you want to increase the sum of what is possible for human beings to say, to know, to understand and therefore in the end, to be, you actually have to go to the edges and push outward”

Salman Rushdie, PEN World Voice Festival May 6, 2012

1. Introduction and overview

1

1. The paradox of the civil service in sustainability transitions

Imagine, you are a civil servant in these times of sustainability transitions and societal crises. As you have a deep understanding of your policy domain and are intrinsically motivated to serve the greater good, you play a crucial role in developing and implementing transformative policies that contribute to society. However, you are not only serving society, but you are also loyal to a temporary politician and her ideas. Because you, as a civil servant, are not democratically chosen, you cannot set the direction of change. Moreover, the organization and setting you work in have many constraints to protect individual citizens and society from the government itself. Loyalty and protective constraints are set in place to diminish civil servants' room to maneuver beyond current institutional constellations. Having a crucial role in guiding change on the one hand, while being greatly restricted on the other, is the paradox civil servants find themselves in nowadays. Conflicting directives place them in an uncomfortable tension at the heart of what it means to be a civil servant.

In 2018, I experienced this position working as a civil servant on innovation in mobility at the Dutch Ministry of Infrastructure and Water Management. Colleagues were openly questioning whether the work of our team¹, i.e., exploring, experimenting, and collaborating with potentially impactful technological innovations that could disrupt the mobility sector, was something a ministry should undertake. Did we not overstep our constraints to accomplish transition goals, and was this not something to be done by the invisible hand of the market that has no a priori preferences? Even when the sustainability transition became a central aim in all policies, were we, as civil servants, not too normative and arbitrary when exploring, experimenting, and collaborating with new commercial parties whose innovations promised to help reach these goals? Were we not disrupting the status quo too much and making the lives of our colleagues, responsible for the maintenance and the relations with incumbents, difficult? Had the minister given any explicit order for all our explorative actions?

This tension between a responsibility to avert catastrophic climate change while being restrained by traditional institutions is felt more widely and is reflected in recent discussions on civil servants' independent, proactive role in sustainability transitions in the Dutch media (Diercks, 2023) and, for example, in the resistance within the United States administration (O'Leary, 2020). Since it is high time for more impactful climate action, a fundamental reflection is needed on civil servants' role in these transitions. In the broadest sense, this dissertation searches for a way public organizations can facilitate system change toward a sustainable future from an institutional point of view.

To establish the legitimacy to urgently strive for radical societal change, many transition scholars refer to supranationally established documents that carry a lot of societal and political support, like the Paris Climate Agreement, the European Green Deal, the IPCC reports, and the EU's societal missions and grand societal challenges (e.g., Janssen et al., 2022; Wanzenböck et al., 2020). Such warrants can also be found in economics², philosophy³, spirituality⁴, and the mobility domain,⁵ the

1 The unit innovation within Directorate General Mobility assigned to explore new innovations.

2 See, e.g., *Mission Economy* by Mazzucato, 2021; *The Donut Economy* by Raworth, 2017; and *degrowth of the economy*, e.g., Hickle, 2021; Schenderling, 2022; and *steward-ownership*, e.g., Kiers, 2020.

3 See, e.g., *The Good Ancestor* by Krznaric, 2021; *the Parlement of Things* by Latour, 2020; and *a reappraisal of the common interest* by In 't Veld, 2022.

4 See, e.g., *'soul, soil and society, a new trinity for our time'* by Satish Kumar, 2019; *integral ecology*, *Laudato Si* by Pope Francis, 2015; and *joint responsibility* by the Dalai Lama, 2020.

5 See, e.g., *The Right of the Fastest* by Verkade and Brömmelstroet, 2020; and *foregrounding the normalization by the state of corporate environmental mobility crimes* by Tombs and Whyte, 2020.

focus of this dissertation. These warrants suggest a broad-based existential unwillingness to accept the consequences of the climate crisis in all its facets and demonstrate a search for a new sustainable equilibrium achieved only by system change.

The central presumption throughout this dissertation is that there is an urgent need for governments to take a more central role in sustainability transitions to mitigate climate change. I provide analyses throughout each chapter of how civil servants in public organizations can (and cannot) play their role. The concept of *Transformative Government* is introduced in Chapter Two and further conceptualized in Chapter Six to indicate that public institutions themselves need to change to guide society toward a sustainable future. In this introduction, I explore the fundamental frameworks from which governments can guide sustainability transition legitimately. This exploration can be seen as a dialectic relation between change and stability, which, when a desirable future is aimed for, does not happen straightforwardly.

This introductory chapter introduces the main building blocks of this thesis. First, the clash between change and stability culminates in the problem space of the dissertation, which is analytically broken down into relationships between discourses, institutional structures, and individual action. Subsequently, I reflect on my empirical case and methodology. I then give an overview of the upcoming chapters and conclude with briefly elaborate on the allegory depicted on the cover of the dissertation.

2. Foundations for change and stability

Due to the urgent need for sustainability transitions, new theories on transitions (or system change⁶) have arisen. I refer to these transition theories underlying literature as Transition Literature. As sustainability transitions are increasingly used in policy notes in various ways, indicating different aspects of change, it is helpful to define what I mean. When I talk about transitions, I mean sustainability transitions—responding to persistent environmental problems, such as climate change and biodiversity loss, which require radical shifts in energy, housing, mobility, and agricultural systems (Hölscher et al., 2018). It contains the ambitions to change and govern the societal regime toward achieving sustainability via innovation and phasing out unsustainable practices and technology (Franzeskaki et al., 2012).

These transition theories have not been developed or adopted by Public Administration (the academic discipline focusing on the government and public sector), which describes and prescribes civil service actions. Transition Literature is, therefore, not adjusted to how prescriptions ought to be recommended to government. My thesis is that both Transition Literature and Public Administration Literature could benefit from establishing common ground on the civil service's role by reviewing their normative assumptions, institutions, and actions, to integrate ideas on system change in legitimizable practices.

As change is a relative attribute, identified by comparing the current stage with the previous one, it breaks through the constraints that stabilize the status quo (Adorno, 2010). Thus, change is determined by the forces of change minus the stabilizing forces, which can be severe. Therefore, change does not always happen. In my research, transition ideas currently in praxis, are often dismissed as impractical and invalid due to a misalignment of the Transition and Public Administration literatures. Because Transition Literature and Public Administration Literature hardly interact, Public Administration Literature does not legitimize practical recommendations of

6 Fundamental adjustments in the complex patterns of interacting, interconnected components.

Transition Literature towards government. The hesitance of civil servants to undertake tasks needed for system change demonstrate this latent misalignment. In the following paragraphs, I elaborate on these foundational literatures for change and stability.

2.1 Transition Literature prescribes transition tasks for system change

Sustainability Transition Literature prescribes new government tasks and roles (Borrás and Edler, 2020). This body of knowledge expanded extensively over the past thirty years, combining ideas from evolutionary economics and the sociology of innovation (Köhler et al., 2019) to develop analytical and practical frameworks. The primary focus of these frameworks is to help support systems of radical innovation while destabilizing established dysfunctional structures. The most widely recognized frameworks are the Multi-level Perspective, Transformative Innovation Policy, Transition Management, Technological Innovation System, and Strategic Niche Management (Köhler et al., 2019).

Strategic Niche Management focuses on radical innovations that need spaces (niches) that protect them from mainstream selection criteria, so these innovations can develop through their early stages of development and diffusion and break through into the regime (Schot and Geels, 2008). The Technological Innovation Systems approach identifies policy intervention points in the form of systemic problems that inhibit the emergence of technological development and diffusion of focal innovations (Hekkert et al., 2007). Transition Management is a practical, policy-oriented framework helping policymakers shape transitions using strategic, tactical, operational, and reflexive activities (Loorbach, 2010). The Multi-Level Perspective provides a holistic perspective on innovation and transition by placing niches in an interplay with the two higher levels of structuration; the socio-technical regime that reflects forces of stability, and the exogenous landscape outside the influence of individual actors (Geels, 2002; 2004).

Few scholars have studied how transitions affect civil service work and its role (Chapter Two). This absence is surprising, as it is considered good practice in Transition Literature to add policy recommendations, and the civil service is the executive body of government. Based on analyzing a hundred articles from the five main transition frameworks, I introduced the term ‘transition tasks’ to categorize all policy recommendations from Transition Literature articles to ‘governments’, ‘public organizations’ such as ministries⁷, and ‘civil servants’. The five (aggregated) transition tasks are: give direction (Hekkert et al., 2007; Rogge and Reichardt, 2016; Edler and Boon, 2018), support governance (Fagerberg, 2018; Rotmans et al., 2001), support the new (Kivima and Kern, Bergek et al., 2008), destabilize the unsustainable (Loorbach, 2007; Turnheim and Geels, 2013; Kanger et al., 2020), and create new structures and capacities (Quitow, 2015; Borrás and Edler, 2020). However, these tasks tend not to align with Public Administration discourses resulting in civil servants’ disinclination to act.

2.2 Public Administration Literature stresses the need for institutional structures for stability

A (representative) democratic system requires accountability from everyone in a position of public power. Politicians will probably not be elected again if the public is unsatisfied with their

7 Parliament and coalition are terms describing the political echelon. The Ministry, department, and bureaucracy are the administrative echelon. I use the term ministry to sidestep the ambiguity of the terms department (which is also used to indicate a specific agency or directorate-general), bureaucracy (which is an ideal-type organization, see Weber, 1978), public sector (which includes all kinds of semi-governmental organizations) and administration (describing total executive branch).

performance. Civil servants are historically appointed for life to maintain stability (Wilson, 1989). They, however, have power too; to prepare solutions, propose alternatives (Kingdon, 1984), set the agenda (Lukes, 1974), advise their minister (Wilson, 1989), implement policy (Pressman & Wildavsky, 1984), and evaluate it (Stone, 2002), and plan for the long-term. Due to this power, civil servants must account for their actions.

This research directly connects to a central concern in Public Administration Research: the relationship between politics and the civil service. Weber's strict ideal-typical division between the political system and its constitutional realization via the bureaucratic system lies at the core of this relationship. This relationship has long been regarded as a dichotomy answering to two risks; politics in the civil service and the civil service in politics. The dichotomy implies that politicians make policy decisions, and civil servants execute these decisions neutrally. Civil servants do not take sides in partisan political activities and are subservient to their political superiors as they have a constitutional claim to represent the public. The presumption was that both spheres work best in isolation with a division of authority and labor (Overeem, 2005). This strict dichotomy has been criticized for oversimplifying policy formulation and execution (Svara, 2001). The reality of public administration practices is more nuanced. There is less room for action by civil servants in highly controversial debates when a political majority decision is needed, than in the initial stages of policy-making, i.e., proposing alternative problem definitions or innovative solutions. Through such distinctions, a continuum is proposed (Demir, 2009), ranging activities from purely political to administrative. In the middle are all activities where politicians and civil servants can complement each other. This model emphasizes sharing responsibility, ongoing interaction, and reciprocity during the policy process (ibid). Understanding the politics-civil service relationship as complementary allows for the involvement of civil servants a) to educate, persuade and dissuade important stakeholders, b) to support informed decision-making processes, c) to propose new initiatives, alternative problem definitions, and innovative solutions, d) set goals, and e) align policy with emerging societal needs (ibid). Like many other authors, I fully acknowledge the crucial role of politicians in sustainability transformations, but I also observe that politicians have received wide attention in the literature (Meadowcroft, 2011; Patterson et al., 2017), whereas the role of civil service is understudied (Song et al., 2023). My research demarcates the understudied position of civil servants in sustainability transitions, while acknowledging the complementarity with politics. I talk about 'government', the system or group of people governing a state, when the closely linked relationship between politics and civil service is implied, and I talk about the 'civil service' when the focus is only on civil servants.

Public Administration Literature is the scientific field studying the civil service and presents legitimate ways to give accountability to civil servants. Public Administration is closely related to Public Policy and Political Science but is a more specific indication as it focuses solely on the government and public sector and contains their normative discourses⁸. Public Administration discourses represent evolving public values and narratives of legitimation on the role of government

8 Other related words often used are *paradigms* (implying scientific methodologies), *approaches* (implying techniques), *theories* (complex to understand at a macro level), and *doctrines* (implying rigidity). For clarity, I use 'Public Administration discourse' or 'discourse' in this introduction and conclusion chapter to analyze their relationship with the institutional structures of public organizations and the agency of civil servants. Following Stout (2013: 63-66), from Chapter Two to Chapter Five, I choose to use the term *traditions* because they represent a 'repository of truth as it is understood' (Bernstein, 1991 in Stout, 2013: 64) and provide 'a stable, structured, yet open context' within the governance dialogue (White and McSwain, 1990 in Stout, 2013: 64).

(Bourgon, 2011; Stout, 2013; Stoker, 2016). Public Administration Literature distinguishes three discourses, each promoting a different, legitimate role for the civil service: the constitutional (classical Public Administration), the discretionary (New Public Management), and the collaborative tradition (New Public Governance or Network Governance⁹). These discourses emerged sequentially during the twentieth century, using distinct ideological frameworks to represent evolving public values in institutions and actions of civil servants. Nowadays, all discourses are present in public institutes at all times, promoting different tasks as essential for civil servants and providing different answers to what good governance is. This available array of discourses may create discretionary space to act, as there are multiple sources to claim legitimacy from, or it may lead to restriction because all these discourses impose limitations, depending on the level of institutionalization of these discourses.

These discourses can be depicted as sedimented public values (Van der Steen et al., 2018) or as matryoshkas to indicate that they are always present in public institutions (Stoker, 2016) using different ideological assumptions. Both metaphors emphasize the lasting heritage of previous periods. Furthermore, they indicate that the essential codified public values in these periods are still necessary. The metaphors illustrate how the new periods' articulated specific values are added to the existing discourses. Every tradition gives a normative guideline to civil servants about their role perception and what they can and cannot do. Through the normative guidelines, Public Administration Literature helps stabilize acquired public values within the administration to ensure sound motivation, carefulness, cost-consciousness (Wilson, 1989), egalitarian interaction (Rhodes, 1997), and to prevent unnecessary intervention in the market (Osborne and Gaebler, 1993). If new tasks are at odds with these guidelines, institutionalized norms and values demand that civil servants acknowledge their restrictedness and conclude that they have no legitimacy¹⁰ to act.

The concepts and emphasis used by Public Administration Literature to describe what is considered legitimate change over time. This changing emphasis can be explained by dialectic reasoning. This method explains the volatile nature of concepts and ideas by exposing the original thesis to an opposing perspective (e.g., Adorno, 2010). A synthesis appears in this collision of ideas, containing both elements of the original ideas and their opposition. Applied to this dissertation, I argue that such a synthesis is impaired. The ideas of Public Administration Literature form the thesis, and the opposing perspective of Transition Literature forms the antithesis; the thesis is not susceptible to alteration. As 'Transition Literature' challenges the status quo by

9 The term governance is used with different meanings across domains. In Public Administration Literature, it refers to governing with and through networks (Rhodes, 2007: 1246). It includes continuous network interaction with non-state actors, where the rules are negotiated in self-organizing coalitions, meaning the boundaries between public and non-public shift (ibid). This conceptualization differs significantly from global governance (interdependence between nation-states), European governance (layered networks of national governments, EU institutions, NGOs, intergovernmental organizations, etc., governing the EU), or corporate governance (business management and delegation of responsibility). Paradoxically, the 'corporate governance' conceptualization is mainly used within Dutch government ministries.

10 Legitimacy is the just, lawful, politically acknowledged, and socially accepted right to exercise power (Bokhorst, 2014). Legitimacy dynamics contain at least two actors, one legitimated to act and the other accepting the authority. Through legitimacy, power is converted into authority (Weber, 1925 in Bokhorst 2014, 31). In a bureaucracy, rationality is the basis for impersonal authority. Therefore, bureaucracies constantly risk decoupling authority from moral values, which are considered personal. Weber thus argues that politicians must add value-driven rationality to counterbalance 'the iron cage of bureaucracy' (Verhaeghe, 2015).

1 advising how government can guide society to a sustainable future, it is delegitimized by current institutionalized discourses of Public Administration. These institutions have, over time, been codified and deliberately set in place to safeguard the status quo from changing. These institutions reflect democratic accomplishments valued by society, such as impartiality, accountability, and responsiveness. Public Administration discourses legitimize the implemented institutions. Dialectically, this means that new ideas on sustainability do not have enough capacity to oppose the old, legitimated ideas, which stalls the synthesis of ideas.

The concept of the government, its tasks, and its role has changed over time. Codifying what a government is, is an attempt to stabilize specific achievements, such as the shifting focus from non-arbitrariness and legality to effectiveness and efficiency. Adding or altering tasks is an attempt to change the status quo. These forces of change and stability are intertwined, especially in the idea of government. While Transition Literature foregrounds the forces of change and neglects those of stability, Public Administration literature foregrounds stability and neglects change. As there is scarce interaction between Transition Literature and Public Administration Literature, this research explicates their normative assumptions to make exploration of alignment possible, resulting in inadequate possibilities for civil servants to execute transition tasks. By identifying these assumptions over time, I argue that neither body of literature fully accounts for both change and stability.

3. The problem space, research question, and overview of studies

The previous sections show that forces of system change within the government are resisted by entrenched forces of stability. Although, in principle, broadly endorsed, the urgent and necessary system changes needed for sustainability goals are antagonized by civil servants advocating the existing, institutionalized values of Public Administration Literature. Antagonizing existing structures leads to opposition within the civil service through various institutional blockades (see Chapter Three). Understanding these blockades from the perspective of civil servants who are expected to execute governmental transition tasks, is needed to advise how public organizations can change their institutions and policies.

This research aims to find a legitimate role for public institutions in supporting sustainability transitions. Interviewed civil servants reported that working on sustainable innovations was approached with noninterventionist, neoliberal discourse by some colleagues, making it hard to find a legitimate role for civil servants aiming to facilitate sustainable transitions within government. They expressed that these objections toward supposed normativity grew when the transition narrative became more robust over recent years. Sometimes these opposing civil servants seemed unaware of their normative assumptions. The institutions established by Public Administration discourses influenced them unconsciously on what to consider a legitimate role for themselves and their organization, which created entrenchment between them and their colleagues who are more inclined to execute transition tasks.

The civil service has, of course, a direct relationship with politics. Although the political sphere itself remains largely undisclosed within this dissertation, civil servants continuously converse with their minister, explicitly in direct conversations and implicitly in their institutions and role perception. I focus on administrative work within transitions, which is often pre- and post-political. The actual political insertions are brief moments, even though the anticipation of these moments determines much of the dynamics within the civil service. As transition tasks prescribe civil servants to guard the long term, it is essential to understand their internal dynamics. I am not

arguing that politics should not help realize transition tasks, but politicians depend on civil servants, and transition tasks do have consequences for public organizations' structures.

The previous sections indicate a need to integrate and legitimize a sustainable, socio-technical system change rationale^{11,12} in Public Administration discourse that legitimizes democratic institutions and their configurations. In this light, the overarching research question of this dissertation is twofold: “*What are the struggles civil servants experience when they try to execute tasks to guide sustainability transitions?*” And, “*What could be a new legitimizable rationale to rethink administrative institutions to take transformative action and explore favorable institutional conditions beyond the current civil service’s inertia?*”

These two questions combine a descriptive empiric research focus with a prescriptive normative ambition. I aimed for these two questions to amplify each other throughout this dissertation. Transition Literature prescribes a new normative discourse of what ought to be done, which triggers observable reactions within the civil service. Understanding these struggles provides a context for what can be done.

The research questions explore the relation between discourses (consolidated systems of meaning based on ideas, concepts, and categorizations; Hajer, 1995), institutions (structures that shape and legitimize individual and collective action and belief through symbols, language, myths, and ceremony; Lawrence et al., 2009), and agency (the act of interpreting, translating, transposing, editing, and recombining institutions; Lawrence et., 2011) within the context of a ministry that undertakes transition tasks. Understanding the interplay of these levels of analysis is essential to explore analytically why the civil service is hesitant to integrate transition recommendations.

Integrating the transition rationale with the Public Administration discourses within the praxis of the ministry seems challenging. To integrate these two, I introduce the concept of *Transformative Government* as a new Public Administration discourse that processes the implications of Transition Literature for Public Administration Literature. The different sub-studies of the dissertation engage with the *Transformative Government* concept on three analytical levels: discourses, institutional structures, and agency, see Figure 1. In the consecutive chapters, I study the relations between them.

11 I use transition rationale as a counterpart of Public Administration discourses because a rationale may not yet be institutionalized.

12 The current Public Administration traditions do not focus explicitly on system change, see Bourgon, 2009; Bourgon, 2011; Osborne, 2006; Stoker, 2006; Stout, 2013; Torfing and Triantafillou, 2016.

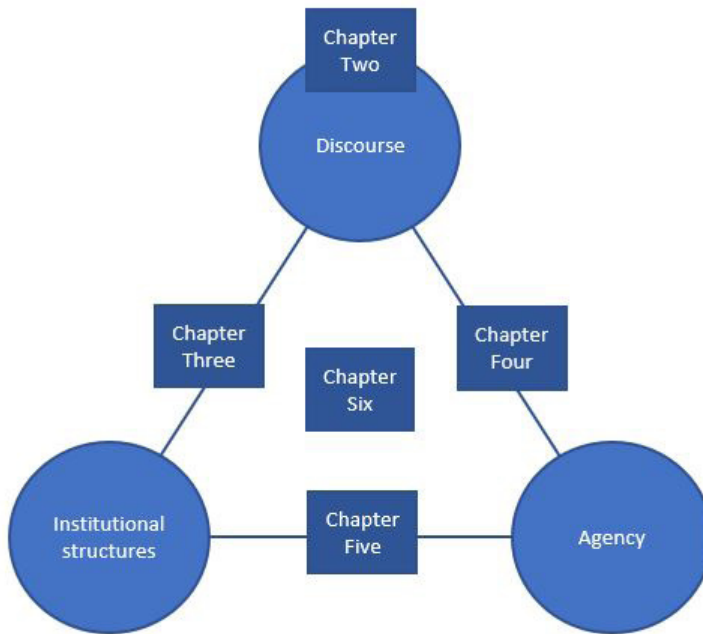


Figure 1: *The relation between the overarching research question and the sub-studies*

- Chapter Two (‘Legitimizing *Transformative Government*’) analyzes the current Public Administration discourse that delegitimizes transition tasks in governments. Its research question is: Can legitimacy be found in the Public Administration traditions for civil servants to execute transition tasks? In this chapter, I construct a preliminary rationale for the execution of transition tasks in government: the *Transformative Government*.
- Chapter Three (‘Understanding why civil servants are reluctant to carry out transition tasks’) analyzes the relationship between a ministry’s dominant discourse and its institutional structures. The research question is: What institutional structures in the civil service determine how civil servants can execute transition tasks legitimately? I describe how the Public Administration discourses are institutionalized into (implicit) structures, which determine whether the civil service can execute transition tasks.
- Chapter Four (‘Civil servants’ tactics for realizing transition tasks. Understanding the micro-dynamics of *Transformative Government*’) analyzes the relationship between the dominant discourse and the individual actions of change agents willing to undertake transition tasks. I address the question: How do entrepreneurial civil servants deal with opposition from within their organization when trying to execute transition tasks? I describe how change agents contest colleagues of other directorates responsible for maintaining the current system. Both parties either try to reproduce or transform the discourse.
- Chapter Five (‘Institutional conditions for governments working on sustainability transitions?’) analyzes the relationship between institutional structures’ beneficial actions to execute transition tasks. The research question is: How do civil servants working on

transition tasks experience constraints resulting from dominant legitimation discourses, and which institutional conditions can help civil servants to tackle these constraints and work on transition tasks? Civil servants are asked what altered institutional conditions would favor them when working on transition tasks. This interplay between agency and institution shows how actors could reform their work structures.

- Chapter Six ('Towards a *Transformative Government*') concludes this dissertation by combining all three levels of analysis to answer the central research question: What is a legitimizable rationale for governments to rethink their administrative institutions and take transformative action?

Working on transitions within the civil service is challenging without a thriving dialectic relation between ideas in Transition Literature and Public Administration Literature. The latent contradictions between these bodies of literature frustrate the practical implementation. Because all the chapters describe the force field of change and stability, the constant push and pull civil servants are subject to is noticeable.

4. Theoretical foundations

This section theoretically explores the foundations of the dissertation and its implications for the following chapters. I connect the Public Administration discourses and the Transition rationale to institutional structures and individual action. These relations show why the expectations of Transition scholars are not aligned with the possible actions of civil servants. This misalignment explains why government and the literature need a new equilibrium of change and stability, which has consequences for all the upcoming chapters.

4.1 Discourses, institutional structures, and individual action

People construct their social reality through discourses and social interaction (Burnham et al., 2008). Discourses are modes of talking and writing that connect a collection of ideas, concepts, and categorizations to practices. These are produced, reproduced, reinforced, and transformed (Hajer, 1995). Thus, the language used is vital to understanding which meanings and explanations dominate society. Discourses imply prohibitions and determine which questions can be asked (ibid). The discourse analysis shows respondents' day-to-day practices and conversations to find consistency and variations in their thinking (Van Es, 2014). Thus, discourse is given meaning in physical and social realities and occurs among individual practices (Hajer, 1995: 44).

Discourses become manifest through interrelated institutions in specific contexts. These institutions are particularizations of the broader discourses and are formally codified into policy or law or informally translated into rules, logics, symbols, stories, habits, etc. Institutions shape, standardize, and regulate the policy context and its legitimated action (Battilana and D'Aunno, 2009; Deephouse and Suchman, 2008). Institutions thus give the rules by which the game ought to be played. This institutional layer mediates between agency and discourse but also stalls change, as it is interwoven throughout and thereby creates stability within the system.

The analysis of discourse identifies the 'varying and multiple languages' within the civil service and its varying interpretations of what is acceptable (Stout, 2013: 62)¹³. Public Administration

13 I analyzed how the academic, normative Public Administration discourses affect the institutional structures of ministries. There are broader societal discourses on the civil service in de media that affect the course of action. However, since I wanted to determine if civil servants can, at all, execute new transition tasks, I demarcate discourses as such.

discourses are institutionalized within the civil service to give three ideal-type arguments on how to legitimize action: 1) through acting by the democratically agreed process and procedures (the constitutional), 2) by acting efficiently and effectively (the discretionary), and 3) by acting inclusively and finding broad support (and the collaborative) (Torfing and Triantafyllou 2016; Stoker, 2006). Ideally, combinations of these types can be found to strengthen the legitimacy claim. However, when none of these are available, civil servants cannot act, as Public Administration Literature delegitimizes action.

Thus, discourses manifest in physical and social practices formed by institutional structures. Both the discourses and their institutionalized structures socialize civil servants and determine legitimized action. However, actors also interpret, translate, transpose, edit, and recombine institutions (Lawrence et al., 2011). These reconstructive actions can also be institutionalized through collective meaning-making processes and may eventually collimate into new discourses. Dismantling existing institutions and channeling reconstructive actions into new institutions disrupts the dominant discourse and might bring an alternative rationale. Therefore, more reflection is needed to understand the interplay between academic Public Administration discourses and administrative practice.

This dissertation tries to bridge this gap between Transition Literature recommendations and Public Administration Literature legitimacy by extending the understanding of the institutional barriers faced by the recipients of transition policy recommendations, i.e., the civil servant. Recombining actions into new institutions is, however, extremely difficult for civil servants because dominant discourses are heavily institutionalized and safeguarded from change. Seeing civil servants as agents of change seems paradoxical from a skeptic's point of view. Many archetypal studies have explained and confirmed the stereotypes of why bureaucracy and innovation are an inherent mismatch (Thompson, 1965) and can impair civil servants' career progression (Adler and Borys, 1996).

Civil servants, however, are critical actors in transition because their setting is where ideas of urgent and necessary transition and accountability mechanisms of Public Administration Literature should collide and manifest in a policy arena. After all, civil servants must undertake action by executing prescribed transition tasks. I argue that no other societal actor has the same opportunities to bring necessary change and established democratic values together in the implementation of a new policy. Besides having the potential for a new synthesis, the civil service has the institutional pre-proposition of reconciliation of conflicting public values in the proximity of the political arena (Svara, 1999). If we accept that civil servants are crucial for executing transition tasks, it is helpful to see them as agents shaping change. My research illustrates that civil servants' individual actions can influence the institutions and the discourse.

4.2 The need for a new equilibrium of change and stability

Individual actions produce and reproduce but also can transform discourses. These transformative actions can be channeled into a broader movement based on alternative discourse. The need for a new synthesis, which includes notions of system change and permanence, is displayed by the close collaboration of DRIFT (one of the guiding transition management institutes) and the NSOB (Dutch School for Public Policy) on steering transitions (Diercks et al. 2020). This unique cooperation superimposes Transition Management and Public Administration's core frameworks and advises how civil servants may act accordingly. It tries to cultivate the balance of proactivity and responsivity. Another promising avenue toward alignment is creating bottom-up transition routines in the administration (Kopp, 2021) to complement top-down policies, as described

by Transformative Innovation Policy (Haddad et al., 2022, Ghosh et al., 2021). Other concepts proposed by the European Commission (2021) are Experimentalist Governance (Kivimaa and Rogge, 2022), Intermediaries (Kivimaa et al., 2019), and Responsible Research and Innovation (Burget et al., 2017) to recalibrate the way of working within the civil service.

These research directions either assume that Public Administration principles can cater to transformative change within government, or that niches outside the regime foster new working methods that can be scaled up within government. My analysis and observations, however, will indicate that this assumption does not always hold. In other words, Transition Literature and Public Administration discourses are currently not aligned enough for civil servants to find legitimacy to act. For example, setting a direction, scaling up new solutions (Van Hout et al., forthcoming), or phasing out undesirable aspects, remains problematic in these new research directions from the perspective of civil servants (see Chapter Two). Therefore, a new overarching Public Administration tradition is needed to facilitate civil servants in executing transition tasks.

Since I argue that civil servants' individual work depends on larger discourses, and the same civil servants enact these discourses, it makes sense to study them simultaneously. The research should thus not only be about concrete, novel practices that help the mobility transition, such as Mobility as a Service, hybrid flying, and electric road systems. It should also be hermeneutic and interpretative of these practices and understand the underlying mechanisms for dealing with change in a specific context. A legitimate tradition can be found by interacting with civil servants on a micro-level and reflecting on societal discourses on a macro-level.

The Aristotelian notion of *phronesis* helps to shift between the micro and the macro level. *Phronesis* is 'an activity to yield practical wisdom' (Loeber, 2003: 129); it links understanding with compassion. Next to the other intellectual virtues of *episteme* (universal and analytical context-independent science on climate change) and *techne* (pragmatic context-dependent craft instrumental for production of policy), *phronesis* is about bringing value judgment both in the collective and the particular (Flybjerg, 2001), and in this case, descriptive and prescriptive elements and notions of change and stability. It is the central intellectual virtue needed to understand the problem this research addresses. The IPCC (Intergovernmental Panel on Climate Change) brings in universal knowledge of where we are going. Transition Scholars discuss the undesirability of climate change and propose new solutions (*episteme*); Public Administration Literature has context-dependent instruments (*techne*) for civil servants to work with these new answers. However, a new rationality is needed to deal with the social and political problems around sustainability. *Phronesis* is needed to conduct such a rationale.

Bringing *episteme* (Transition Literature) and *techne* (Public Administration Literature) together in deliberation about a value-oriented action (*phronesis*) is currently lacking in policy praxis. It seems the discourses of the two bodies of literature are at odds; therefore, their corresponding institutional structures and proposed actions do not align, leading to inadequate possibilities for *phronesis*. The *Transformative Government* rationale introduced in this dissertation addresses the current inertia stemming from insufficient rationality for action and tries to find a shared space for both literatures to advise the civil service. *Phronesis* may be a way to balance navigating between - and altering discourses, institutions, and actions, guiding the *Transformative Government* rationale.

This concept of *Transformative Government* legitimizes working on transformative change for civil servants when functioning as a Public Administration tradition. *Transformative Government* is the central concept of this dissertation, connecting the rationale for solving societal problems through socio-technical transitions with Public Administration Literature claims needed to acquire

legitimacy (see Chapter Two). *Transformative Government* is thus a label for a ‘new tradition’¹⁴ for Public Administration Literature that facilitates and legitimizes civil servants who try to execute transition tasks. Alternatively, a transformative government (without capitals) is a government capable of executing transition tasks well. All studies in this dissertation contribute to building blocks for this encompassing idea and its application.

5. Empirical case

To find a legitimate role for public organizations to undertake transition tasks, I studied the Dutch Ministry of Infrastructure and Water Management (mentioned later as I&W or ‘the Ministry’). I&W requested answers to their question about how they could support innovations that would accelerate the transition towards a green and smart mobility system. These answers would help them reduce emissions following the Paris Climate Agreement. This Dutch Climate Agreement operationalized the goal of mobility into ‘seamless and emission-free mobility for everything and everybody in 2050’¹⁵. Meaning clean energy carriers, electric transport, sustainable logistics, and sustainable personal mobility. Like almost all ministries executing the Paris Agreement worldwide, this Ministry is co-responsible for reducing greenhouse gas emissions. Its objectives are a reduction of 49% by 2030 and 95% by 2050, with goals of achieving emission-free mobility and a sustainable, circular economy by 2050. Another essential transition within this Ministry is the adaptation to climate change, which requires water management to secure against flooding and drought.

I aim to provide transferable answers to the Ministry’s request to find its role in sustainability transitions. As many public organizations have to concern themselves with executing transition tasks to reach sustainability goals, my descriptions and illustrations help readers (both academics and practitioners) of different contexts to interpret which transition tasks, institutional rules, heuristics, and favorable institutional conditions can be used in their setting. The particular case of I&W has many generalizable conditions embodied in experiential, tacit knowledge. The specific context helps to communicate these aspects recognizable to (our) different audiences (Stake, 1994).

I&W is an interesting setting to untangle a transformative rationale. The environmental part of the Ministry has a 20-year history of dealing with transitions (Loorbach, 2007), while the mobility part has focused on developing infrastructure to serve the economy. Thinking about transitions originated within the Spatial Planning and Environment Ministry¹⁶, which later merged with and Traffic and Waterways Ministry¹⁷. The Ministry lost its environmental, climate, and spatial planning departments to Economic Affairs and Home Affairs over several coalition agreement cycles. Initially being the Ministry of Traffic, their policy was no longer perceived by other public values than extending mobility which is mainly understood in the context of economic growth. With the beginning of a transition rationale, the Ministry’s focus shifted from supporting economic development to addressing transformative societal challenges.

I&W presents an interesting, highly institutionalized context to understand how the Public Administration discourses collide with a transition rationale with an external background where transitions are becoming more manifest. The Ministry’s domains (circular economy, climate adaptation, and mobility) are (on the verge of) extensive system change, making for an insightful

14 ‘Which is a bit of an oxymoron,’ as an anonymous reviewer pointed out.

15 www.klimaataakkoord.nl/mobiliteit.

16 In Dutch: ministerie van Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer.

17 In Dutch: ministerie van Verkeer en Waterstaat.

policy arena to understand the transition processes within a governmental setting. The Ministry synthesises sustainable change and economic permanence in its policy. The renewed rationale on transitions over the last few years broadened the discussions on what public values should be significant. For instance, conceptualizing 'Broad Welfare' so that it includes sustainability indicators could be used in policies to accelerate this process¹⁸. This case, thus, makes a generalizable case study as it examines how civil servants legitimize transition tasks by combining an economic and transition rationale in pursuing public value.

6. Methodological approach

This section discusses general methodological issues and concerns that apply to the entire dissertation. Since the research methods differ per sub-research question, specific methods are elaborated in the corresponding chapters.

My career colors my research interest, questions, focus, methods, and data availability; this deserves attention. Trained as an interpretative political scientist, I have seven years of experience working and preunderstanding (Coghlan and Brannick, 2005) as a civil servant at the Dutch Ministry of Infrastructure and Water Management. For the last four years, I have also been undertaking an external Ph.D. at the Copernicus Institute for Sustainable Development.

The primary respondents of my research were civil servants of the same Ministry. As I interpreted their interpretations of the issues, I developed ideas. Iteratively, I presented these ideas, frameworks, and recommendations to over a thousand Dutch civil servants¹⁹. When my research was published in peer-reviewed journals, my audience within the Ministry and other public institutions became more extensive. As the research explores their embedded understanding (Bevir and Rhodes, 2002), what is considered relevant is decided by the researcher's and her the respondents' interpretations; this is called double hermeneutics. Although this research was not set up as action research, some interference cannot be ruled out²⁰. However, I continually reflected on my inside-out position²¹ and used logic, triangulation, intercoder reliability checks, and member validation to work methodically. With an inside-out position, understanding the praxis from within and without (Flybjerg, 2001) differs from a civil servant's perspective (inside-in) or non-external Ph.D. researcher (outside-out), or a consultant or ethnographic researcher (outside-in, see Bason, 2017). The inside-out position may best help to establish high-quality relationships with respondents, understand the context, interpret meanings, get access to the data, and develop a narrative to refine the debate (Coghlan and Brannick, 2005).

The inside-out position implied that I was already submerged in a ministerial context. In social science, such a role duality can be used as an advantage, as it helps determine what constitutes relevant facts for respondents. Cognitive models are limited when actions are less defined and executed by experts (Dryfus 1986, in Flybjerg, 2001). Understanding these actions requires

18 Denkkader Brede Welvaart IenW (2022) by De Argumentenfabriek.

19 I held many presentations over the years, presenting my lines of thought and findings. These presentations offered ample reactions from practitioners of all levels in a broad array of public organizations and, thus, the opportunity to deepen understanding and find possible generalizations. I am aware that these practices influenced the research along the way.

20 The built-in delay in publishing and starting with the diagnosis helped to maintain and possibly enhance (because of multiple presentations, c.q. validation sessions) the reliability and validity.

21 Or 'complete member' (Coghlan and Brannick, 2005).

interpretation and judgment. My inside-out position facilitated making these interpretations and judgments, as it allowed both scholarly distance to make valid claims and professional and context-dependent compassion toward the subject. Analytically, I took a step back from the broader case, questioning its meaning, conditions, and goals and reflecting on it as a problem (Foucault 1984, in Flybjerg, 2001); practically, I got close to reality, consciously exposing myself to positive and negative reactions (Geertz, 1973; Flyberg, 2001). Both enhanced my understanding of the structures and agency in place.

I aimed to initiate a sustainable dialogue on how to overcome the friction between Transition Literature, Public Administration Literature, and the (praxis of) civil service. I started my Ph.D. research with questions and a thick description (Geertz, 1973) from a few years of bewilderment and socialization as a civil servant; I followed up with diagnoses of phenomena experienced by civil servants (Chapters Two and Three) and iterated this process with an inscription article on timing, context, tempo, and sequence (Chapter Four) and a specification article on tacit knowledge (Chapter Five). Constantly coupling theoretical speculation with data and analysis helped develop the narrative of the *Transformative Government*.

Understanding and acknowledging civil servants' service, expertise, and engagement are crucial; discarding them as unproductive prevents society from using their potential to guide and guard through sustainability transitions. Being able to signal a gay view toward the praxis²², and therefore having the opportunity to have honest and compassionate conversations, is the final reason my inside-out position worked in this context.

7. Ambitions for practitioners and academia

A consequence of my inside-out position, research method, and problem diagnosis is that the academic and practical relevance of my dissertation are highly intertwined. I start with a practical question with significant implications for the role perception of civil servants²³. I will end this dissertation with more practical questions and broader recommendations on a new rationale needed, favorable institutional structures, and a reappraisal of civil servants willing to execute transition tasks (see Chapter Six). In the middle, there is analysis and contribution to theory. I highlight the misalignment of Transition Literature and Public Administration Literature. This divide has grave practical implications. It leads to unfavorable institutional ramifications for the civil service. In its extreme, either no too-limited action will be undertaken to diminish (the consequences of) climate change, or democratic values will eventually be sacrificed to save human existence.

Academically, I will try to bridge the gap between transition ideas and Public Administration discourses with the concept of *Transformative Government* on three analytical levels: discourse, institutional structures, and agency. This concept features the need for a coherent civil servants' discourse on transformative change, which Public Administration Literature currently lacks (see: Bourgon, 2009; 2011; Hajer, 2011; Osborne, 2006; Stoker, 2006; Stout, 2013; Torfing and Triantafillou, 2016; Van der Steen et al., 2018).

At the level of institutional structures, I aim to analyze how dominant Public Administration discourse affects the civil service's rules when confronted with transition tasks. This research

22 Yea-saying to the difficult parts of life, a variation on Gay Science – Nietzsche (1882).

23 What is the role of the Dutch Ministry of Infrastructure and Water Management in innovations that could help accelerate the mobility transition?

will illustrate how institutional structures are formed around these discourses (Fuenfschilling and Truffer, 2014). To the Transition community, I open the black box of government and show the micro-dynamics that explain seemingly contradictory courses from within the same public organization. I aim to contribute comprehension of what institutional structures resist the uptake of their recommendations, for instance, why civil servants find it difficult to accelerate the transition by phasing-out unsustainable practices (Hebinck, 2022).

From the agency level, I aim to aggregate the recommendations of Transition Literature (see Appendix 1 for the 100 Transition Literature articles analyzed) for governments and interpret what favorable institutional conditions are actually working to undertake transition tasks. I will answer what preliminary conditions need to be altered in the culture, organizational structure, collaborative behavior, and values to become a government capable of transformation.

I propose a research agenda for this new tradition to integrate aspects of Transition Literature with Public Administration Literature so that my ministry colleagues can undertake transition tasks under specific conditions. I want to contribute to their engagement with transition tasks from the perspective of *phronesis*, meaning the combination of the urgent problem based on empirical knowledge and the right democratic tools for the job. As the Dutch Ministry for Water Management is my employer, I intend to reciprocate by presenting the finding as concrete as possible to the central government. With this dissertation, a public release is published as a magazine²⁴, introducing the core ideas and suggesting action repertoire. My aspiration with this release is that other public institutions can benefit from the practical insights.

8. Overview of the chapters

In the broadest sense, this dissertation aims to establish the ministries' role in guiding sustainability transitions. To do this, ideas from Transition Literature and Public Administration Literature needed to be aligned. Chapter Two problematizes a presumed smooth integration of this alignment due to the (de-)legitimizing force of existing Public Administration discourses. Chapter Three assessed these theoretical expectations in the daily praxis of the Dutch Ministry of Infrastructure and Water Management. The analysis of interviews with civil servants confirmed the reluctance to execute these relatively new tasks since they conflict with normative arguments and assumptions enacted as implicit rules. The Fourth Chapter enters the structure-agency debate by looking at change agents willing to defy these dominant discourses to further transition tasks. It presents a heuristic rounds-model to understand the interplay between tactics, contestation, and responses between internal forces of change and stability. The Fifth Chapter combines the previous insights and centralizes the tacit insights of the practitioner. The Sixth Chapter concludes and answers the main research questions. The subsequent paragraphs present the upcoming five chapters in more detail.

Chapter Two contains a theoretical argument based on literature research. The chapter sets the scene theoretically by problematizing the supposed ease with which the government should be able to execute the necessary tasks to help guide sustainability transitions. It asks whether there is enough legitimacy to execute necessary transition tasks. Transition Literature has described many roles (Borras and Edler, 2020) and tasks (Mazzucato, 2016; Hekkert et al., 2020; Weber and Rohrer, 2012) for government; this body of literature, however, does not take Public Administration discourses (see, e.g., Bourgon, 2011; Stout, 2013; Torfing and Triantafillou, 2016;

24 <https://www.rijksoverheid.nl/documenten/rapporten/2023/09/19/proefschrift-de-transformatieve-overheid>

Stoker, 2006) into account. These discourses determine the legitimacy by which civil servants can act. Some fundamentally incompatible objections arose when analyzing whether the transition tasks found in the literature (80) could be executed under the three main Public Administration discourses. Due to the urgency and necessity for governments to act in the climate crisis, I proposed building a new Public Administration framework. This framework, *Transformative Government*, would facilitate governments in sustainable system change.

In Chapter Three, I aimed to validate to what extent the theoretical problems of the previous chapter affect policy-making by asking: What institutional structures in the civil service determine how civil servants can execute transition tasks legitimately? Thirty-four Dutch civil servants working on the circular economy, climate adaptation, and green and smart mobility were interviewed about whether they considered transition tasks presented to them as legitimate tasks to execute. Often, implicit institutional structures traceable to normative Public Administration discourses prevented them from perceiving legitimacy in executing. I found seven institutionalized structures illustrating the inadequacy of adhering to Public Administration discourses while trying to execute transition tasks. The chapter is descriptive and inductive, with a selective sample and a thematic analysis.

In Chapter Four, I took an agency perspective, looking at the civil servants who try, despite institutional adversity, to execute transition tasks. The research question was: how do entrepreneurial civil servants handle opposition from within their organization when executing transition tasks? These change agents were willing to risk reputational capital to create change. I analyzed the case of Mobility as a Service within the Ministry of Infrastructure and Water Management, where continuous tactical adjustments were needed to manage the opposing rationalities within the organization. I interviewed 15 respondents and constructed a timeline from +300 documents from the archive of the Ministry. By introducing a heuristic rounds-model, I interpret the interplay between contestation and response, uncovering tactical work and tactical temporariness.

Chapter Five takes a design approach, where the practical wisdom of civil servants is investigated. The research question was: how do civil servants working on transition tasks experience constraints resulting from dominant legitimation discourses, and which institutional conditions can help civil servants to tackle these constraints and work on transition tasks? I looked for unexamined but preferable new states beyond the current configurations for a government that ought to be good at transformations. In design groups (between four and eight participants in each), I build on the premises of previous articles: 'transition tasks are necessary to carry out,' 'civil servants ought to conduct these tasks,' 'opposition arises automatically within the Ministry when these tasks are being executed,' 'opposition needs to be handled,' and 'entrepreneurial civil servants need to be helped to do so'. This chapter identifies potential favorable institutional changes for facilitating transition tasks to overcome recognized obstacles by exploring possible futures which do not yet exist (Bason, 2017).

In Chapter Six, I concluded by binding together the argumentative lines from the previous chapters. Firstly, I summarized different insights per chapter and constructed *Transformative Government* as a new Public Administration tradition via the indicators of Stout (2013). I also elaborated on such a transformative tradition's institutional and practical implications. Secondly, I discussed the challenge of urgency and necessity being normative within Transition Literature but not within Public Administration Literature. Thirdly, I elaborated on what this means for academia and the civil service. This elaboration opens up new avenues for multidisciplinary research.

9. Between Scylla and Charybdis

The image on the cover of this dissertation shows a ship between a whirlpool and a giant swell. It takes excellent helmsmanship to steer not too close to one or the other, which would spell disaster. In Greek mythology, within the larger story of the *Odyssey*, Odysseus had to steer his ship between strait with two sea monsters on each side, Scylla and Charybdis. Dependent on the story²⁵, Scylla was a terrifying six-headed monster on a cliff, reaching down to grab the sailors from the deck. When trying to avoid sailing too close to the rock, you encounter Charybdis, a monster that creates an enormous whirlpool swallowing the entire ship.

Interpretations of this allegory vary; some consider you can choose the lesser of two evils (climate disaster or undemocratic governance). Another explanation highlights the disaster; eventually, what you do does not matter. A third explanation is that you are driven to an extreme while trying to avoid another. I will opt for a fourth: in not choosing, you refuse the dilemma (either Scylla or Charybdis) and stay in the paradox while searching for synthesis. I know this is not competent advice for Odysseus because it only works while there is still time to act. However, in this case, between urgency and necessity, and democratic values, hopefully, there is.

25 I follow Stephen Fry's narration in Hero's (2019).

“A man goes seeking the law and is confronted by a guard who stands before an open door. The guard ensures him that the law he seeks lies within but will not let him pass. So the man spends the rest of his life there, trying to convince the guard to let him enter; he begs him, he cajoles him, he engages in small talk, he tempts to bribe him, and the guard accepts this bribe, as he says that the man does not feel that he left something unattended. And finally, when the man is about to die, he asks the guard, ‘I have been here all this time. Why has no one else come down this way seeking the law?’ And the guard says, ‘no one could have come this way since this gate was only made here for you, and now I am going to shut it.’”

‘Before the law’ by Franz Kafka retold by Sam Harris

2. Legitimizing Transformative Government

Aligning essential government tasks from transition literature with normative arguments about legitimacy from Public Administration traditions

2

Highlights

- In 100 transition articles, 80 transition tasks for government were found, and these were clustered into five categories.
- Current Public Administration traditions cannot legitimize all these transition tasks for government.
- The absence of legitimizing arguments may account for the reluctance of the civil service to adopt these transition tasks.
- *Transformative Government* is introduced as a new tradition for civil service to undertake transition in a more legitimate manner.

Abstract

The literature on transitions recommends that both government and civil service should engage with the profound societal problems that require a fundamental socio-technical system change. We analyzed a corpus of 100 publications to cluster the transition tasks for the government that are found in different transition frameworks. These tasks are set off against the normative arguments of the Public Administration (PA) traditions that legitimize government action. Our analysis shows that although some traditions present a normative basis for certain tasks, many of the transition tasks assigned to the government do not align well with any of the PA traditions. Thus, the normative basis for legitimizing socio-technical transitions, provided by the PA traditions, is inadequate. This finding is consistent with the urgent need for a new, legitimizing rationale for societal transition. We conclude by presenting the contours of *Transformative Government* as a new PA tradition to legitimize government's transition tasks.

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1. Introduction

Over the past decade, there has been increasing attention for achieving goals related to persistent, wicked, societal problems, such as climate change (EC 2011; Cagnin et al., 2012; Hicks, 2016). This trend is illustrated by the Sustainable Development Goals (SDGs), the ‘grand societal challenges’ defined by the EU and the new mission-oriented innovation policy approach that has been adopted by governments at various levels (Brown, 2020; Mazzucato, 2018; Kuittinen et al., 2018). Solving these societal problems requires socio-technical transitions (e.g. Diercks et al., 2019; Schot and Steinmueller, 2018; Geels et al., 2016) and thus a fundamental shift towards sustainability in the socio-technical systems by which our society is organized (Zolfagharian et al., 2019). From the Transition Literature (TL), recommendations and tasks have originated that call on both the government and the civil service to engage with the deeply rooted societal problems that require societal transitions (Bergek et al., 2015; Kivimaa and Kern, 2016). If these tasks are to be put into action, a government must be willing to take them on. So far, TL has not delved into the normative schemes of government to understand whether a government is a priori willing to take on these new tasks. In other words, the roles played by the government in transitions are still underexplored (Borras and Edler, 2020).

Within the government, the civil service plays an important role in executing these transition tasks – although this role has received even less scientific attention. Civil servants and politicians are often assumed to constitute a dichotomy within the government. However, Svava (1999) argues that the civil service is complementary to politicians, as both are crucial for the joint pursuit of sound governance. Civil servants interact with scholars and other stakeholders, initiate projects, make roadmaps, suggests pathways, prepare political debates, operationalize goals, translate these goals into policy and implement these policies (Pressman and Wildavsky, 1973). As in any policy, the success of transition policy depends on these inherently administrative tasks. Legitimizing the execution of these tasks for civil servants requires a normative basis that will be explored in this study. Weber and Rohracher (2012) have showed that such a normative basis should be more than a market failure argumentation for transformative change.

Since governments are expected to direct and accelerate transitions towards sustainability (Borras and Edler, 2020), civil servants are assigned various transition tasks. However, to execute these new tasks legitimately, such tasks need to be positioned within normative frameworks that are acceptable to the civil servants and the governance systems in which the tasks they are embedded. Normative frameworks have been developed in the Public Administration (PA) literature at different periods in time to represent evolving public values and narratives of legitimation (Bourgon, 2011). Such frameworks are called ‘traditions’, and they include the constitutional, discretionary and collaborative tradition¹ (Stout, 2013). However, these traditions do not consider the notion of socio-technical transitions and the implications of transition tasks for government legitimacy. Simultaneously, scant attention has been paid to interpreting these traditions from the perspective of socio-technical transition (Termeer et al., 2017).

In this exploratory review, we examine the extent to which these two strands of literature – on Public Administration and on socio-technical transitions – theoretically align, in order to uncover possible tensions, synergies and complementarities as well as to arrive at the synthesis needed to legitimize the government’s role in socio-technical transitions. The underlying rationale developed

1 Also referred to as Traditional Public Administration, New Public Management and New Public Governance, respectively (Bevir, 2010; Osborne, 2006).

in this paper for this synthesis focuses on the need for intervention, rather than on evaluating its effectiveness or efficiency.

In the following section, we describe the Transition Literature (TL) and Public Administration (PA) literature, and then we discuss our methods in Section 3. Subsequently, Section 4 reviews the TL to distill the government's transition tasks and then analyzes the PA traditions to explore how their rationales on transition align or conflict with these transition tasks. From this, we establish the compatibility of the TL and PA traditions, so as to assess what transition tasks are considered legitimate for civil servants to undertake, and under which traditions. In Section 5, we reflect on the development of the idea of *Transformative Government*, as a new tradition which can provide the legitimation for the government's role in the socio-technical transition. Section 6 concludes by summarizing the main contributions of this paper.

2. Arranging the different foundations

2.1 Transition Literature

The Transition Literature originated from innovation studies around the year 2000, with an analytical focus on supporting the emergence of systems of innovation as well as on destabilizing existing, dysfunctional structures (Köhler et al., 2019; Kivimaa and Kern, 2016). The most dominant views in TL include the Multi-Level Perspective (Geels, 2002; 2004), Technological Innovation Systems (Hekkert et al., 2007; Bergek et al., 2008), Strategic Niche Management (Kemp et al., 2007; Schot and Geels, 2008) and Transition Management (Rotmans et al., 2001; Loorbach, 2010). The Multi-Level Perspective and the Technological Innovation Systems approach are primarily conceptual and analytical frameworks to explain how innovation and transitions arise. In contrast, Strategic Niche Management and Transition Management approaches are explicitly prescriptive and are meant to guide interventions to enable and trigger transitions.

The Multi-Level Perspective places niches in the context of two higher levels of structuration – the socio-technical regimes and exogenous landscape – to provide a more holistic transitions perspective as emerging from the interplay of these three analytical levels (Geels, 2002; 2004). The Technological Innovation Systems (TIS) approach analyzes the emergence of technological innovation, typically using the structural-functional approach to identify systemic problems that inhibit the development and diffusion of focal innovations (Hekkert et al., 2007). When comparing these ideal-type TIS functions with actual policy, analysts can suggest prescriptive solutions for policy. Strategic Niche Management focuses on radically innovations that require protection in their early stages of development and diffusion to break through into the regime (Schot and Geels, 2008). Finally, Transition Management has developed a practical, policy-oriented framework, which helps policy makers shape transitions, with strategic, tactical, operational, and reflexive activities (Loorbach, 2010).

2.2 Public Administration traditions

Public Administration traditions are generally accepted normative frameworks that represent evolving public values and narratives of legitimation on the role of the government (Bourgon, 2011). Stout (2013) identified three PA traditions which promote distinctive roles for the civil service from the perspective of legitimacy, namely the constitutional, the discretionary, and the collaborative tradition. Bokhorst states that 'legitimacy is here defined as the justified, legal, politically acknowledged, socially accepted right to execute authority' (2014: 20). The traditions emerged in

sequence during the twentieth century to diagnose problems and to suggest solutions, using distinct ideological frameworks to represent evolving public values in institutions (Stout, 2013; Bourgon, 2011).

It is important to note that not one, but all rationales are always present in public institutes (Stoker, 2006). They can be seen as sedimented public values (Van der Steen et al., 2018), as they promote different values as essential for civil servants as well as provide different answers to what good governance is, but they do not replace the values of a previous tradition. Therefore, if new tasks are needed to enable transition, these will most likely be qualified and assessed through all rationales in an institute.

Below, the main PA traditions and their implications for transitions are outlined. Although some studies have investigated how competing PA traditions describe the way innovation is generated and adopted (Hartley, 2005; Hartley et al., 2013; Rothstein, 2012; Sørensen, 2012), no PA studies have yet been conducted on long-term transformative change to overcome societal problems.

Constitutional tradition

At the beginning of the twentieth century similar traditions in PA emerged in Western Europe and North America as a reaction against patronage and clientelism practices (Fung, 2004), which failed to deliver 'a predictable and right-based service' (Torfing and Triantafillou, 2016: 14). To overcome this issue, a new PA framework was designed by Weber (1978), which revolved around hierarchy, procedural accountability, and predictability (Wilson, 1989). Legitimacy comes from the strict implementation of laws, procedures, and rules, which would make policy predictable for citizens (Rothstein, 2012). This constitutional tradition perceives civil servants as skilled professionals who strictly follow orders in a neutral, rational, and accountable way (Stout, 2013; Pollitt, 2003; Olsen, 2006).

An extensive bureaucracy is an attempt to reduce uncertainty and create predictability. In such complex organizations, innovation is rare because it changes complicated routines, patterns, and tasks. The smallest changes are therefore 'likely to rouse the ire of some important constituency' (Wilson, 1989: 69). Thompson (1965) even argued that bureaucracy and innovation are an inherent mismatch. The values of the constitutional tradition undermine creativity and entrepreneurship; as a result, changes in public institutes tend to be limited and incremental in nature (Torfing and Triantafillou, 2016: 16).

Discretionary tradition

The discretionary tradition emerged during the 1980s as a reaction to bureaucratic systems being too big, expensive, slow, inefficient, and inadaptable (Pollitt, 2003). The discretionary tradition focuses on the responsibility to efficiently achieve desired outcomes. This tradition is heavily based on New Public Management (NPM) theories with a neoliberal ontology (Pollitt, 2003; Osborne and Gaebler, 1993; Wynen et al., 2014). NPM marks the introduction of managerial autonomy, performance management and incentives, and competition (Hood, 1991; Osborne, 2006; Wynen et al., 2014). These reform elements shifted legitimacy within government institutes from input and procedures to outcome accountability and results (Osborne and Gaebler, 1993). As a cure for bureaucratic monopolies which are considered to be costly and of low quality, NPM advocates deregulation, public-private competition, and the introduction of performance incentives (Osborne, 2006; Torfing and Triantafillou, 2016).

NPM tries to mimic the private market as much as possible by creating an environment that pushes the organization and staff to perform better, to take risks and to innovate (Wynen et al.,

2014). Civil servants have a technical and strategic rationality and should act responsibly, efficiently and effectively (Stout, 2013). They should see themselves as entrepreneurs and work towards superior service delivery, while adhering to the principles of competition and cost-consciousness (Osborne and Gaebler, 1993). Competition is typically considered a permanent driving force for innovation, which government normally lacks (Osborne and Gaebler, 1993). Decentralization and deregulation should also compensate for this lack of systematic change, according to the discretionary perspective (Torfing and Triantafillou, 2016).

Collaborative tradition

The collaborative tradition started at the end of the 1990s, when a new set of problems led to a reorientation towards the state. Problems regarding terrorism, the environment, digitalization, and asylum seekers had more to do with security and fairness than with efficiency (Bevir, 2010). In this tradition, the government finds itself between the forces of globalization on the one hand and the increasing diversity of society on the other, and it is not able to cope with these new complexities on its own (Bevir, 2010).

The collaborative tradition is about managing multiple societal centers of power by relying on self-organization, interdependence, and resource exchange between actors, while limiting the scope, power, and discretion of government (Rhodes, 1997). As it is increasingly difficult to control swift societal changes with limited means, the government can no longer be held wholly accountable for society's problems. This process is called the hollowing out of the state (Rhodes, 1997). In a fragmented polity, or a centerless society (Bevir, 2010), government becomes just one of many actors.

Under the collaborative tradition, legitimacy is thus ensured by giving interest groups and citizens direct influence over the policy process, which should lead to more successful policy implementation (Rothstein, 2012; Bouckaert, 1993). Decentralized actors should be empowered and encouraged to take bottom-up action, creating a demand upon which the government can act (Sørensen, 2012). Together with these actors, civil servants produce public value by creating inclusive networks and partnerships, and by facilitating self-governance. In the collaborative tradition, civil servants should see themselves as guardians of egalitarian interaction, giving technical advice. They should be responsive through a process of social inclusion and empowerment (Bevir, 2010; Rhodes, 1997; Stout, 2013).

As Sørensen put it, the collaborative tradition 'provides spaces in which a plurality of competent actors is able to use their knowledge, creativity, entrepreneurship, and resources to find new and better ways of getting things done' (2012: 218). It helps to establish trust and to destabilize routines for integrating new practices, perspectives, and perceptions, as this could lead to a restructuring of the rules of the game and a redefinition of roles and responsibilities (Metcalf, 1993). However, there is a growing concern that the collaborative tradition may also restrict democracy because networks become 'centers of power and privilege that give structural advantage to particular private interest...' (Klijn and Skelcher, 2007: 588), which erodes ministerial control and therefore accountability (Willems and Van Dooren, 2011).

Public Administration's rationales

To construct a starting point to examine transitions from the PA traditions discussed above, we build on the comparative models of Stout (2013) and Torfing and Triantafillou (2016). These studies provide holistic insight into the PA traditions by constructing these, using an extensive set of variables (Stout, 2013: 100; Torfing and Triantafillou, 2016: 14-15) such as political ontology,

principle theory, political authority, problem diagnosis, preferred solution, overall goal, role of employees, criteria of proper behavior, source of legitimacy, and rationality². These models were combined into the following three overarching categories for assessing the transition tasks from the perspective of PA traditions: (1) their main problem-solution diagnosis, (2) civil servants' role perception, and (3) the characterization of legitimate action. Table 1 provides an overview.

Table 1: *The problem-solution diagnosis, role perception of civil servants, and legitimate action described for the three main Public Administration traditions*

	Constitutional Tradition	Discretionary Tradition	Collaborative Tradition
Problem-Solution Diagnosis	Problems of irregularity and unpredictability are core reasons for the existence of bureaucracies. Obedient and neutral civil servants are the solution (Pollitt, 2003; Wilson, 1989).	Ineffectiveness and inefficiency exist in governments without any competition. The government should focus on performance by including market incentives (Hood, 1991; Osborne and Gaebler, 1993).	The growing inability to exercise control in a complex world leads to the necessity of sharing responsibility in networks. Societal changes are therefore co-directed by society (Bevir, 2010; Rhodes, 1997).
Role Perception of Civil Servants	Civil servants should not be in the position to influence the direction, but should follow their political leader. Civil servants are trained for the job, so they can execute tasks in a uniform way (Stout, 2013; Wilson, 1989).	Civil servants are entrepreneurs who adhere to the principles of deregulation, noninterference in the market, competition, and cost-consciousness (Osborne, 2006; Stout, 2013).	The role of the civil servant is to focus on emergent coalitions and bring actors together to construct a solution accepted by all (Sørensen, 2012).
Characterization of Legitimate Action	The procedures and processes should be constitutionally clear, rational and traceable from the beginning and precisely followed (Wilson, 1989).	Deregulated markets are the default option to give direction and achieve results. If markets are unfeasible, public institutes should mimic private ones (Osborne, 2006; Wynen et al., 2014).	To gain legitimacy in dealing with structural change, a wide range of societal parties must participate, unlocking different capacities (Rothstein, 2012).

To summarize, the constitutional rationale is obedience-driven, as authorization to influence transition must result from politicians' transition plans. From a discretionary perspective, the civil service should focus on performance, and transition results should be achieved via the market. The collaborative rationale focuses on emergent coalitions, and transition results are realized through collaboration with a wide range of societal parties.

2 See Table 13 in the Appendix.

2.3 The gap between Transition Literature and Public Administration literature

The study of the role of government in socio-technical transitions should build on the TL to provide information on transition tasks. It should also build on the PA traditions, and consider the normative frames to which the tasks should be linked for legitimate action. However, these two strands of literature are largely disconnected; socio-technical transitions are barely analyzed within the PA traditions (Termeer et al., 2017), and TL analyses do not link with PA's normative frames.

Below, we apply a systematic analysis of the literature to bring these separate branches of academic work into a single analytical framework by contrasting operational transition tasks with the fundamental presuppositions of the PA traditions. We aim for a thorough confrontation between TL and PA, in order to map out the fundamental tensions. The following section describes how we approached this process.

3. Method

To assess how compatible transition tasks are with PA traditions, three analytical steps were taken. First, we reviewed the Transition Literature to cluster the transition tasks expected from the government into aggregated categories of transition tasks for the government. Second, we interpreted these tasks from the perspective of the normative assumptions of the PA traditions in order to identify which transition tasks are most problematic for the government. The compatibility issues were so fundamental that we included a third step, namely proposing a new PA tradition that is aligned with transitions thinking. Below, these three methodological steps are described in greater detail.

3.1 Step 1: Extracting transition tasks from the literature

We used an inductive approach to distill government tasks from the major transition frameworks. For each of the four frameworks, we identified two sets of ten articles. The top ten all-time most cited articles were used to generally conceptualize the framework, while the top ten most cited articles since 2018 present recent applications of these frameworks. This resulted in a total of eighty articles and book chapters collected using Google Scholar in October 2019. To correct for possible omission bias, we added a set of twenty articles (the ten all-time most cited and the ten most cited since 2018) on Transformative Innovation Policy, which focus on policy on system change and transformation (Schot et al., 2017). This led to a reformulation of three of the eighty codes.

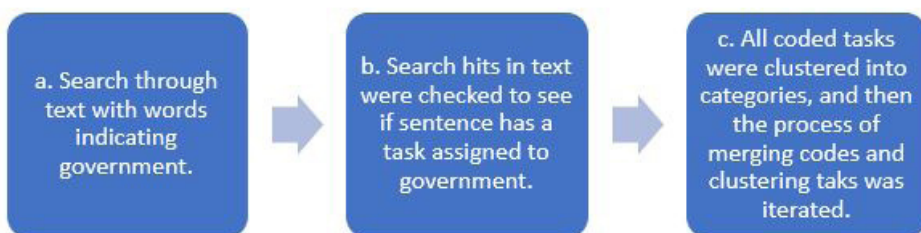


Figure 2: Flowchart of the iterative coding process.

An open coding procedure in NVivo 12 was used by the first author when he was manually searching for government tasks (see Figure 2 for a flowchart of the coding process). The text around the search hits was checked for relevance, then labelled as tasks using the original wording, and subsequently clustered into more generic categories with more differentiated purposes and characteristics. A continuous, iterative effort was made by the team to reduce the number of categories. After seventy articles, saturation was reached, i.e. no new transition tasks were identified, illustrating the reliability of our approach.

- a. In the 100 articles, we searched the text for ‘government’ (95 articles, with 1,380 references), ‘state’ (81 articles, 813 references), ‘ministry’ (38 articles, 242 references), ‘public policy’ (77 articles, 246 references), ‘administration’ (36 articles, 101 references), ‘bureaucracy’ (10 articles, 11 references), ‘policy makers’ (67 articles, 343 references), ‘public sector’ (15 articles, 66 references), and ‘civil servant’ (53 articles, 263 references).
- b. The main inclusion criterion was that tasks had to be suggested to government, as a recommendation, an instruction or after an evaluation. Search hits were excluded if they only described a historical situation. This produced 301 references in 59 articles. For example, the search text ‘state’ yielded: ‘The role of the state in innovation policy is changing. Rather than being limited to supporting the capability and connectivity of and within systems to innovate, the state is increasingly seen [by authors such as Mazzucato, 2011 and Weber and Rohrer, 2012]—again—as a major actor in shaping the directionality of innovation’ (taken from: Boon and Edler, 2018: 435). This was coded as ‘State is increasingly seen as a major actor in shaping directionality of innovation’.
- c. At first, the tasks were clustered inductively, but after three iterative rounds, familiar clusters (from the perspective of a transition scholar) emerged, for example related to ‘giving direction’ and ‘supporting niche activity’, which were then used as the codebook. Returning to the previous example: we clustered the previous code into the category ‘Give direction’, together with for example ‘Articulate demand’, ‘Give legitimacy to technological field’, and ‘State ambition and set targets’. The code ‘State is increasingly seen as a major actor in shaping directionality of innovation’ was incorporated into the more generic code ‘Guiding role and show leadership in structural change’.

3.2 Step 2: Assessing transition tasks for their compatibility with ideas from Public Administration literature

We assessed the aggregated transition tasks (Section 4.1) on their compatibility with the PA ideas on transition, to expose any incompatibilities. From this, the ideal-type reaction expected from the civil service to these transition tasks is described per tradition. Transitions take several decades to unfold (Kanger et al., 2020), in which the configuration of actors and their interests shifts (Geels and Schot, 2007). We focus our analysis on the take-off phase of the transition, as conflicts between the old and the new are expected to be magnified in this phase – requiring a broader mix of transition tasks (Loorbach, 2010; Kivimaa and Kern, 2016; Turnheim et al., 2018).

First, the task categories as well as the specific tasks were assessed on their compatibility with PA traditions by interpreting them through the constructed rationales on transition (see Section 4.2 for tasks categories and Table 14 in de Appendix for the specific tasks). Each task (both the category tasks and the specific tasks) was evaluated as acceptable if (1) it was in line with the dominant

problem-solution diagnosis, (2) it was aimed at the conventional role of civil servants, *and* (3) it could be legitimized in the specific PA tradition. If one of these three conditions was not met, we deemed it unlikely that such a task would be easily accepted by the civil service.

Second, in this process of logically understanding the compatibility, to measure if a task category was generally accepted by the PA tradition, we categorized all specific tasks as ‘accepted’, ‘hesitance’ or ‘rejected’ per tradition. Hesitance refers to tasks that civil servants in principle do not reject, but for which they need explicit authorization from their minister. A task is categorized as accepted if all three conditions are met and no explicit authorization from a minister is needed. The leading categorizing question was the following: ‘Based on the reasoning of the different traditions, does a civil servant accept, hesitate about or reject this specific transition task?’. The intercoder reliability check indicated a high level of reliability based on 51 textual fragments coded by two researchers³.

3.3 Step 3: Constructing the new Public Administration tradition

This last step was a discontinuation of the systematic analysis until now. The results from Steps 1 and 2 warranted the construction of a new PA tradition with a rationale supportive of transitions. This new tradition was constructed by the same dimensions as used by Stout (2013) and Torfing and Triantafillou (2016) for their characterization of traditions. To tentatively introduce such a new tradition, we built on parts of PA traditions that are supportive of transition tasks and complemented them with elements from PA literature and political science literature, and with ideas on including interest groups. Acknowledging that more theoretical and empirical work is needed to build a new PA tradition, we listed some tentative tensions underlying this new PA tradition as revealed by our analysis, which provides guidance for further analysis.

4. Results

4.1 Transition tasks for government

Inductively coding 100 transition articles yielded 80 different transition tasks for the government, which we aggregated iteratively into five overarching categories (see Table 1). These categories show similarities with the intervention points described by Kanger et al. (2020): (1) Stimulate different niches, (2) Accelerate niches, (3) Destabilize the regime, (4) Address the broader repercussions of regime destabilizations, (5) Provide co-ordination to multi-regime interaction, and (6) Tilt the landscape. Nevertheless, these intervention points are only found in the MLP literature and are not specifically directed at government.

The first category was labelled *Give direction*. The failure to direct has been highlighted by Weber and Rohracher (2012) as a fundamental transformation failure which should give the government legitimation for transformative change. The guidance of the search given by the government (Function 4 TIS; Hekkert et al., 2007) through the articulation of demand, visions and ambition as well as taking the lead in establishing policy objectives and plans through policy strategies (Rogge and Reichardt, 2016) should steer the generation and diffusion of innovation towards societal needs (Edler and Boon, 2018). Direction is also provided by harder market interventions, such as standards provided by law.

The second category was *Create governance*. This category recommends that the government should play an important role in opening up the process of transition for multiple stakeholders and

³ The alpha we found was in the order of 0.8.

collective action, encouraging others to participate (e.g. Fagerberg, 2018; Rotmans et al., 2001). Additionally, the government plays an important role in developing and maintaining network relations and is responsible for specific collective outcomes within these networks. The strategies to support and develop interactions in a network mentioned in Söderholm et al. (2019) and Newell et al. (2017) formed the basis of the subheading.

The third category was *Support the new*. This category recognizes the fact that the government should engage with, support and fund new developments. It focuses on aiding niches which could lead to new configurations breaking into the dominant socio-technical regime over time (Kivimaa and Kern, 2016). Thus, the government is required to engage with, facilitate, and fund new developments (e.g. Hekkert and Negro, 2008; Bergek et al., 2008).

The fourth category was *Destabilize the unsustainable*. It captures 'regime destabilization' tasks (Loorbach, 2007; Rotmans et al., 2001) that involve the proactive weakening and phasing out of certain regime processes, so that they can be replaced by niche innovations for systemic change (Turnheim and Geels, 2013, Kivimaa and Kern, 2016). This includes policies putting economic pressure on the regime or banning certain practices (Kanger et al., 2020). Of the five different transition categories, *Destabilize the unsustainable* is the least mentioned in the literature.

The fifth category was called *Develop internal capabilities and structures*. It is internally focused and encompasses tasks around developing internal capabilities and structures to facilitate external tasks. By requiring capabilities such as new skills and structures, the government can enhance its ability to play its role and promote and direct societal transitions (Quitow, 2015, Boras and Edler, 2020). To achieve effective internal capabilities and structures, the government should critically review its own role and routines (Bergek, 2008; Goddard and Farrelly, 2018; Kemp et al., 2007). From the five categories and their multitude of underlying tasks listed in Table 1, an ideal type of government can be seen to emerge. This assertive type of government can be constructed along the same lines as used by Stout (2013) to describe the other PA traditions. This type of government is well-equipped to handle the urgent need for systemic and sustainable change and holds humans responsible for creating and fixing problems. Societal failure to adapt to emerging sustainability problems due to systemic lock-in and the evident, immense need for change implies a legitimate basis for action. The core value of a proposed government seems to be socio-ecological resilience. This ideal type expects civil servants to adopt the role of system architects and catalysts who search for systematic, sustainable change. Their process of reasoning is technocratic, abductive, and normative. This ideal type of government action, as required by TL, is the foundation on which we construct *Transformative Government*.

The different theoretical strands of TL differ in the emphasis which they place when prescribing tasks to the government. In general, *Giving direction*, *Creating governance* and *Supporting the new* are the most prominent of the externally oriented government tasks, while *Destabilize the unsustainable* is often overlooked, even though breaking down the dysfunctional aspects in the current regime is a crucial transition activity requiring a government. In addition, all transition frameworks recommend that the government should *Develop internal processes* that enable it to better support and steer transition.

Table 2: *Assigned tasks to government prescribed by Transition Literature*

Category of Transition Tasks	Specific Transition Tasks
<p>1: Give Direction</p> <p>(Number of articles assigning tasks to Government / Total number of references: 25/72)</p>	<p><u>Articulate the direction:</u> Articulate demand (1), Develop missions (2), Guiding role and show leadership in structural change (3), State ambition and set targets (4), Select experiments (5), Translate ideas into priorities and actions (6), Create a vision for the future (7),</p> <p><u>Construct policy strategies in order to direct:</u> Create public organizations to link emerging markets with societal challenges (8), Create stable policy frameworks regarding guidance and market formation (9), Justify new policies and government intervention (10).</p> <p><u>Reconfigure the market:</u> Create and shape markets (11), Form markets through minimal consumption quotas (12), Give direction through establishing a favorable tax regime (13), Give legitimacy to technological field (14), Help the market decide on strategic investments (15).</p> <p><u>Direct through enforced regulations:</u> Enforce laws and IP rights (16), Standardize and regulate (17).</p>
<p>2: Support Governance</p> <p>(Number of articles assigning tasks to Government / Total number of references: 27/65)</p>	<p><u>Activate actors:</u> Acknowledge third sector and consumers (18), Encourage parties to participate (19), Make room for a variety of voices, arguments and interpretations (20).</p> <p><u>Guiding organizational arrangements:</u> Create coalitions and make covenants (21), Facilitate development of networks (22), Facilitate Public Private Partnerships (23), Improve governance (24), Mediate in brokering (25), Be the niche manager (26).</p> <p><u>Goals achieving strategies:</u> Ensure the process of co-evolution leads to a desirable outcome (27), Facilitate reciprocal learning from experimentation (28), Mobilize private financial organizations (29), Organize platforms for collective action (30), Stimulate collective learning process (31), Stimulate discussion (32).</p>
<p>3: Support the new</p> <p>(Number of articles assigning tasks to Government / Total number of references: 39/102)</p>	<p><u>Engage in entrepreneurial experiments:</u> Embrace innovation as an option and make it assessable (33), Engage with new niche actors (34), Organize interaction between emergent technology groups and government (35), Steer from within a niche (36), Provide room for experimentation (37).</p> <p><u>Establish market formation:</u> Build beneficial infrastructure for innovations (38), Create, protect and facilitate niches (39), Give temporary exemption from regulations (40), Mitigate initial negative impact of an innovation (41), Remove institutional barriers (42), Stimulate and initiate new pilots and developments (43), Support diffusion (44).</p> <p><u>Price-performance improvements and resource mobilization:</u> Create innovation funds (45), Fund education (46), Fund experiments (47), Invest in new technologies (48), Public procurement (49), Stimulate with materials and subsidies (50), Support complementary technologies (51), Support research (52), Help find funding (53).</p> <p><u>Help new developments develop and diffuse:</u> Introduce and demonstrate new technologies and use them to set expectations (54), Communicate about new developments (55), Develop sufficient technological variation (56), Train third parties' capacity and capability (57).</p>

<p>4: Destabilize the unsustainable</p> <p>(Number of articles assigning tasks to Government / Total number of references: 16/21)</p>	<p><u>Control policies and make significant changes in regime rules:</u> Introduce extra goals and measures to redirect negative developments (58), Reform tax system to tax the unsustainable (59), Restrict use of unsustainable practices (60), Introduce policies that erode unsustainable regimes (61)</p> <p><u>Reduce support for dominant regime technologies:</u> Address market failures responsible for unsustainability (62), Provide evidence from experiments for regime shifts (63), Slow down or stop new unsustainable developments (64).</p>
<p>5: Develop internal capabilities and Structures (to enable external tasks)</p> <p>(Number of articles assigning tasks to Government / Total number of references: 21/41)</p>	<p><u>Rethink own role in a transition:</u> Take a holistic perspective (65), Align social and environmental challenges with national innovation objectives (66), Embrace opportunities (67), Internal focus on upscaling (68), Revise and critically evaluate own role and regulation (69).</p> <p><u>Development of new competences:</u> Become more entrepreneurial (70), Analyze innovation systems (71), Build dynamic organizational capabilities (72), Understand new technological developments (73).</p> <p><u>Monitor and evaluate:</u> Continuous monitoring and evaluation (74), Develop the capacity for learning (75), Learn to experiment and explore (76).</p> <p><u>Establish mechanisms for policy coordination:</u> Coordinate between public institutes (77), Create new institutional conditions (78), Embed processes in institutes (79), Set up responsible institutes (80).</p>

4.2 Transition tasks assessed on their compatibility with PA transition rationales

In this section we assess the five transition task categories to detect possible incompatibilities with suggestions from the PA traditions (see Table 14 in the Appendix for an overview).

Constitutional rationale

The core premise of the constitutional rationale is the focus of civil servants on implementing decisions made by their minister. Therefore, *Giving direction*, which is already difficult in an unpredictable political environment, is even more problematic in this tradition, because no bottom-up direction or continuity can be expected from civil servants.

In this tradition, *Creating governance* and starting the process of transition for active participation by the government are not the responsibility of civil servants. They regard voices other than the minister’s as only of secondary importance, and they are reluctant to bring parties together to stimulate co-creation or collective learning; after all, this may lead to unequal treatment as not everybody can be invited, and in the constitutional rationale this is considered a delegitimization of their role.

Tasks involving *Supporting the new* have the same difficulties as explained above; the constitutional rationale warns strongly against picking winners and against preferential treatment to facilitate new developments. Civil servants are expected to refrain from granting exceptions – even temporarily. Consequently, while the success of a transition depends on the support and protection of specific new developments, the constitutional tradition does not legitimize these tasks.

To *Destabilize the unsustainable*, the civil service needs explicit orders from politicians. According to this tradition, civil servants should refrain from deciding what to break down. Only if orders are given by the minister and the rules apply to all domains and parties in the same way,

can the government apply uniform, rational and traceable procedures to put pressure on existing regimes.

Working on transitions calls for *Developing internal capabilities and structures*. Some new capabilities, such as the ones related to the tasks ‘learn to experiment and explore’, ‘be more entrepreneurial’ and ‘take a holistic perspective’, imply high degrees of freedom and new forms of reasoning from civil servants. From a constitutional rationale, this leads to friction as discretionary space ought to be minimized and work should be traceable and executed through standards and procedures. However, as civil servants need to act rationally and be neutral, they are expected to be highly educated. Therefore, in this tradition it is feasible to develop the necessary capabilities and structures (to make scale, developing capacity for learning and monitor, ‘embedding process in institutions’, and ‘setting up responsible institutions’).

To conclude, civil servants working in the constitutional tradition do not have the authority to execute new transition tasks. Hence, they can only steer and support such tasks if the minister has made a decision for a particular transition. A minister who advocates a transition would certainly accelerate steering the transition, particularly by *Giving direction*; however, most tasks will still be at odds with the expected roles of civil servants.

Discretionary rationale

Within the discretionary rationale, civil servants should mimic market mechanisms and must be wary of disturbing the market. *Giving direction* is not a task for the government, except when something is accepted as an obvious market failure. In addition, the emphasis on efficiency and effectiveness is difficult in the case of transition processes due to the complex, nonlinear dynamics and the long-time horizons. Their preferred alternative, an incremental or lean approach, does not work in the case of system transformation (Hartley et al., 2013).

If it makes the process more efficient, emerging market parties may be included in the creation of governance with public-private partnerships. However, tailor-made solutions could lead to higher costs and less efficiency and are therefore discouraged. In addition, the discretionary rationale discourages the sharing of knowledge, collective learning and open innovation, as it is perceived to interfere with competition (Hartley et al., 2013).

The discretionary rationale is likely to be skeptical about *Supporting the new* since it advocates that the market, rather than the government, determines what developments are promising. It may support general early-stage innovation because of its knowledge spillovers, but a government is not supposed to stimulate specific, normatively chosen new market developments. As the discretionary rationale follows the dominant market paradigm, new developments based on other assumptions, for example new business models based on sustainable and social propositions, are likely to be ignored (Hartley et al., 2013).

Destabilizing the unsustainable will also be met with skepticism if it is perceived as market interference – ‘picking losers’. The discretionary rationale will argue that the market itself breaks down undesirable situations. Interference is only acceptable if market failures are evident and accepted as such. However, if no market failure is acknowledged by politicians, the discretionary rationale holds that there is no legitimacy to act.

Developing the internal capabilities and structures needed for an entrepreneurial mindset is certainly encouraged, from the perspective of deregulation, noninterference, and competition. Civil servants are expected to be trained to be cost-conscious and to use innovation to improve effective and efficient service delivery. If the focus on transitions compels the government to take responsibility for coordination and directionality back from the market, an apparent ideological

mismatch emerges between the conceptualization of the entrepreneurial mindset envisioned by the discretionary rationale, which is entrepreneurial concerning efficiency and effectiveness only, and what the transition literature means by a 'policy entrepreneur' namely an actor who is moving the transition forward.

To conclude, a general unwillingness to intervene in the market is decisive for civil servants working in accordance with the discretionary tradition. This results in a limited capacity of the government to proactively shape the transition. In particular *Giving direction* and *Destabilizing the unsustainable* are not seen as tasks for the government but rather tasks for the market.

Collaborative rationale

From the collaborative rationale, neither governments nor markets have the upper hand in *Giving direction* to the transition. Ministers can make normative decisions, but they also have to acknowledge that they need broad support in society. With the articulation and development of demands and missions, civil servants should take into account the interests of all relevant actors, even actors clearly belonging to the current, dysfunctional regime. The insight that a sustainability transition implies losers and will consequently provoke resistance by vested interests that need to be overcome is not widely supported in this tradition. Hence, the more radical decisions needed for a societal transition are unlikely to be taken, since broad stakeholder support is needed.

The collaborative rationale serves the transition tasks of *Creating governance* well. This rationale focuses on empowering all parties and acting within networks. Working with deeply ingrained ideological differences and power imbalances within a coalition is one of the greater challenges that this tradition must face (Hartley et al., 2013). However, the accommodating attitude towards objections of vested interests inhibits transitions.

The collaborative rationale takes a constructive view of *Supporting the new*; it affirms government's role in supporting new collective developments by creating niches, demonstrating and legitimizing innovations as well as organizing interaction between technology and government. However, as this rationale focuses on the inclusiveness of all parties, it is difficult to establish consensus on which new developments should be facilitated. This may create hesitance in civil servants about the execution of such tasks.

Destabilizing the unsustainable requires an inclusive coalition in this rationale. This is problematic since parties invested in the old regime are most likely not inclined to agree to phasing out their practices, creating obstacles to reach consensus. This rationale is responsive to reactions from society, acknowledging that the government is unable to govern without broad support. The government is no longer the singular actor who decides what must be broken down, but shares this responsibility with the market and societal actors, leading to potential deadlock and general unwillingness in civil servants to enact. This tradition therefore requires massive pressure from society to transform certain domains.

The collaborative rationale entails engaging holistically with other and new parties and learning from them. The *Development of internal capabilities and structures* needed for transitions is viable from a collaborative rationale. However, the possibility of implementing all different recommendations is limited because the government is no longer the only actor who is in control (although it is still an important actor). It thus shares the responsibility of acquiring new skillsets within a network.

To conclude, from a collaborative perspective, nation states are reducing their influence on societal processes as they are sharing increasingly more responsibilities with a broad range of stakeholders. From this perspective, the potential losers in the transition are just as relevant as the

frontrunners, making the government less effective in facilitating system change. In this tradition, broad coalitions and inclusion are required, limiting government's executive power and vision. As the transition literature expects government to steer, support and destabilize, it ignores the bounded capacity of the government that is postulated by the collaborative rationale.

4.3. Misalignment of TL and PA

Figure 3 and Table 14 (see Appendix) provide an overview of the compatibility of each specific transition task with the different PA traditions. Figure 3 highlights that the three PA traditions do

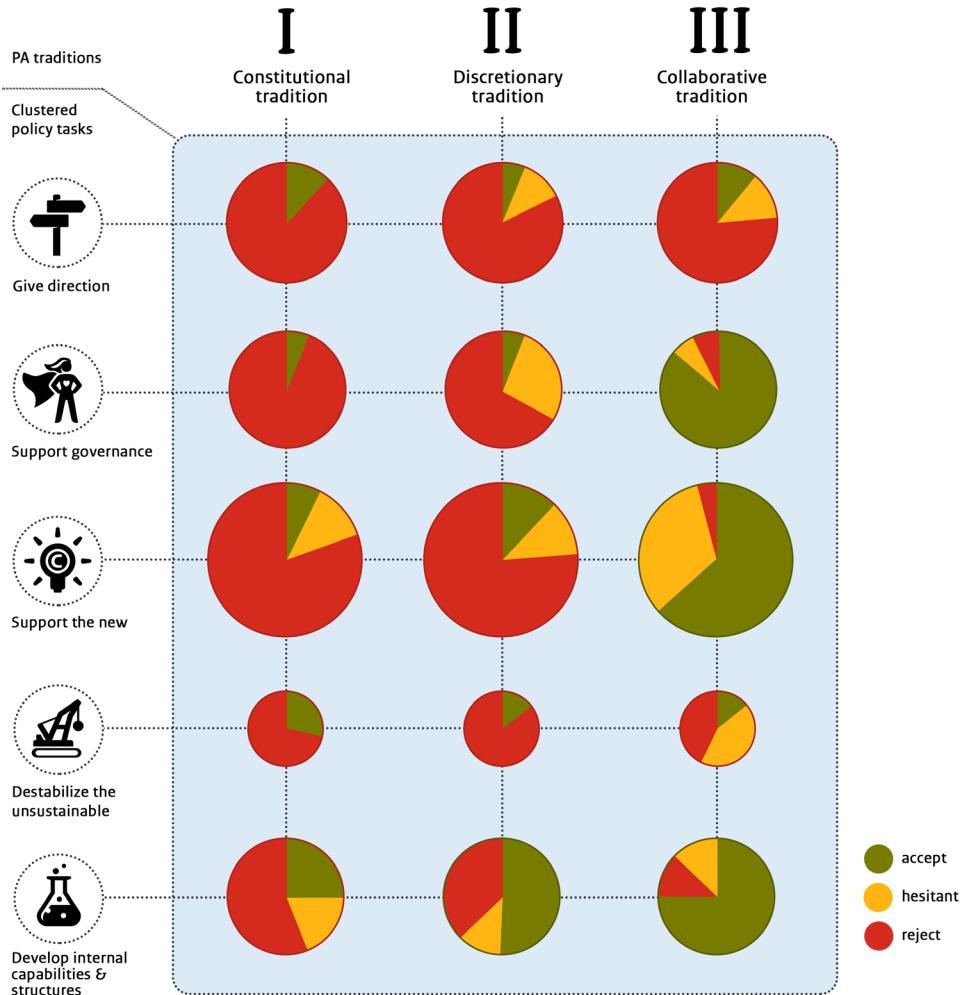


Figure 3: Accepted/rejected ratio of transitions tasks in Public Administration traditions. The different diameters of the globes symbolize the differences in the number of tasks within the tradition. See the corresponding table in the Appendix.

not align well with the transition tasks of the government. First, the PA literature does not perceive *Giving direction* as a task for civil servants, but instead as a role for the political side of government (constitutional rationale), for the market (discretionary rationale), or for society as a whole (collaborative rationale). Second, the constitutional and discretionary rationale do not explicitly focus on *Creating governance*. From the collaborative rationale, the government is the place where the different interests meet; however, it strives for broad agreement, and therefore the pace of the transition is likely to be slowed down. Third, *Supporting the new* confronts the impartial status that civil servants strive for in all traditions, leading to rejection or hesitance regarding the prescribed task. The collaborative rationale focuses on supporting emergent groups and activities in the first stages of innovation, but it lacks the legitimacy to support the growth and scaling up of specific trajectories. Fourth, *Destabilizing the unsustainable*, or putting the old regime under pressure, will immediately evoke public and political debate because this determines who will lose their economic advantages. Civil servants will therefore reject this task without explicit political direction. Last, in all PA traditions the civil service is expected to *Develop new capabilities*. However, tasks aimed at enhancing the discretionary space for civil servants are rejected by the constitutional rationale.

The analysis presents both the opportunities and limitations for civil servants adopting the transition tasks. The constitutional tradition appears useful for accelerating the transition when a government decision has been made to *Give direction* and to *Destabilize the unsustainable*. However, due to the volatility of politics, this tradition may find itself at odds with the necessity of long-term political commitment to a transition. The discretionary tradition provides an opportunity to *Give direction* and *Destabilize the unsustainable* structures if market failures are accepted. In many sustainability transitions, negative externalities are apparent, but the civil service is still generally unwilling to act on recommended transition tasks without explicit political backing. The transition tasks *Create governance*, *Support the new* and *Develop internal capabilities* benefit most from the collaborative tradition. This tradition is open to renewal and new stakeholders, but less open to *Give direction* and *Destabilize the unsustainable*.

5. Towards Transformative Government

Due to the fundamental incompatibilities between the existing PA traditions and the transformative tasks assigned to government, we propose the development of a new, additional PA rationale. This rationale labelled *Transformative Government*, connects the transition literature's rationale of solving societal problems through socio-technical transition to accepted legitimacy claims from the PA literature. A *Transformative Government* is a government that understands, accepts and executes transition tasks, building on a new normative framework (see Table 3). It synthesizes notions of system change with an understanding of administrative processes, legitimacy, and democracy to enable a legitimized pursuit of transition tasks.

Thus, *Transformative Government* as a new PA rationale builds on the various understandings of transition tasks in transition literature, on fundamental discussions on innovation and democracy in political science (e.g. Sørensen, 2017), and on a reconstructed relationship between civil service and politics by PA (Svara, 1999; see e.g. Hartley et al., 2015 for public value framework and Meijer et al., 2019 for Open Governance as a new paradigm).

The *Transformative Government* rationale focuses on solving societal problems by socio-technical transformation. The legitimacy basis for the new tradition is the idea that the government is the guardian for certain 'weak' interests that are not sufficiently represented by politics, the market, or societal collaboration. This guardianship results from a conscientious socio-ecological

ontology and from recognizing the planetary boundaries and thresholds (Rockström et al., 2009) as well as the interests of the future generation and natural entities. The guardianship directly relates to broad societal objectives for long-term sustainability such as the Sustainable Development Goals. The role of the civil service is to be the system architect, safeguarding the alignment of social and environmental challenges for the full duration of the transition.

Table 3: *The problem-solution diagnosis, role perception of civil servants and legitimate action described for Transformative Government*

Socio-technical transition rationale

Problem-Solution Diagnosis	Transformative Government would solve societal problems through socio-technical transition. The government needs to overcome a systemic lock-in and an absence of societal steering capacity in order to solve emerging societal problems. Part of the solution lies in the emerging ontology that humans are collectively responsible for socio-ecological resilience and that they should collectively adapt their socio-technical systems towards sustainability.
Role Perception of Civil Servants	Within Transformative Government, civil servants see themselves as future-oriented system architects working with other stakeholders. They are trained to think holistically and abductively, aligning social and environmental challenges. In matters of giving direction to the transition, the civil service focuses on its complementarity with politics.
Characterization of Legitimate Action	Legitimacy is found in the translation from supranational agreements to national and regional objectives and the acknowledgement that governments need to take an assertive role in sustainability transitions. Future generations and natural entities are recognized as having a rightful place at the negotiations.

This outline of a *Transformative Government* rationale provides a starting point for analyzing the role of government in a societal transition. The rationale provides a basis for legitimizing *Transformative Government*, but it also raises various issues that require further exploration and debate and that need to be addressed in further research to develop this tradition.

A first issue is the democratic basis for the directionality provided by civil servants. Kattel and Mazzucato (2018) describe the shift in innovation policy from a focus on the quantity of innovation (i.e. economic benefits through the number of patterns and jobs) towards its quality (i.e. the orientation towards societal goals) as a normative turn (Daimer et al. (2012) and see Weber and Rohrer (2012) on strategic broadening). They emphasize the importance of setting the direction of innovation towards sustainable growth. Within transition theory this normative turn is even more pertinent than in innovation literature (Köhler et al., 2019), as it maps the direction of change a priori, e.g. presuming the urgent need for sustainable solutions. As the analysis above shows, if directionality is not backed up by broad societal support, legitimacy within the civil service immediately becomes problematic. If civil servants provide the direction based on their role as guardians of sustainability, the democratic debate is cut out, triggering resistance to the proposed task. In a democratic system, the role of parliament is then marginalized. We contend that the *Transformative Government* tradition requires that we rethink and deepen the complex relationship between political-administrative relations and democratic dynamics and legitimacy in transitions.

A second issue is the fact that if legitimacy is based on urgency and necessity, it may lead to technocracy. Urgency and necessity as source of legitimacy appears to be justifiable in the scholarly

debate in transition literature (see Hysing and Olsson, 2018 for their account of Inside Activism); however, if any action is legitimate as a consequence of its urgent necessity, regardless of other values, the discussion is depoliticized (Swyngedou, 2010). Once a discussion is depoliticized, the proposed solutions become authoritarian or technocratic. Sadowski and Selinger (2014) argue that technocratic tendencies are being justified by considering a government's interventions as a responsibility to society, surmounting extensive political disagreements, and thus replacing politics itself. Technocratic solutions may have limited consideration for questions about justice and fairness (Sadowski and Selinger, 2014), and thus for political decision making. There is no a priori reason for society to limit itself to a particular mode of sustainable development (Grin et al., 2010); in other words, sustainable development is essentially a matter of political judgement (Loeber, 2004). *Transformative Government* should therefore keep different pathways open and develop precautionary methods of early action, which can help civil servants to take a long-term perspective, so that transition paths can be debated with a broader audience, without losing vigor and pace.

A third issue is the political-administrative deficiency in handling transition goals. The PA literature not only pays limited attention to technological innovation (Meijer and Löfgren, 2015), but it also remains theoretically underdeveloped regarding a government's transformative responsibilities. As a result, main frameworks in PA might frustrate the civil service in executing the tasks needed for transitions. Traditional strategies to steer society are ineffective and do not focus on transition (Meadowcroft, 2005). However, eager governments increasingly wish to be advised on how they can rethink their policies and institutional settings when dealing with transitions (Turnheim et al., 2020).

In sum, politics, especially in times of change, is known for its volatility (Meadowcroft, 2005). The stability and direction of the transitions may best be conserved by means of the guardianship of civil servants, but it is not clear how to do so legitimately and democratically. This may require political innovation, which means an intentional effort to (1) alter political institutions and procedures, so as to enable the civil service to guide transitions for the full duration of the transition (several decades), (2) change the political decision-making processes, so as to give the necessary mandate, legitimacy, and influence to the civil service to safeguard transitions, and (3) formulate and codify these new roles in policy (Sørensen, 2017). This requires rethinking the complementarity and interdependence between politics and the civil service (Svara, 1999; Svara, 2002). In debunking the strict political-administrative dichotomy, *Transformative Government* may find new forms of independence, leadership, responsibility, and thus legitimacy.

6. Conclusion

This paper set out to examine the extent to which the socio-technical transitions literature and the PA literature align, in order to uncover possible tensions and prepare a synthesis to legitimize the government's role in socio-technical transitions. We inductively coded 100 TL articles on tasks assigned to the government. Five categories emerged: Give Direction, Create Governance, Support the New, Destabilize the Unsustainable and Develop Internal Capabilities and Structures. We assessed these tasks against normative arguments from the different PA traditions and found that at present, most of the transition tasks are not compatible with the PA traditions. The existing PA traditions give some interpretative flexibility to civil servants to undertake transformative action, but when clustered, each transition task is at variance with at least one PA tradition. To provide legitimation for the government's role in societal transition, we propose the development of *Transformative Government* as a new PA tradition. *Transformative Government* must find ways

to combine PA insights on legitimacy, public support and democracy, with the transition tasks recommended by the TL literature.

The contributions to the literature are threefold. First, this paper forms an addition to the TL literature by providing an overview of the government's transition tasks and identifying the problems of legitimation from a PA perspective. This analysis helps to understand why the civil service may not adopt transition tasks that the TL deems urgent. Second, the paper presents a new normative framework – *Transformative Government* – which extends the PA literature by providing an understanding of suggestions for the role of a democratic government in societal transition. Third, the paper synthesizes the literature on TL and PA and highlights that such a synthesis is needed to provide both an understanding of the new role of government in a societal transition and arguments for legitimizing this new role.

There are also some limitations to this paper. Our analysis focuses on the take-off phase of a transition; although all the tasks that we identified are relevant during early and later stages of transition, some tasks (such as destabilizing the unsustainable) and their legitimation become more prominent once a transition is further developed. Related to this, Kanger et al. (2020) address the broader repercussions of regime stabilization, specifically by providing support for the losers in a transition. We did not encounter such tasks in our database, possibly because the transitions literature focuses predominantly on the early stages of transition (Turnheim et al., 2018). However, we endorse the necessity of this task and suggest adding 'providing support for the losers in transitions' to 'destabilize the unsustainable' as an additional subcategory, for instance, by opening up avenues for firms with outdated business models.

Our proposal of a new tradition of *Transformative Government* in addition to the existing traditions of constitutional, discretionary and collaborative government calls for further empirical and theoretical research. These new lines of thought should be validated with empirics, such as interviews with civil servants and grey literature. We chose to perform this fundamental analysis based on the assumptions and argumentation derived from generic PA literature. The new tradition could be further refined by means of a systematic review of the PA literature on socio-technical transitions.

The tradition of *Transformative Government* requires more normative elaboration. There is a need to rethink political processes, citizen and stakeholder engagement, the connections between long-term and short-term interests, and new approaches for risk taking, and this requires new institutional arrangements. We identified the following three issues that need to be addressed to provide strong legitimation for *Transformative Government*: the democratic basis for directionality, the risk of technocracy and the political-administrative deficiency. We contend that addressing these issues is a priority in order to realize a legitimate socio-technical transition towards a more sustainable society.

“Prudens quaestrio dimidium scientiae” - half of science is putting forth the right questions

Francis Bacon

3. Understanding why civil servants are reluctant to carry out transition tasks.

Highlights

- We analyzed the normative argumentation of civil servants on why transition tasks are challenging to execute.
- Seven (often) implicit rules were found explaining this challenge.
- These rules are related to legitimating Public Administration traditions.
- We introduce new building blocks for a *Transformative Government*, such as: seeing transition goals as public values, learning which phases of a transition can be administrated, and a new role perception.

Abstract

The transition literature attributes various transition tasks to government to support socio-technical transitions toward overcoming societal challenges. It is, however, difficult for civil servants to execute these transition tasks, because they partly conflict with Public Administration (PA) traditions that provide legitimacy to their work. This dilemma is discussed in neither the transition literature nor the PA literature. In this paper, we ask civil servants about the normative arguments that reflect their role perception within the institutional structures of their ministry, when it comes to executing transition tasks. We see these situated and enacted normative arguments and underlying assumptions as implicit rules determining legitimacy. The arguments civil servants used confirm that transition tasks are currently difficult to execute within the civil service. We found seven institutionalized rules that explain this difficulty and highlight the inadequacy of civil servants to adhere to the PA traditions while trying to execute transition tasks.

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1. Introduction

The need for structural change in social-technical systems to overcome interconnected, social, economic, and ecological challenges is reflected in many recent local, national and supranational initiatives, like the UN's adoption of Sustainable Development Goals (SDGs) in 2015; the signing of the 2015 Paris Climate Agreement by 196 parties; and the 2018 EU grand challenges (Cagnin et al. 2012, Mazzucato 2018; Schot and Kanger 2018). The socio-technical transitions literature studies these wicked societal problems (Wanzenböck et al. 2019) in many domains, like electricity, transport, water, food, heat, buildings, cities, and waste management (Köhler et al. 2019). This literature developed rapidly over the past 20 years, showing exponential publication growth and reaching 500 publications in 2018. Transitions perspectives provide a deeper understanding of transformative, system-level dynamics and identify intervention points for supporting socio-technical transitions to meet societal challenges (ibid).

From the perspective of transitions literature, governments are essential for solving socio-technical transitions in helping steer the rate and direction of societal transitions and tasks governments with transition policy interventions (Borrás & Edler 2020; Hekkert et al., 2020; Hoppmann et al. 2014). Based on a systematic review of a hundred transition papers' policy recommendations, Braams et al. (2021) identify five main transition tasks that the transition literature attributes to government, including Give Direction, Support Governance, Support the New, Destabilize the Unsustainable, and Develop internal Structures and Capabilities (see Box 1).

Box 1: Transition tasks for government

Give Direction - The government should guide the search by articulating demands, vision, and ambitions and take the lead in establishing policy objectives and plans through policy strategies that should steer the generation and diffusion of innovation towards societal needs.

Support Governance - The government should play an essential role in opening up the transition process for multiple stakeholders and collective action, encouraging others to participate.

Support the New - The government should collaborate and engage with, support, and fund new developments that could lead to new configurations breaking the dominant socio-technical regime.

Destabilize the Unsustainable - The government should proactively weaken and phase out specific regimes' processes to replace niche innovation for systemic change.

Develop internal Structures and Capabilities - The government should develop internal capabilities and structures to enhance its capabilities to play its role and direct societal change.

Within government, the civil service, as the operational body of government, has a pivotal role and position in carrying out transition tasks not only because they prepare, operationalize, execute and implement policy but also because they are better positioned than politicians to keep long-term policy stable, which is crucial for transformative directionality (Weber & Rohracher 2012; Janssen et al. 2021). Thus, if a transition is a goal politics and society agree on, then civil servants are needed to execute these transition tasks to adjust the social-technical systems actively. However, the legitimacy needed for civil servants to execute these transition tasks is not explored in the transition literature.

Although the field provides many policy recommendations in the form of transition tasks, it black-boxes the government (Borrás & Edler 2020) and, more specifically, policy departments and civil servants (Haddad et al. 2019). The general idea seems to be that good policy advice from rigorous academic studies can easily be adopted by government. However, in reality, civil servants

within policy departments do not have unrestricted freedom in their policy actions (Wilson 1989; Svava 1999). This confined rationality of civil servants is much better understood by the Public Administration (PA) literature (Stoker 2006; Stout 2013; Torfing and Triantafyllou 2016). This literature has developed a set of policy traditions explaining how civil servants (should) work (Stout 2013). These PA traditions exist side by side (van der Steen, van Twist, & Bressers, 2018) and entail specific public values from which legitimacy can be derived. When transition scholars do not consider these traditions that dominate practice, the likelihood of successful implementation of their transition policy recommendations is relatively low due to a lack of legitimacy (Braams et al. 2021).

In policy practice, the PA traditions are broadly institutionalized by policy departments, where they translate into implicit and collectively interpreted rules of legitimation for policy intervention. These rules generally draw on an actor's perspective of sense-making embedded in a specific context (Reay et al. 2006). In the context of policymaking, institutional rules constitute shared patterns of action of civil servants founded in normative arguments about their role as policymakers and, consequently, the types of policy interventions that are legitimate to undertake. In this paper, we argue that these institutional rules explain why the civil service is generally reluctant to implement transition tasks, and these rules, therefore, require further study. The need to focus on institutional rules determining legitimacy is shared by Haddad et al. (2019: 29), who state that a micro-perspective on how 'legitimacy is created, developed, maintained, etc.' is currently lacking in the literature on transitions and transformative innovation policy.

This paper addresses this literature gap with the research question: 'What institutionalized rules in the civil service determine how civil servants can execute transition tasks legitimately?'. To answer this question, we confront civil servants at the Dutch Ministry of Infrastructure and Water Management (I&W) with a set of transition tasks that we distilled from the literature on sustainability transitions. First, we ask the civil servants whether they consider these transition tasks as legitimate tasks to execute. Second, we ask them for the normative arguments by which they assess the legitimacy of transition tasks. These arguments are mapped onto the three main PA traditions to explore how these traditions influence civil servants perceived legitimacy in executing transition tasks.

The perspective of institutionalized rules allows us to open the black box between legitimizing PA traditions and transition tasks on a micro-level to understand the institutionalized rules determining legitimacy, explaining how civil servants give meaning to PA traditions' abstract assumptions. With these rules, their orientation towards transition tasks can be interpreted. Not all legitimizing and delegitimizing arguments are expected to be grounded in PA traditions. We use the non-PA arguments in the Discussion section to consider how they may be used more broadly by civil servants in order to find legitimacy in implementing transition tasks.

2. Theory

In Section 2, we explore the concept of legitimacy for the government, and thus civil service, when they are confronted with transition tasks. We argue that the literature on transition hardly unpacks this puzzle, leading to inertia within the civil service. The Public Administration gives insights into how legitimacy is conceptualized and processed. However, in the daily praxis of civil servants when executing transition tasks, explicit prescriptions are not expected because Public Administration barely focuses on transitions and theorizes systematic change (Braams et al. 2021). We, therefore,

focus on implicit institutional rules to understand the daily struggles of civil servants with (il-) legitimate transition tasks.

2.1 Lack of legitimacy for transition tasks

The grand societal challenges defined by the EU illustrate the increased attention given to solving persistent, wicked societal problems (Cagnin et al. 2012; Mazzucato 2018). The transition literature shows that solving these problems calls for fundamental shifts in socio-technical systems, i.e., socio-technical transitions (Diercks et al. 2019; Schot & Steinmueller 2018). In general, a large body of work on sustainability transitions highlights these transitions' specific dynamics and stipulates what governments should do to guide, manage, accelerate, and facilitate these transitions (Loorbach 2010; Hekkert et al. 2007; Wanzenböck et al. 2019). The essence of such policies can be captured by the five transition tasks described in Box 1. The literature argues that governments have a crucial role to play in these transitions via what has been labeled transformative innovation policy (TIP) (Haddad et al. 2019; Schot & Steinmueller 2018).

In their review, Haddad et al. (2019: 29) conclude that TIP lacks micro-perspectives 'on the dynamics of how legitimacy is created, developed, maintained, etc.' Following their departure from the focus on the legitimation function of a Technological Innovation System, in which legitimation is deemed crucial for mobilizing resources and acquiring political strength (ibid; Bergek et al. 2008), this research refocuses the angle on issues of legitimately executing transition tasks from an institutional perspective. Such notions are absent in the transition literature, except for Weber & Rohrer (2012). They reached out to policymakers by combining insights from innovation systems and the multi-level perspective in a comprehensive 'failures framework,' which would legitimize governmental intervention through innovation policies.

Building on Weber and Rohrer, who prescribed transition tasks for government need bases of legitimacy to be executed, Braams et al. (2021) evaluated whether the five major transition tasks attributed to government could be executed legitimately by the civil service. Braams et al. concluded that civil servants could not; because they assign these tasks to politicians, market parties, or societal groups. These tasks confront their impartial status and reject new tasks without their minister's explicit direction. They suggest a better understanding of PA traditions can help prescribe tasks more impactfully.

2.2 Legitimation in Public Administration (PA)

PA has multiple traditions that use different normative assumptions on legitimate action. Thus, there are various traditions for civil servants 'to choose from' to legitimize their actions (Stout 2013). The dominant tradition within these altered over time and per situation. For example, competition and cooperation procedures partly replace hierarchical command and control structures in public organizations (Ibid.). Stout (2013) distinguishes three main traditions: the constitutional, the discretionary, and the collaborative tradition.

The constitutional tradition is based on a Traditionalist Public Administration, coming from classical conservative Liberalism (Stout, 2013), and sees obedient, neutral, and rational civil servants as the solution for irregularities, arbitrariness, and unpredictability (Pollitt, 2003; Wilson, 1989). To ban patronage and clientelism (Fung, 2009), they are trained to execute tasks standardized, with clear constitutional procedures and processes, thereby securing legitimacy (Stout 2013, Wilson 1989).

According to the discretionary tradition, governments and civil services should focus on market incentives. It criticizes governments' monopolistic service provision leading to inefficiency and

non-responsiveness toward consumer needs (Stoker 2006). The principal theory is New Public Management, with a neo-liberal ontology, which states that without competition, performance suffers (Hood 1991; Osborne and Gaebler 1993). It conceptualizes a set of professional norms civil servants should work with deregulation principles, laissez-faire, cost-consciousness, and integrating market mechanisms in public institutes (Osborne 2006; Wynen et al. 2014). Legitimacy comes from achieving outcomes efficiently and effectively (Stout 2013). Civil servants' enthusiasm for this new hands-off doctrine varied enormously, ranging from 'only correct way to correct for the irretrievable failures and even moral bankruptcy in the 'old' public management' to 'the philistine destruction of more than a century's work in developing a distinctive public service ethic and culture' (Hood 1991: 4).

Proponents of the collaborative tradition argue that the principles of a market economy are not appropriate to govern (Stoker, 2009). It arose from New Public Service and is based on Humanism (Stout 2013), and did not shift the focus back to the formal structures of government but rather to an interdependent, negotiating, self-regulating network containing various actors (Sørensen & Torfing 2005). Direction and power are shared through networks. Therefore, societal change processes are co-directed with different parties. Civil servants should give voice to emergent coalitions and bring different actors together to create broad support (Sørensen 2012). Legitimacy for transitions is gained when a fair process and empowerment for a broad spectrum of parties are unlocked (Rothstein 2012; Stout 2013). Civil servants experience several tensions with this tradition: 1) Between efficiency and inclusive decision making, 2) Managing internal legitimacy, focusing on the needs of the selected participants vs. the broader external legitimacy of the whole network, and 3) The flexibility of a network is hard to institutionalize into stable and effective policy (Provan and Kenis 2008).

These traditions do not replace each other; the new traditions were added to the spectrum (Bourgon 2009). Such a spectrum can be understood as layers of sedimentation or Russian dolls, with different answers to what defines doing good in the civil service (Van der Steen et al. 2018).

These current PA traditions do not describe or prescribe clear government responses to fundamental shifts in socio-technical systems, even when such shifts are urgently needed to overcome societal problems. This may constitute a legitimacy crisis for civil servants, as the multiple traditions either fail to offer, or offer paradoxical and sometimes conflicting prescriptions to attain legitimacy in dealing with transition. For instance, whereas civil servants must be free to act on their expertise (discretionary tradition), they also need to obey hierarchy and politics (constitutional tradition). Jacob et al. (2021) show a similar discrepancy when interviewing 17 civil servants of two German ministries between internal views on transformations and the required competencies to execute these plans. Based on a systematic review of the transition literature, Braams et al. (2021) assessed the executability of a clustering of five main transition tasks against the normative arguments from the PA traditions that legitimize government action. This theoretical exercise finds that PA traditions take different positions in carrying out the transition tasks assigned to the government. However, an empirical analysis of how PA traditions relate to transition tasks is currently missing in either of the two bodies of literature.

2.3 Implicit rules indicating legitimacy in the institutional environment

Institutionalizing a new logic means confronting the old logic (Dacin et al. 2002). The literature on sustainability transitions has led to a large set of actions that governments should take to speed up transitions. We state that they introduce a new logic – the transition logic - to governments. The introduction of this new transition logic in a ministry is an exogenous factor that changes work

activities. It disrupts the status quo in a field, allowing other actors to interpret what is needed for change (Reay et al. 2006).

Because of imminent system changes in society, civil servants' work is currently in flux, which brings a reinterpretation, reconstruction, and reenactment of the rules, norms, and standards. Civil servants ask themselves: 'What are legitimate tasks for us as civil servants in supporting a given socio-technical transition process?' To comprehend 'a legitimate task,' we follow Suchman's definition for legitimacy: 'Legitimacy is a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions' (1995: 574). Within projects of change in organizations, the creation of legitimation can be seen as a continuous exploration 'to meet the expectations of the social system they are part of' (Jemine et al. 2019: 3).

The new tasks ministries have to execute in a transition change the organization and legitimation processes. Whether transition tasks are considered legitimate is dependent on collective interpretations of the work civil servants do and the prevailing institutions conveyed by the PA traditions. It is an ongoing structuration of their shared reflections on the incongruity between their changing work and tasks and the deep-rooted institutional restrictions. Whether legitimacy is found depends on how this incongruity between change and stability is explained collectively (explicit or implicit). We are interested in the civil service's implicit rules, which explain the incongruity between change and stability.

The PA traditions are enacted within the civil service and often become, over time, more implicit. Collective meaning-making processes manifested on a micro-level and situated in daily work are the implicit rules within these traditions. These rules regulate the institutional context (Deephouse and Suchman 2008) and standardize civil servants' difficulties or advantages and aversions or preferences. The embedded, often implicit rules thus structure actors' considerations and form collective interpretations about constraints and possibilities for agency and change (Thornton and Ocasio 2008) and what is and is not considered legitimate.

3. Method

This research aimed to understand which institutionalized rules establish the conceived executability of transition tasks. We were interested both in the potential conflict between normative assumptions of dominant PA traditions with transition tasks, and the institutionalized rules that guide civil servants in deciding what is considered legitimate.

The Dutch Ministry of I&W is a compelling case. Part of this ministry has a 20-year history of grappling with transitions (Loorbach 2007: 159), while other parts have mainly been serving the economy by building infrastructure. Historically being the ministry of Traffic, the rationale within the ministry had to switch from supporting economic development via, e.g., the 'gateway to Europe-discourse,' towards focusing on transformative societal challenges such as climate adaptation, a circular economy, and a green mobility system. Nowadays, the ministry is co-responsible for reducing greenhouse gasses by 49% by 2030 and 95% by 2050. This is translated for I&W into 1) Emission-free mobility for people and goods by 2050 and 2) A sustainably driven, circular economy by 2050 (Kamerbrief 2019: 4-6). The third transition is the adaptation to climate change. Sea level rises, and changing weather conditions need other water management to secure safety for high water and prevent drought. This shift in attaining public value makes the ministry of I&W an appealing place to study how civil servants legitimize transition tasks because it embodies both an economic and a transition rationale.

We conducted 34 semi-structured individual interviews with civil servants of the ministry of I&W who are confronted with transitions. Four senior-level civil servants who coordinate knowledge development and innovation within I&W listed a total of 51 potential respondents. From this list, we used quota sampling to identify a sample of 40 civil servants that worked in the different transition domains that fall under the jurisdiction of the Ministry of I&W. Sampling across these transition domains allows for more generalizable results. 34 out of the 40 addressed civil servants agreed to an interview; 16 worked within the mobility domain, 11 within the circular economy, and 7 in the water domain. Interviewees vary in seniority: 17 respondents were (sr.) policy officers, 11 were middle management, and 6 were top management.

From the answers of these civil servants, who elaborated why they thought transition tasks were legitimate to execute, we extracted more general patterns that reflect institutionalized rules. These rules indicate whether transition tasks are comfortably assimilated into civil servants' traditional work. The transition tasks which the respondents were asked about were selected from Braams et al. (2021), who distilled 80 specific transition tasks for government from one hundred articles on socio-technical transition and aggregated them into five categories. We selected two tasks from every category (ten in total) based on their exemplarity and prevalence in the literature. One of each couple of tasks was in the take-off phase of the transition, which we predicted to be easier to undertake due to the limited impact and resources needed for such policies (Turnheim et al. 2018), and the other one in the implementation phase, which was predicted to be more difficult because of the anticipated kickback from society and thereby politics (ibid.). See Table 4 for the specific transition tasks per aggregated category.

Table 4: *Aggregated categories and specific transition tasks*

Aggregated categories **Specific transition tasks**

Give Direction	'Justify that we, as government, can intervene in the market to stimulate goals and steer the transition.' 'Communicate necessary ambition on the transition goals towards the society'.
Support Governance	'Make space for a great variety of voices, arguments, and interpretations in the design process of transition policy.' 'Organize and maintain platforms for collective action to stimulate transition goals'.
Support the New	'Work mainly together with companies who stand for new solutions.' 'Mitigate initial negative aspects of new developments'.
Destabilize the Unsustainable	'Collect (international) results for experiments that show banning or taxing specific products is beneficial for the transition.' 'Put negative aspects of the industrial production processes under pressure'.
Create Internal Capabilities and Structures	'Develop internal competency to understand new developments and technology.' 'Develop the skill to learn and experiment in your team'.

All interviews are transcribed and coded in NVivo in several phases. First, respondents' answers to the question if they view specific transition tasks as ones that the organization would order them to execute were coded as either 'yes' or 'no'. We coded their argumentation in an open and inductive

way (Holton 2007). This first phase covers the possibility that such orders may happen and the normative arguments for allowing this. In the second phase, arguments were inductively mapped on the normative PA framework. This step allowed us to explore to what extent respondents adhere to specific PA traditions. Finally, all codes from the first phase were clustered into generic themes containing similar quotes (Charmaz 2005). We moved iteratively between the transcripts with their first-phase codes and the generic themes to interpret the percentages of executability for the second phase. The implicit institutionalized rules were composed as the explanatory denominator from emblematic quotes about the daily practices.

4. Results

The five transition tasks structure this section. Each subsection first describes what reasons and conditions civil servants give when asked if they deem specific transition tasks executable; it then discusses the underlying institutionalized rules. Seven rules that emerge this way undermine the legitimacy of executing transition tasks. These findings are summarized in Table 5, showing the number of interviewees mentioning these arguments. The final subsection provides an analysis across transition tasks.

4.1 Giving Direction

The transition task ‘giving direction’ states that a government should guide and steer innovation towards societal needs (Edler & Boon 2018). The majority of respondents (about 60%) considered these tasks executable because government holds democratic legitimacy to make decisions and uses transparent procedures to create broad support for this. However, they constantly underline two conditions that need to be met: a clear political mandate and an apparent market failure. When respondents were unsure about these conditions, they used arguments about arbitrariness and a lack of a long-term commitment to society and politics. We found two institutionalized rules from the responses that structure these actor considerations around giving direction: 1) the difficulty of constructing concrete ambitions and 2) the process of keeping long-term ambitions stable.

4.1.1 *The avoidance of constructing concrete ambitions*

An example of how civil servants struggle with clear transition ambitions is found in the area of climate adaptation. The increasing need to adapt to a changing climate is marked as a transition for the ministry, with the ambition to create climate resilience or robustness. However, respondents argued that the ambition of climate resilience would not, for strategic reasons, be reduced to a single indicator or a SMART statement, resulting in vagueness in ambitions: what do we mean by climate robustness? “We say, ‘it [climate robustness] is about heavy rainfall or extreme drought, that ensuing damage should not be greater than damage in 1990’. However, we have not written this kind of precision down. [...] Maybe because it is a task of our ministry [...] and we will never reach this goal because of extreme weather (interviewee #22).”

From the collaborative PA perspective, it seems acceptable to aim for broad support at the dispense of concreteness and executability. Abstract ambitions may help build coalitions and create trust among parties, but it complicates the implementation without refinement as ambition for transition is often negotiated within broad networks with generally formulated agreements in subtle balance. Civil servants need a clear political mandate to translate this into more concrete measurements from a constitutional perspective. Without a clear mandate, no legitimate action is possible.

Another underlying reason for being vague that we observed is general not-knowing. Uncertainty and unexplored terrain seem to inhibit civil servants' ability to formulate integral ambitions when political vision and societal commitment are lacking. Respondents raised the challenge of translating broad ambitions into more concrete actions and into an overarching abstract but guiding vision. A vague middle level may be interpreted as a safe haven between operationalization and generalization, avoiding a general unease at being accountable for concrete statements. Such struggles seem particularly explicit for policymakers working with mission-oriented innovation policy (Janssen et al. 2021).

4.1.2 The difficulty of keeping long-term ambitions stable

Next to implementing new policies and regulations, more cooperative policy instruments such as voluntary agreements and covenants are also applied. These instruments are preferred in the take-of phase of transitions when broad support for ambitions in society is not yet ensured. 'I think the part of the ministry responsible for sustainability is not used to intervening heavily. So, there are many agreements and covenants and those kinds of softer policy instruments. [...] Covenants and pacts with industry are creative means to book progress for us on an environmental agenda [when this was not a top priority on the agenda of the minister]' (interviewee #15).

Interviewees note that agreements with market parties, which often have to start voluntarily, are much more effective when they have a prospect of enforcement in the future. They argue that this requires long-term political commitment toward stricter enforcement. These trajectories with voluntary agreements have processes of multiple years, and over time, have to be codified into regulation to make scale. As this extends well beyond the usual political term, such processes are sensitive to political power shifts.

The collaborative tradition advocates applying voluntary strategies with active parts of society when issues are not priorities in the political arena. This view contrasts with the stricter interpretation of the constitutional tradition, which withholds civil service from giving direction themselves. The difficulty of navigating this interplay of rationales is explained by a seasoned civil servant stating that the long-term ambition set by the ministry's softer policy instruments is not always stable due to changing political priorities or strategies. As a result, civil servants hesitate to communicate goals and ambitions among other societal parties, especially when political leadership changes and creates a vacuum in ambition and direction.

4.2 Supporting Governance

The transition task of supporting governance endorses the government to play an essential role in opening the policymaking process for multiple stakeholders (Fagerberg 2018). About half of the respondents answered confidently that these tasks were executable, considering it good practice and belonging to the civil servants' craftsmanship to get broad support. The other half were indecisive, mainly listing practical difficulties and often stating that it could be a task, given its focus on involving society, but hardly is. The more stringent uneasiness of the respondents concerned civil servants' supposed neutrality; this position of neutrality could be constrained in choosing which parties can participate. As expected, the collaborative tradition delivers the most legitimizing arguments, while the constitutional and discretionary traditions mainly delegitimize these tasks. Delegitimizing arguments concerned unequal treatment and a supposed unwanted intervention in the market. The common denominator we found was the aversion to the potential chaos of opening up government action to inputs from diverse stakeholder groups.

4.2.1 Aversion to the potential chaos of opening up government to stakeholders

Opening up the process of policy development in the transition to multiple stakeholders is generally considered an important task: respondents sometimes see such tasks as “almost too obvious” and ‘very useful to get out of your tunnel vision’ (interviewee #10). Others see it as a strategic maneuver: ‘Getting the whole ecosystem involved is essential, especially while orienting phase; otherwise, the political arena gets uncontrollable in a later phase’ (interviewee #27). Losing control of suggested solutions is considered challenging and may lead to unwanted dynamics or resistance in society. For instance, a respondent argued that a process of governance is sometimes purposefully avoided when the ministry has not formulated an official position. Civil servants expressed feeling vulnerable exchanging ideas in a policy void ‘because the lines to parliament are so short with, for instance, social media’ (interviewee #12), in which unaligned ideas could harm their minister.

The balance for civil servants between co-creation with society and executing and protecting the orders of their minister is delicate. It may lead to a unique position for civil servants in society because they are seen as neutral and working in society’s interest, which ‘creates a situation where everybody wants to talk to you’ (interviewee #19). On the other hand, the balance could also be tipped towards strategic behavior, such as rhetorical means for the political arena: knowing in an early phase where your opponents are and strategizing to convince parliament. This balance can be seen as an interplay between the progressive, collaborative assumptions of opening up and the hierarchical division between politics and the administration of the constitutional tradition. The different role perceptions of working for society as an institute or working for the minister as an instrument are at the root of this institutionalized rule.

4.3 Supporting the New

‘Supporting the new’ recognizes that government should engage with and support new niche actors and their developments (Kivimaa & Kern 2016; Schot & Geels 2008). Almost half of the respondents hesitated about these tasks’ executability, and a little over a quarter rejected these tasks. They expressed concerns about the level playing field, arbitrariness, ministerial responsibility, and unlawful intervention in the market. The constitutional tradition sets many conditions to act, while the collaborative tradition acknowledges that other parties are needed to execute a new policy. Emblematic for this task is the line: ‘we work for society as a whole,’ creating a general unwillingness to disempower incumbents.

4.3.1 Aversion to the disempowerment of established interests

In general, respondents show hesitation in working with new parties if this excludes or frustrates incumbent parties. ‘Well, [...] it affects my integrity [excluding incumbent parties], while I think we are working for everybody. So, you look at the societal interests and think strategically about whom to use and evaluate everybody’s contribution fairly, with multiple representatives.’ (interviewee #1). Preferring newcomers with different solutions is sometimes needed to direct system change, which becomes an integrity issue. This doubt comes down to the central question: Whom do you serve as a civil servant?

Respondents displayed suspicion about new players, stating that those often try to establish new monopolies by arguing for a new policy beneficial for their projects. Respondents argued that new parties and solutions are no alternative to incumbent parties who keep the essential aspects of the sector running. An adage seems here: a promising innovation is one that merges itself into the existing situation, with minimal adjustments to the broader configurations. Therefore, innovations

are primarily seen as ‘nice to have’ by the civil service and only attractive when easily implemented. They are not worth the trouble of changing the whole system.

More innovative-minded respondents mentioned additional problems; working with frontrunners also means keeping in close contact with laggards to get them on the right trajectory, which burdens the service’s capacity and cannot always be carried through. The constitutional tradition prescribes non-arbitrariness; favoring new developments becomes an integrity issue. Many conditions have to be met to hedge against allegations of unfairness. The discretionary rationale focuses on the extra costs of changing processes that reconfigure whole systems, explaining the inertia and lock-in.

4.4 Destabilize the Unsustainable

‘Destabilizing the unsustainable’ focuses on regime destabilization and the phase-out of harmful practices and goods (Loorbach 2007). About 40% of the interviewees reported that these tasks are executable by the civil service. The same percentage of respondents articulated some hesitation, and 20% rejected these tasks. They mentioned the minister’s vision as an essential condition for civil servants to execute these tasks and indicated that the topic to which the tasks relate should no longer be in the political arena. Respondents’ delegitimizing arguments were that there is a shortage of knowledge, awareness, and mandate to execute the tasks; that market mechanisms are much more efficient to coordinate goods and practices, including destabilizing unsustainable ones; and that governments should not intervene in this inherent market process. We find that two institutionalized rules underlie the respondents’ normative arguments: 1) a preference for approving the new over disapproving the unsustainable, and 2) an aversion of civil servants to overstepping their mandate.

4.4.1 Preference for approving the new over disapproving the unsustainable

Destabilizing the unsustainable is often politically sensitive, and respondents feel unauthorized to articulate such thoughts in discussions. For example, a respondent illustrates: ‘it is not appreciated in formal discussions [for civil servants] to state that building new houses in the west of the country is unwise because of the predictions that the sea level will rise,’ as such statements would critique the current ministry’s building policy (interview #26). In internal conversation, there is some room for negative examples and practices in policy and society. However, in discussions among non-colleagues, many respondents express anxiousness about the possible consequences of their statements, which could even lead to litigation or a political fight with questions from parliament. This perception is dictated by particularly the constitutional tradition, which states that the minister is politically responsible for the civil service statements, effectively forbidding the latter from making disapproving statements on unsustainable practices in public.

New developments, on the contrary, are considered ‘sexy’ and non-threatening. Interviewee #12 states: ‘We find it easier to give a podium for things that go well. We can be selective with this because it does not hurt anybody. Somebody just gets an extra pat on the back.’ This preference means that civil servants focus their attention on ‘supporting the new’ instead of ‘destabilizing the unsustainable’.

4.4.2 Aversion to overstepping their mandate

Respondents indicated that they are even wary of acknowledging some unsustainable effects of existing goods and practices in their domain because overcoming these sustainability problems requires ‘enormous, systematic change’ for which their directorate is not equipped (interview #17).

So instead of looking at societal problems in an integrated way, combing, for example, safety and accessibility with sustainability, civil servants prefer to feel and be responsible for one or a few aspects. This restraint allows for a narrower job description with a more explicit mandate, for which their organizational structures are designed. Interviewee #14 illustrates: ‘We are a body of political execution. We are not an organization that tries to maximize the change in the world.’ (interviewee #14). This quote shows that civil servants see themselves as a body of execution in a specific domain without their own voice, displaying the perception of the constitutional tradition. Furthermore, the focus on efficiency of the discretionary tradition has cut internal government budgets and outsourced many tasks. Adding new tasks seems, therefore, unwelcome.

4.5 Create Internal Capabilities and Structures

‘Developing internal capabilities and structures’ highlights the need for new skills and structures for government to promote and direct transitions (Quitow 2015). Only 30% of the respondents were positive about the executability of these tasks. The constitutional tradition mainly legitimizes this task, stating it is good practice and benefits transparent and knowledgeable policymaking. Delegitimizing arguments came from the discretionary tradition and are concerned with the danger of spending public money on potential failures in the proximity of the political arena, leading to no real commitment in the organization. The institutionalized rule found is the systematically undervaluing knowledge compared to procedural skills.

4.5.1 Bias towards process specialists over content specialists

During the last decades, much process-based knowledge is accumulated to get policy through the administration and the political arena, but there is too little understanding of the content. Interviewees reported that the civil service has searched for very generalist people who can switch quickly between topics and are especially good at understanding politics and translating content into political stories and back. ‘It is more important to have good narratives for parliament than have a substantive piece with accurate content’ (interview #25).

“For transition, however, you need different competencies. And I do not think we are quite there yet” (interviewee #3). Respondents stated management is too far removed from the content of the knowledge development. Historically, the discretionary tradition fixates on managing processes efficiently and cutting costs where possible. Knowledge accumulation is, in this view, not a core task of government and is therefore undervalued.

4.6 The impact of PA traditions on institutional rules

Table 5 provides an overview of the institutionalized rules that influenced the willingness of civil servants to execute transition tasks and the impact PA traditions had on these rules. When we compare these findings across transition tasks, we find that the constitutional tradition is most dominant in influencing the attitude of civil servants towards transition tasks.

The constitutional tradition remains the central guide for civil servants in deciding what actions are legitimate. The discretionary and collaborative traditions have redefined and redirected government to a less central position in society over recent decades, making it more challenging for the government to guide transitions. The dialectic way PA traditions are developed, reacting to and addressing each other’s pitfalls, generates built-in tradeoffs of conflicting underlying public values. These tradeoffs stood out less when government was retreating through decades of *laissez-faire* and seeing society as networks with distributed power. However, when transitions challenge governments to become more directive, a new balance needs to be established. It seems that

government as a steering force is back on the agenda, although this is not fully recognized yet by PA traditions and the civil service.

Approximately 70% of all the legitimizing arguments and 50% of the delegitimizing arguments can be traced back to normative assumptions of PA traditions. These percentages indicate the vital role PA traditions play in legitimizing new tasks for government. In reverse, it also shows that not all legitimizing and delegitimizing arguments are grounded in PA traditions. While civil servants may use these non-PA arguments to find legitimacy in implementing transition tasks, there seems no counterbalance rationale championing the necessity of executing transition tasks within the civil service against these traditions. To that end, an appropriate rationale for government, compatible with transition tasks, is needed. This rationale should shift this dialectical motion from currently limiting conditions to create additional legitimacy forms for fundamental, societal change. For this purpose, Braams et al. (2021) coined the term Transformative Government.

Table 5: *The impact of PA traditions on institutionalized rules and transition tasks*

Institutionalized rules	Impact of PA on institutionalized rules
Vague ambitions lead to uncertainty and, therefore, a general uneasiness for civil servants to make it applicable. This makes interpreting the given direction difficult.	The collaborative tradition is willing to aim for broad support at the expense of concreteness and executability, resulting in vague ambitions.
Voluntary agreements can help transitions, but their long-term goals are susceptible to strategic and political changes.	The collaborative tradition suggests voluntary strategies with active parts of society when issues are not prioritized in the political arena. However, the constitutional tradition prevents civil service from giving direction themselves. Moreover, legitimation is based on elections and therefore expires, harming long-term projects.
Opening up the governance structures feels vulnerable for civil servants because of the proximity of a delicate political constellation. It can lead civil servants to be trusted partners of society or ministers' defenders.	This dynamic is an interplay between the progressive, collaborative assumptions of opening up and the hierarchical division between politics and the administration of the constitutional tradition.
Civil servants work for all of society; they deem it unethical to favor new parties or developments over incumbent parties.	The constitutional tradition prescribes non-arbitrariness; favoring new developments and associated actors of existing practices becomes an integrity issue. Thus, many conditions have to be met to prevent allegations of unfairness.
Civil servants prefer approving the new over disapproving the unsustainable.	The constitutional tradition states the minister is politically responsible for the actions of the civil service, which mutes the latter on making disapproving statements in public.

Destabilizing unsustainable practices often create reconfigurations within regimes and systems. This leads to unanticipated and unwanted extra activities outside the job description.

Notions of efficiency in the discretionary tradition have cut internal government budgets and outsourced many tasks. Adding new tasks is therefore unwelcome. Moreover, the constitutional tradition sees civil servants as just the executive body of the minister and less as an organization that can think for itself.

Domain knowledge is undervalued in the civil service compared to the knowledge of the process, complicating the development of new capabilities beneficial for transitions.

The discretionary tradition fixates on managing processes effectively and cutting costs where possible. Knowledge accumulation is not a core task of government and is therefore undervalued.

5. Implications for a transformative government

Our research shows that civil servants struggle with the advice from transition scholars related to necessary government actions to accelerate highly needed societal transitions. The existing PA traditions seem to resonate strongly in policy departments and negatively influence the willingness of civil servants to execute transition tasks. Since societal transitions are critical for developing a sustainable future, these hindrances justify the need for a reform of PA traditions and new reflexivity.

A transformative government rationale could reassess PA-induced institutionalized rules to address the societal challenges. We found legitimizing arguments set forward by civil servants endeavoring to implement transitions, which can be understood through current PA traditions. However, when interpreting and articulating these arguments collectively and coherently via the lens of transformative government, they expose a new perspective with a more central role for the civil service. Below, we elaborate shortly on the following assertions that would support a transformative government: 1) Transition goals are just like public values, 2) Keeping transition projects out of the political arena in certain phases out is beneficial for the execution of transition tasks, and 3) A redefined role of civil servants could be beneficial for the execution of transition tasks. These pieces of equipment for transitions indicate a basis for further research.

Ad. 1) Under a new transformative government rationale, transition goals could be more explicitly embedded as public values. In line with Bozeman (2007: 13), we perceive public values as the principles on which policies should be based and which provide a normative consensus about the rights, benefits, and prerogatives to which citizens are entitled. A reconceptualization of transition goals can be seen in the interviews; public values were sometimes used synonymously or together with transition goals, which, in the eyes of the interviewee, legitimized their execution—seeing urgent and necessary system change towards sustainability as public value consists of both a direction and an incentive to act. Respondents often argue that transition goals would lose out to currently more predominant public values such as safety, competitive position, and accessibility. Identifying transition goals as public values seems to give them a higher status, leading to fewer institutional rules causing inertia.

Ad 2.) Another suggested solution to explore in further research is to lessen inertia by keeping the transitional subject out of the political arena in certain phases. Long-term projects often become an administrative issue over specific periods. The Dutch Delta Program, an official independent commission ensuring protection against flooding and weather extremes, was taken out of the political arena. Their independent mandate is to shape and prioritize its program and execute this

in collaboration with national and regional governments. A respondent indicated the importance of not relying on politics for basic needs like drinking water and water safety. Instead, society needs independent, autonomous organizations to be responsible for safeguarding these societal needs.

Ad 3.) A final notion, interesting for future research, often mentioned in interviews, was rethinking the current role perception of civil servants. A recalibration towards serving society and its shared values would be necessary, requiring discretionary abilities and creativity. The civil service can develop considerable knowledge in early-stage transitions since they, as neutral agents, can quickly become most knowledgeable in the new field because many streams of entrepreneurial activity and solutions, scientific knowledge, policy problems, and political goals come together in their policy sphere (Kingdon 1984). Thus, civil servants could guide the transition and help it mature. Respondents report that such capacities are often dependent on specific individuals interpreting their instruction towards public value within the civil service. These specific individuals have the position and the capabilities to overview a transition in its early phase.

It comes, however, with a potential danger of being disciplined by the organization when stepping beyond their discretionary space. Such guidance of the transition by civil servants can be seen as a way to depoliticize the subject. Depoliticizing contains, of course, a danger of technocratic tendencies without much accountability. It is thus about rethinking and understanding when transitions should and should not become political. As new rationalities often emerge from paradoxes and merging different domains, transitional scholars should collaborate with political scientists and PA scientists to further understand and guide governments who try to transform society towards sustainability.

6. Conclusion

Few studies have connected the Transition and PA tradition literature, resulting in a knowledge gap regarding the civil service's feasibility of transition task execution. This paper sets out to open up the black box of governmental departments and understand the reluctance of civil servants to carry out these transition tasks. Based on 34 interviews, we find that civil servants at the Dutch Ministry of Infrastructure and Water Management find it challenging to carry out transition tasks.

By analyzing interviewed civil servants' normative arguments regarding the executability of transition tasks, we also identified seven institutionalized rules that determine what tasks are considered legitimate or not. Institutionalized rules are crucial to comprehend because they are embedded in daily work and determine avoidances, difficulties, aversions, and biases. All of them are influenced by PA traditions and enclose paradoxical notions. These paradoxical notions embody the different and sometimes contrasting normative assumptions of the PA traditions. They show how legitimacy arises between system change and institutional restrictions, and cautiousness.

The institutionalized rules found

1. The avoidance of formulating concrete ambitions.
2. The difficulty of keeping long-term ambitions stable.
3. Aversion to the potential chaos of opening up government to all stakeholders.
4. Aversion to the disempowerment of established interests.
5. Preference for approving the new over disapproving the unsustainable.
6. Aversion to overstepping their mandate.
7. Bias towards process specialists over content specialists.

These institutionalized rules embody many criteria set by all PA traditions. The inflexibility of PA traditions to legitimize transition tasks can be understood as safeguarding democratic and market principles stringently. Therefore, it appears unfeasible to meet all these criteria within current PA traditions when legitimizing transition tasks. For this reason, it is vital that a new tradition emerges that does legitimize transition tasks. We propose Transformative Government for this purpose. Transformative Government searches for a path to combine the urgency and necessity for system change without losing democratic principles. Therefore, it should remain reflexive on both the PA traditions and Transition Literature's normative values. Transformative Government can become another layer on the Russian doll of PA traditions, stressing and legitimizing another answer to what is needed.

Finally, this paper also has two main limitations. The first limitation is the selection of transition tasks proposed to interviewees. Braams et al. (2021) found 80 tasks for government in the transition literature, but only ten were presented. Although we came up with selection criteria, responses on executability may have differed while presenting other tasks. The second limitation is generalizing institutionalized rules from the Dutch Ministry of Infrastructure and Water Management case. Not many other ministries have undergone a trajectory in proximity to the development of transition theory. Civil servants may have been accustomed to the transition lingo over the years and, therefore, more inclined to see such tasks as acceptable. It is interesting to replicate this design in ministries less informed.

“Sometimes you have to ask for the moon”

Charles de Gaulle

4. Civil servant tactics for realizing transition tasks

Understanding the microdynamics of Transformative Government

Highlight

- How do entrepreneurial civil servants working on transition tasks deal with resistance from within their own organization?
- Studying the role of government in grand societal challenges opens up the black box of government actions and provides an understanding of seemingly contradicting courses of action.
- We introduce a heuristic round-model to understand the opposing rationalities which constitute the resistance.
- This in-depth illustrative case study shows how the model can be used to provide a rich empirical understanding of the complexities of realizing transition tasks in government.

Abstract

The transition literature argues that governments have an essential role in facilitating societal transitions. The current paper aims to provide a theoretical and empirical understanding of this government role by analyzing the work of entrepreneurial civil servants. These civil servants try to execute transition tasks but are often resisted by their colleagues who invoke dominant traditions in Public Administration. This raises the question of how they deal with this resistance and manage to execute government transition tasks. We introduce a heuristic rounds-model to understand the interplay between contestation and responses. Due to its subsequent rounds, the model shows ongoing tactical work navigating opposition and uncovers the tactics' temporariness and their capacity to backfire. We illustrate the value of the heuristic model by analyzing the clash between opposing rationalities and the change agents' continuous tactical adjustment in our case study on 'Mobility as a Service' in the Netherlands.

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1. Introduction

The transition literature attributes governments an increasingly prominent role in guiding societal transformations to overcome wicked societal problems (Borrás & Edler, 2020; Kanger, Sovacool, & Noorköiv, 2020). Therefore, the transitions literature considers civil servants as crucial actors for realizing socio-technical transformations. This perception conflicts with dominant traditions about the legitimacy of Public Administration (PA) (Stout, 2013; Torfing & Triantafillou, 2016) that prescribe civil servants' legitimate roles and generally oppose transformative actions (Braams et al., 2022). Traditions that help to understand how entrepreneurial civil servants do institutional work to execute transition policies in the face of the public administration's resistance are currently lacking. Combining the literatures on transition studies, dominant frameworks in public administration, and change agents, this paper develops a heuristic rounds-model that can study this tension of entrepreneurial civil servants executing transitions policy in the face of the public administration's resistance.

The transition literature, building upon evolutionary economics, innovation sociology, institutional theory, innovation systems theory, complexity science, and governance studies (Köhler et al., 2019), focuses on the societal transitions needed to overcome grand societal challenges. These challenges comprise societal and environmental problems, such as climate change, biodiversity loss, and resource depletion (Köhler et al., 2019). Transitions literature conceptualizes and explains how societal transitions should take place to overcome societal challenges. This includes supporting emergent sociotechnical and innovation systems and destabilizing dysfunctional socio-technical structures (Kivimaa & Kern, 2016). From this perspective, transition scholars prescribe governments various (normatively-laden and therefore politically sensitive) transition tasks (Borrás & Edler, 2020).

Although transition literature argues government transition tasks are crucial for dealing with grand societal challenges, these tasks are hard to legitimize for civil servants (Braams et al., 2021) through standard normative frameworks for PA, such as traditional public administration, new public management, and new public governance (Stout, 2013; Torfing & Triantafillou, 2016). These frameworks emphasize and prescribe stability and incremental change rather than transformative change (Thompson, 1965; Pressman & Wildawsky, 1984; Mulgan and Albury, 2003); the radical new pathways needed for societal transformations require civil servants that can invoke new forms of legitimation. To understand how entrepreneurial civil servants execute transition tasks despite internal resistance stemming from institutionalized frameworks for legitimizing public administration, this paper develops a heuristic model building on political models of organizational decision-making (i.e., the policy process of Lasswell (1956); the stream model of Kingdon (1984); and the rounds model of Teisman (2000)). Our model helps develop a context-specific understanding of change agents' tactics in response to internal opposition within public organizations and how such struggles evolve over several rounds in the policy-making process to push transition tasks forward.

The value of this heuristic rounds-model is illustrated with the case of civil servants at the Dutch Infrastructure and Water Management Ministry facilitating the transition to Mobility as a Service (MaaS). MaaS promises to fundamentally reshape mobility with multimodal data and algorithms as an alternative for car ownership while reducing CO2 emissions (Audouin & Finger, 2018). In the Netherlands, the objective with seven national MaaS pilots focused more on understanding this new market with startups, understanding travel behavior, and learning how to optimize mobility on policy objectives using data from MaaS. The entrepreneurial civil servants facilitating MaaS were constrained by their interactions with opposing, more traditional-oriented directorates,

whose support is necessary to change the regimes' configuration. The case shows how civil servants employed several tactics in response to this opposition, the consequences of these tactics, and how the tactics and opposition changed over several rounds of interaction.

2. A heuristic rounds-model for understanding micro-dynamics in transformative governments

The transition literature attributes government a crucial role in transformative societal change. Transition scholars, therefore, formulate transition tasks for governments to execute. Government must steer the transition toward societal needs by articulating demand, vision, and ambition (Boon & Edler, 2018; Hekkert et al., 2007; Rogge & Reichardt, 2016). It must also activate and facilitate multiple stakeholders to participate in societal transformation processes (Fagerberg, 2018; Loorbach, 2010; Söderholm et al., 2019). Government must furthermore focus on aiding new sustainable developments to replace dominant regime practices in the future (Hekkert & Negro, 2009; Kemp et al., 1998). This replacement process also requires government to proactively put pressure on unsustainable practices via, e.g., regulation or taxation (Hebinck et al., 2022; Kivimaa & Kern, 2016). Transition literature argues that for all these new tasks, government requires new capabilities and structures (Bergek et al., 2008; Quitzow, 2015). Braams et al. (2021) reviewed and typified these transition tasks as Give Direction, Support Governance, Support the New, Destabilize the unsustainable, and Create New Capacities and Structures.

The execution of these new tasks is, however, not granted. Civil servants do not have unlimited discretion for these new tasks aimed at societal change; in fact, as Table 6 describes, they are constrained by normative traditions for legitimizing public administration. Civil servants, for instance, must obey their Minister and prevent arbitrariness (Pollitt, 2003), refrain as much as possible from interfering in the market to be efficient and effective (Osborne, 2006), and co-design policy with society to guarantee broad societal support (Bevir, 2010).

Table 6: Constraints from public administration traditions for civil servants' transformative tasks (based on Stoker, 2006; Torfing and Triantafyllou, 2016)

Traditions in public administration	Associated constraints for transition tasks of civil servants
Traditional Public Administration	Civil servants have no authority to execute new transition tasks. Politicians define inputs and expected output; rules and procedures must be strictly followed hierarchically. Because the goals are stability and predictability, change is incremental.
New Public Management	If civil servants do not identify market failure, no interference is accepted. By using deregulation and performance elements, civil servants achieve efficiency and effectiveness. However, such competition policies hamper the collaboration needed for change, and performance auditing produces an aversion to change.
New Public Governance	Outcome is co-produced by government and society through networks. Civil servants must be responsive through emergent coalitions. They cannot control hindering efforts of powerful incumbents.

A ministry stands for core values needed in a democratic society, such as fairness, justice, accountability, and predictability. Thus, ideal-typical civil servants have to be willing and capable of following constitutional rules, orders, and ethical codes, which depend on mechanisms of motivation, socialization, and habituation (Olson, 2006). In reality, understanding a civil service as such is a misconception; civil servants are strategic agents, and within a bureaucracy are advocacy coalitions (Sabatier & Weible, 2007), turf wars, and organizational politics (Wilson, 1989; Bolman and Deal, 2017).

Moreover, as the civil service is subservient to the democratically accountable Minister, attaining multiple public interests in a volatile context creates discretionary space because what the public interests exactly are is not defined. Civil servants must have ideas and ‘frank and fearless advice’ on the public good (Mulgan, 2008: 346). However, being responsive is limited by their loyalty toward the current coalition invoking constrained partisanship. This paradoxical notion creates the gray and blurry lines of public integrity and diminishes an apparent dichotomy between administration and politics (Svana, 2001). Public integrity means that civil servants uphold some independence in protecting democratic institutions (Mulgan, 2008; Keating, 2002).

Working on sustainability transitions may fall under ‘protecting democratic institutions’. Working on innovations that induce system change will mean working with these gray and blurry lines. However, system innovations that change internal institutionalized patterns are uncertain and costly and threaten the machinery organization (Wilson, 1989) in a risk-averse organization (Borins, 2001). Civil servants operate within contexts that are, by default, adverse to change (Thompson, 1965). Thus, doing things differently is a potentially dangerous occupation for civil servants as it creates resistance from those uncomfortable with uncertainty. It may also easily impair their career within the civil service (Adler, 1996).

From a strict Weberian perspective (i.e., Traditional Public Administration), civil servants’ actions to parry resistance and navigate opposing forces can easily be labeled illegitimate, as resistance represents broadly accepted public values. Civil servants can construct legitimacy by drawing on additional widely accepted frameworks, such as New Public Management and New Public Governance (Stoker, 2006; Stout, 2013; Torfing & Triantafillou, 2016), but these frameworks also introduce restrictions such as respecting current markets rather than radically re-ordering them (for New Public Management) or working through current coalitions rather than breaking the power positions of actors opposing sustainability (for New Public Governance). When civil servants cooperate with innovative parties challenging incumbents and see a need to execute new tasks, these different interpretations conflict with other civil servants emphasizing traditional public administration, new public management, and new public governance. Although opposing civil servants often do not note underlying principles (Van der Steen et al., 2018), a discursive struggle within ministries over what is considered good practice determines whether transition tasks are executed.

The contextualized institutional restrictions produce resistance to transformative change and form opposing rationalities within the civil service. We define ‘opposing rationalities’ as underlying organizational discursive resistance resulting from normative traditions in PA questioning transition tasks’ legitimacy. These opposing rationalities are institutional logics that shape the rules of the game, distributing power and status through means-end relations (Thornton and Ocasio, 2008). The three logics within public organizations, grounded in traditions in public administration (Stout, 2013), coexist, complement, and compete (Fuenfschilling & Truffer, 2014) within government. Waylen et al. (2015) call such fixed path dependencies cognitive sticking points that can produce strong resistance to change. However, from a transition perspective, these logics

(or traditions) within government merge into undifferentiated opposing rationalities, hindering the execution of the transition tasks. Opposing rationalities endorsed by dominant traditions thus create a stable counterbalance to change as transformative change requires legitimacy since new transition tasks can easily be disputed within the civil service. Change agents play a crucial role in constructing new forms of legitimacy for transition tasks as well as deinstitutionalizing unquestioned assumptions (Dacin et al., 2002). Zilber (1992: 575) shows the microdynamics of new members with other backgrounds in an organization ‘that differ from existing members bring different interpretive frameworks and social definitions of behavior to the organization that act to diminish consensus and unquestioning adherence to taken-for-granted practices.’

Change agents can successfully overcome resistance (Brouwer & Biermann, 2011) to execute new tasks. Extensive literature across disciplines documents change agents (Mintrom & Norman, 2009). It is clear, therefore, that agency can be crucial in accounting for policy changes necessary to influence the rate and direction of change (Capano & Galanti, 2018). There are different change agent branches in the literature¹; they are defined within radically divergent contexts (Huitema et al., 2011). Intermediaries, for example, can be actors or institutions working within any societal transition domain, whereas inside activists are specific to government administration.

Although these conceptual understandings of change agents all describe change agents who possess some ‘knowledge, power, tenacity, and luck to exploit key opportunities’ (Cairney, 2018: 201), none of these concepts were designed to incorporate the restrictiveness imposed by traditions in public administration on civil servants’ room for maneuver. This means change agents’ willingness and motivation to undertake activities deviating from the norm can radically differ from restricted civil servants. Capano and Galanti (2018) foreground actors’ activities, allowing detection and a detailed understanding of successful actors’ tactics. The present research focuses on how actors can counter opposing rationalities, making Capano and Galanti’s approach the most suitable for studying the tactics of entrepreneurial civil servants aiming to realize government transition tasks.

Recognizing the entire variety of entrepreneurial civil servants’ possible tactics is essential to understanding attempts to bypass opposing rationalities. Building on Frisch-Aviram et al. (2019) systematic entrepreneurial policy activities review of 229 peer-reviewed articles and structured by tactic, Table 7 shows a condensed change agents’ activities list complemented with insights from other change agents’ literature.

Figure 4 integrates our discussion on transition tasks, legitimizing traditions in public administration, opposing rationalities, and change agents in a heuristic model. This model presents a lens for studying context-specific and emergent interactions between change agents and the opposing rationalities of incumbents. It helps to understand how entrepreneurial civil servants execute transition tasks despite internal resistance stemming from institutionalized PA frameworks.

Building on the structural phases of the policy cycle of Lasswell (1956) and the input-output model with a feedback loop introduced by Easton (1957), our model has four components. These are 1) initial tactics of change agents, 2) opposition and contestation, 3) adjusted tactics due to the feedback loop, and 4) effects. The rationalities behind the aims of change agents and their internal opposition can be seen as existing policy streams within a public organization (see Kingdon, 1984).

1 For instance: policy entrepreneurs (Frisch Aviram et al., 2019; Mintrom & Norman, 2009); institutional entrepreneurs (Battilana et al., 2009); brokers (Stovel & Shaw, 2012); intermediaries (Kivimaa et al., 2019); inside activists (Hysing & Olsson, 2018); champions (Sergeeva, 2016); deliberative practitioners (Forester, 1999).

The model highlights the dynamics between 1) entrepreneurial civil servants executing change agent tactics in pursuit of realizing transition tasks and 2) opposition obstructing these changes. The heuristic model presents an understanding of the clash between change agents and adversaries to change. Contestation is expected when entrepreneurial change agents see transformative projects as necessary but are opposed by institutional rules and norms.

Table 7) *Change agents' tactics, adapted from Frisch-Aviram et al. (2019).*

Tactics	Description
Problem-solution framing	Frame a problem politically and culturally acceptable and desirable and offer a solution.
Venue shopping to influence the policy-making process	Move decision-making authority to a new policy arena. For instance, divide policy development into stages, influence the planning, and evaluate policies.
Using symbolism	Use stories, images, and symbols to stir passion, capture public attention, and build support.
Risk-taking	Use (subversive) actions with potential price entrepreneurship.
Information dissemination	Use information strategically among actors in the policy process.
Team leadership	Lead policy networks.
Stimulating beneficiaries	Praising policy's benefits to different audiences.
Forge intra-, inter-organizational and cross-sectoral partnerships	Create networks with actors from different sectors and organizations among politicians, bureaucrats, private and third-sector players.
Involve civic engagement	Organize the public to be active in policy issues.
Political activation	Become active in policy decision-making and politics.
Gathering evidence to show a policy's utility	Engage with others to demonstrate a policy proposal's workability.

When confronted with contestation, adaptable change agents adjust their tactics to retry and generate new opportunities for advancing transition tasks. This adjustment creates another round of contestation when faced with opposing rationalities. Thus, the transformative project's character evolves via tactical adjustments and readjustments triggered by successive rounds of contestation. Strong opposition, external events, and adjusted tactics change the contestation structure. Following Teisman (2000: 944), we structure these empirical contestation triggers as rounds with 'starting and concluding points of a certain period,' claiming that a policy process is more accurately described as a series of rounds, all with their own dynamics. Each round can have three potential effects: it leads to transition task execution, it does not lead to execution, or a negotiated middle way is found.

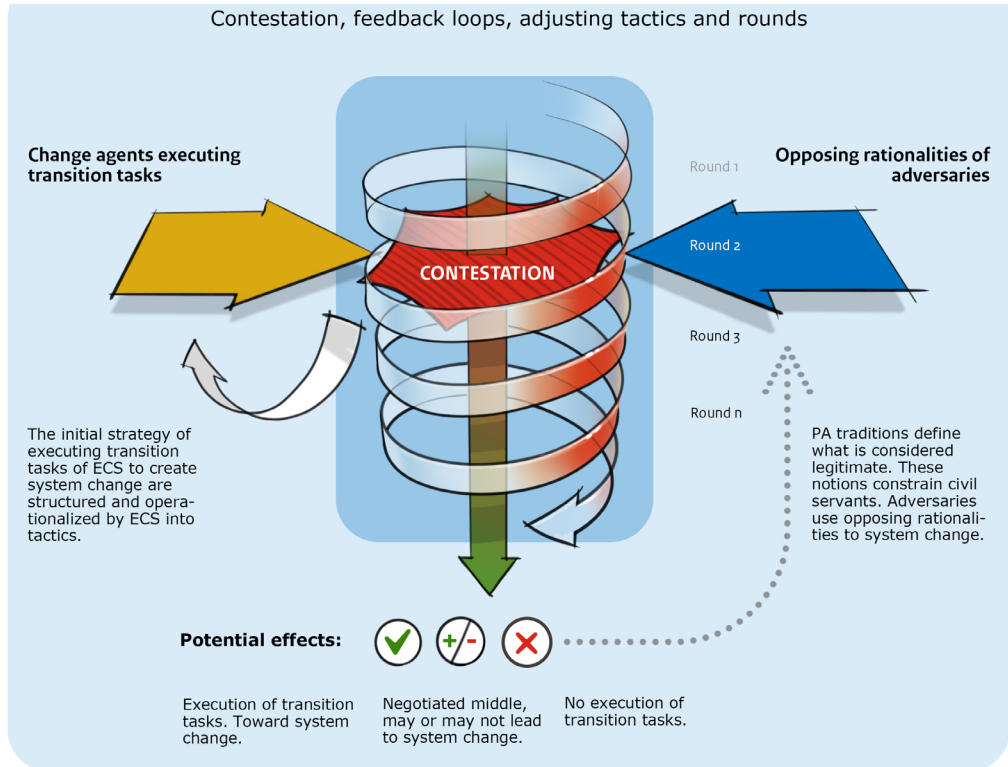


Figure 4: Dynamics between Entrepreneurial Change Agents' tactics and opposing rationalities. The first feedback loop (yellow arrow) depicts tactics adjustment; change agents understand their previous tactic triggered contestation and search for alternative ways to counter the opposition. The second loop maintains the current regime stabilization if, after subsequent rounds, no transition tasks are executed.

3. Method

Since few studies report on entrepreneurial civil servants pursuing transition tasks within their opposing environment, we considered an exploratory, illustrative case study approach beneficial. It helps inductively identify new variables, hypotheses, and causal paths. We selected the Dutch Infrastructure and Water Management (I&W) 'Mobility as a Service'-team (MaaS-team) as a single case study due to its potentially transformative impact on the mobility system. This team was installed to work towards functioning pilots to explore MaaS' feasibility. They, therefore, had an entrepreneurial as well as a steering role.

Mobility as a Service (MaaS) is categorized as a disruptive niche innovation that stimulates mobility systems transformation (Kivimaa & Rogge, 2022) and as 'a possible game-changer' (Audouin & Finger, 2018: 25). It promises transformative change in the mobility sector by providing seamless door-to-door (public) mobility services, which would decrease CO₂ emissions and the need for personal cars. Such ambition requires a mobility transition integrating all modalities' layers of data and algorithms (Audouin & Finger, 2018). Incremental change by the Ministry seems

insufficient to keep up with the rapidly digitalizing mobility domain, creating many opportunities for newcomers and incumbents alike.

I&W defines MaaS as the provision of multimodal, demand-driven mobility services, with personalized travel options offered to customers via a digital platform and real-time travel information, including payment and transaction settlement (Ministry I&W, 2021). This definition means all the Ministries' directorates must work together internally and with relevant market parties to determine how MaaS could reshape mobility's future. This case illustrates the dynamics between entrepreneurial civil servants' attempts to build the project and the opposing rationalities of other directorates responsible for the current systems' maintenance. The MaaS case shows transformative attempts by entrepreneurial civil servants to transform the system toward a 'green and smart mobility system'.²

I&W fully cooperated with interviews and provided other data sources. The Ministry already had substantial experience in 'managing' transitions over the last 20 years (Loorbach, 2007) and intended to deepen their transition' understanding via this study. We searched for civil servants who tried to foster societal change within the MaaS project by combining extreme case sampling and snowball sampling. To avoid the 'hero innovator's trap' (Meijer, 2014), we interviewed an array of respondents after consulting the program leader and his two confidants. We targeted both entrepreneurial civil servants and civil servants from other policy units who play various roles at different hierarchical levels.

To prepare the case, we searched ministerial digital archives using the terms: 'MaaS' and 'Mobility as a Service'. The Ministry provided the lead researcher with two hours of training in complex software (Content Manager)³. MaaS-teams records and several meeting sequences came up, including 94 elements about case development or case decisions. We triangulated these sources (memos, reports, as well as formal and informal policy documents) with a LexisNexis media analysis (184 articles in Dutch newspapers between 2014 and September 2021) to get an extensive timeline of essential events and internal decisions. A simplified timeline version was used as a PowerPoint slide structuring the thirteen online interviews.

All relevant actor types were interviewed for this case (n15), including MaaS-team members (5), consultants working for the MaaS-team (2), civil servants and managers of other I&W directorates (4), officials of the legal department (3)⁴ and semi-public transport manager (1). We included MaaS-team adversaries (6) to confirm and deepen the understanding of the tactics used. The interviewees are neither named nor numbered to secure their anonymity on this politically sensitive topic. Interviews were semi-structured and, therefore, adaptable to the specific tactics disclosed. The interviews lasted from 45 to 210 minutes⁵. Since this paper analyzes internal collaboration and decision-making, we explicitly choose not to interview market parties.

2 Dutch Climate Agreement – www.klimaatkoord.nl/mobilititeit.

3 Although the Ministry's documentation is thorough, documents are formalistic and do not display personal opinions, let alone sensitivities or irritations. We complemented the Ministry's documentation with interviews to understand stakeholders' interpretations of the studied tactical dynamics.

4 After sending the concept paper to the respondents for validation, we had an extra conversation with two officials from the legal department in which they elaborated on the situation with the GDPR.

5 The interview time varies because participants entered and left the project at different moments.

MaaS-team members were asked what arguments were used to oppose and resist their project. Adversaries were asked how they perceived strategies and tactics used by the MaaS-team members⁶. Interview data were all transcribed and coded in NVivo. We constantly analyzed the transcripts during the fieldwork and compared them with observations and internal documents to correct subjective respondents' interpretations. We coded key strategies (transition tasks), tactics (both the transitions tasks' operationalization and literatures change agents tactics), opposing rationales (arguments contending tactics used by the MaaS-team or notions indicating resistance), and adjusted tactics (an alteration of the previous tactic after recognizing opposing rationality creates problems for the project) within designated contestation moments.

4. Results

The results are structured in four rounds. Each presents a sequence of critical moments introducing the round, the initial transition aims, and entrepreneurial civil servants' tactics. Next, we recall the rationality of the opposition (based on PA; see Table 6) and document how tactics are adjusted, resulting in an effect (see Figure 4).

Round 1: MaaS-optimism

From the outset of the Maas Project, a MaaS-team member remembered a techno-optimism mindset:

'We heard market parties were eager to provide MaaS services; they could work with what they already had. We had a Silicon-Valleyish feeling of large data sets and smart algorithms adaptable to personal preferences. Who would not want such an app? (MaaS-team member).'

This optimism focused on technology and supporting startups because startups are more adaptable to new realities. They felt much urgency to learn what MaaS could become: 'otherwise, a Google [with all their data and investment power] would take over. It felt like a race against time' (MaaS-team member).

MaaS-team's initial aims and tactics. At this stage, the team's rationale was to discover what MaaS could entail and create healthy competition to avoid monopoly power and loss of government control in the mobility system. The project leader opted for a few scalable national pilots to compare outcomes and prevent a rudimentary monopoly installation to learn as fast as possible. The director-general extended the amount on pragmatic grounds to seven. There are seven mobility regions in the Netherlands; each region was given a pilot matched with a topic different political parties would find interesting, such as social aspects, regional mobility, corporate users, and sustainable mobility (MaaS-team member). This pacifying tactic would safeguard the pilots from future political coalitions. However, it made the consortia facilitating the pilot more vulnerable to specification and technological lock-in due to competitive pressure (consultant MaaS-team).

Opposing rationality. When broad internal support is missing, civil servants are uneasy about uncertainty. New developments can be seen as contingent, arbitrary, and unworthy of reconfiguring existing structures.

⁶ A limitation is the respondents' memory; they had difficulties precisely placing their anecdotes in the five-year timeline, despite our structuring devices. Triangulation of data helped overcome this.

Opposition and contestation. The Ministry's Public Transportation and Railway directorate (PTRD) had other priorities than MaaS due to their daily business' being bound to railway investments, safe level-crossings, international lines, safety, and vibration. PTRD oversees the semi-governmental, state-owned National Railway (NR) company, which holds the concession for the principal network, and is the largest mobility provider in the Netherlands (Intranet I&W, n.d.). The MaaS technology sounded like wishful thinking to PTRD because of its comprehensiveness (civil servants I&W). This perceived urgency disparity between the MaaS-team and PTRD affected the legal department responsible for all ministerial legal matters; they felt not everybody was comfortable with MaaS, making them question its priority. Moreover, they had questions if the Ministry could take responsibility for processing all the data (officials legal department).

Adjusted tactics. To spark interest within PTRD, the MaaS-team members used roundtables and conferences to share white papers with external parties, hoping to create waves in the market and activate their counterparts within. However, this did not work; PTRD did not attend meetings even after repeated invitations. Their opposing rationality was not to favor new parties at the current systems' expense. Reflecting on their approach toward other directorates, another MaaS-team member said: 'I think they found us a bit pushy (MaaS-team member)'. The MaaS-team also shared news articles and commissioned more research to get PTRD's attention, which did not help (MaaS-team member). The lack of response within the organization resulted in the MaaS-team seeing their counterparts at PTRD as 'MaaS non-believers' who 'just' needed to keep trains running normally and did not focus on an integrated mobility system. This absence from other directorates led to the adjusted tactic of hiring external consultants. Because of the previous decade's personnel cuts, hiring external consultants was common practice to fill project teams (MaaS-team member).

Effects. The MaaS-team convinced Minister and Ministry's management to learn from MaaS via pilots and shape these to prevent rudimentary monopoly formation. They, however, lacked broad support within all directorates.

Round 2: Mobility data

After a few months, the project got much more urgent after the cities of Amsterdam and Rotterdam had to deal with Asian companies who tried to conquer the mobility market with free-floating bicycles (Duursma, 2017). The cities soon banished them due to adverse effects on public space. The MaaS-team used this event to highlight that digitization and shared concepts were entering and reforming the mobility domain. They pushed the idea of interoperability between different modalities with data, algorithms, and application programming interfaces. Large platform companies could scale quickly, disrupting the physical sphere. In their eyes, this diagnosis legitimized the more proactive governmental role in this development (MaaS-team member).

MaaS-team's initial aims and tactics. A senior MaaS member explains the team's intent at this moment: 'we were trying to create a level playing field; otherwise, large mobility parties would crush smaller ones' (MaaS-team member). Boosted by the explicit backing from the new coalition agreement, the MaaS-team rapidly implemented an open market consultation. Eighty-five companies showed interest and reacted to 30 consultation questions (Parliamentary letter, 2018a). The market parties agreed government needed to take a proactive role in sharing data to make MaaS work. The MaaS-team created governance structures between the Ministry and the regions to

construct pilot tendering procedures and secure adequate public financing (Memo Ministry I&W, 2018).

Opposing rationality. Destabilizing incumbents feels unethical for civil servants because they fulfill an indispensable role in maintaining the current system.

Opposition and contestation. Although other incumbents participated in the pilots, the NR did not express interest in participating in pilots because of a previous trauma when the Dutch Authority for Consumers and Markets accused NR of power abuse in a tender (NR official). The MaaS-team expected PTRD to address NR to go along with this development, 'but these negotiations are super sensitive between PTRD and NR; there are a hundred dossiers to settle with them' (MaaS-team member). However, the absence of NR, the largest mobility provider and therefore vital for MaaS development in the Netherlands, worried commercial parties. A letter in the leading financial newspaper appeared from the Transdev Netherlands CEO (an international parent transport provider company in the Netherlands) about NR data monopoly and their unwillingness to share traveler data (Clahsen, 2018). NR reacted to these allegations: these commercial parties painted an unconstructive NR image toward the MaaS-team (and thereby the Ministry) out of self-interest to cut away NR's business case (NR official).

Adjusted tactics. The MaaS-team had problems conveying digitalization urgency to PTRD and other involved directorates. They, therefore, targeted external events to create internal attention for their project and adjusted their tactics in partnering up with mainly commercial MaaS parties. However, this tactic made them a lobbying instrument for commercial parties in NR's eyes.

Effects. The MaaS-team focused its tactics on creating a level playing field and succeeded in sparking broad interest in the market. These interactions, however, destabilized the largest state-owned mobility provider's position, increasing their opposition to the MaaS pilots.

Round 3: Escalation in the ecosystem

The MaaS-team reported via the Minister to Parliament an overwhelming interest for MaaS in the market, and 41 wide-ranging consortia signed up for the tender, from which 24 were admitted to the framework contract, meaning these could compete to be the MaaS provider for one or more pilots in the region (Parliamentary letter, 2018b). The team gave direction by trying to understand market development to optimize policy objectives and reconfigure the market if needed. Although the aim was to explore opportunities, colleagues of other policy units understood this as destabilizing efforts by reducing support for the dominant regime.

In early 2019, the estrangement between the MaaS-team and the NR intensified. The four largest semi-public transport providers decided to start their own MaaS platform, RiVier (Memo Ministry I&W, 2019). The NR felt threatened as they perceived the commercial parties' intentions as cherry-picking and monopolistic. 'These commercial parties wanted to resell our subscriptions without the risks and costs we take and make for this' (NR official). NR saw RiVier as an attempt to put public value in a pilot and as their societal role to realize MaaS for the total accessibility in the Netherlands (ibid). The RiVier development alarmed commercial MaaS parties, and the Authority for Consumers and Markets was concerned about monopoly issues (ACM, 2021). Commercial parties immediately informed the MaaS-project leader, accusing NR of illegally using its market domination.

MaaS-team's initial aims and tactics. At this stage, the Minister positioned MaaS as the mobility transition facilitator in the parliamentary letter (Parliamentary letter, 2018b). This positioning implies a proactive role from the government, intending to create urgency within the organization (civil servant I&W). The MaaS-team expected a proactive role from PTRD to keep NR on board.

Opposing rationality. Destabilizing the old regime can seem unwanted by society and politics and cost-inefficient. Furthermore, incumbents are part of the governance structure and therefore influence decision-making.

Opposition and contestation. In PTRD's eyes, the MaaS-team lobbied for drastic changes for commercial parties, ignoring the current concession constellation. This controversial approach toward everyday operations led other policymakers to dislike the MaaS-team (PTRD official). It was hard for the Ministry to intervene in the concession with NR if, by doing this, NR's business case would change. 'This is the heart of the [mobility-] system. The concession systematic has built-in expected returns the Finance Ministry has already booked as income for the upcoming decade. This dynamic hinders policy reforms. The discussion about MaaS is suddenly at the policy discussion's core (civil servant I&W)'. Due to this, higher management did not escalate orders on NR.

Adjusted tactics. 'When we learned the NR had started its own MaaS platform, the alarm bell went off' (MaaS-team member). The MaaS-team was afraid RiVier would create a monopoly, as NR and the other RiVier parties combined to make 80% of all current mobility transactions. The MaaS-project leader remembers heated conversations between the director-general and himself with the NR management and commercial parties to prevent any winner-takes-all situation and advocated standardized data sharing and ticketing (MaaS-team member). The main contested issue was NR's discount (40%), used by them to manage rush hour and bind customers; they were unwilling to extend this discount to MaaS providers who needed to resell NR tickets. If these issues were not solved, MaaS would not work as a total solution (MaaS-team member).

Because PTRD was primarily absent in this conflict, the MaaS-team proactively installed an account manager within PTRD. This person brought MaaS knowledge into their current discussions and processes, leading to a much-improved relationship, cross-fertilization, mutual understanding, and a place at the table to write necessities for data sharing in the new concession (consultant MaaS-team). This adjustment gave direction within the situation structurally via these concessions (MaaS-team member). Concerning RiVier, the MaaS-team used different tactics: in the letter to Parliament (Parliamentary letter, 2019), it expressed concerns that traditional mobility providers would not share their data, showing commercial parties they addressed the issue (MaaS-team member). Another way to prevent RiVier from becoming a monopoly was that market parties were in touch with the Authority for Consumers and Markets (MaaS-team member). Second, they would stay in close contact with the NR to avoid alienation (consultant MaaS-team). Thirdly, working with PTRD, the MaaS-team initiated MaaS-worthiness, a new set of guiding principles for future public transport concessions about selling tickets and exchanging data. This collaborative 'soft' intervention greatly impacted the reconfiguration of the mobility system (MaaS-team member).

Effects. The MaaS-team understood that the MaaS invention alone was insufficient to make a sustainable impact. It needed to be incorporated into the system—efforts to change the concession system created much resistance in the ecosystem.

Round 4: The legal predicament

The MaaS-team continued building a more integrated ‘MaaS-ecosystem’ in 2019, with parties willing to share data via specific APIs and learn about optimized traffic flows and travelers’ behavior. After much discussion, RiVier joined this ecosystem, endorsing MaaS-pilots’ principles, mainly because Authority for Consumers and Markets publicly denounced their position. When Covid19 emerged, public transportation diminished. Because commercial parties were struggling, creating MaaS apps and unlocking all mobility options was no longer a priority, delaying the project. Despite Covid19, the first pilot went live in September 2020 in the city of Utrecht. Other regions followed the following year.

MaaS-team’s initial aims and tactics. Going live was vital to MaaS-team’s strategy; the data collected needed to be analyzed to optimize and steer specific public values. Commercial parties designated the Ministry as the only party able to collect this data from a neutral perspective to fill the learning environment (an extensive database with travelers’ data from all mobility providers). However, the legal department submitted fundamental comments concerning the legal possibility for the Ministry to undertake the role responsible for processing the data according to the GDPR duties (officials legal department). A MaaS-team member indicated: ‘The legal saga is a sad story for MaaS. The pilot phase is over in a year, and we could not collect nor save any data’ (consultant MaaS-team), which was the whole pilot’s purpose.

Opposing rationality. Civil servants prioritize not jeopardizing their ministers. Furthermore, they firmly check the actions’ legality.

Opposition and contestation. Although the MaaS-team tactic initially kept all relevant directorates involved in an early stage, their need for more intensive legal advice on various legal aspects of the MaaS case than the legal department could provide led to their decision to hire external advisers. Miscommunication between the MaaS-team and the legal department led to a misunderstanding in a late stage of the process. The solitary tactics estranged the legal department (official legal department), which directly advises the Minister. The MaaS-project leader interprets: ‘If they say to her: “it is legally not correct,” I go down in flames because it is their expertise. It is risk aversion, hardly content driven’ (MaaS-team member). The legal department contends this qualification and states: ‘there were fundamental objections regarding the lawfulness of the method of processing personal data proposed by the project group,’ which could cause the Minister to receive reprimands and fines by the Dutch Supervisory Authority ... ‘such legal considerations are highly content driven’ (officials legal department).

Adjusted tactics. The commercial MaaS operators were unhappy with the legal directorates’ analyses because they needed the Ministry to play this different role and asked the MaaS-team to get a second opinion. Two lawyers outside the Ministry conducted the second opinion, commissioned by the MaaS-team, and endorsed the difficulty with the legal basis for lawfully processing and GDPR but suggested exploring another legal basis for the learning environment (official legal department).

Effects. Due to objections around the legality of the construct,, the MaaS-team had to scale down their learning environment under pressure.

After five years, all pilots were operational, with eight MaaS apps downloadable in app stores. However, ticketing problems were not resolved, and data collected by the pilots were not analyzed in the learning environment. In autumn 2021, the team leader decided that because the pilots had started, it would be best to bring the MaaS project into the Ministry’s operating core because changing policy based on the outcomes of the pilots was the next step.

5. Comparative rounds analysis

The case study illustrates how the heuristic rounds-model can analyze the dynamics between change tactics and opposing rationalities; different role perceptions are at the root of the tensions we examined in this case study. On the one hand, the mobility domain is quickly changing, requiring the Ministry to adapt, guide, and support this change to prevent new monopolies and seize opportunities to create new public value. On the other hand, the Ministry is responsible for the entire mobility system, which cannot be destabilized for pilots with uncertain outcomes when accessibility, reliability, and transparency are at stake and risk discomforting the Minister. The contestation dynamics between these two perceptions can be seen when the MaaS-team claimed MaaS to be the potential transformer of ‘the mobility systems heart’ with data, integrating different modalities and introducing new market parties. Such a system change triggers all kinds of opposition within the current regime, explaining why this case has so many facets. The heuristic rounds-model helps understand the ongoing tactical work of entrepreneurial civil servants aiming to execute transition tasks within the context of legitimizing PA traditions; see Table 8 for an overview.



Table 8 – Dynamics of the heuristic rounds-model for the Dutch MaaS case (with tactics in italics)

Round 1 – MaaS optimism	
Initial tactics	The MaaS-team used stories about looming tech giants’ monopolies to create urgency to act and capture attention to legitimize the given direction (<i>‘using symbolism’ tactic</i>). They framed the MaaS project as ‘pilots to learn from,’ aiming to optimize mobility based on data and reduce resistance (<i>problem-solution framing</i>). Their team leadership started pilots to bring mobility-related problems together with regional governments and new market developments. They actively formed a market demand.
Opposition and contestation	Civil servants of other directorates did not believe in the MaaS’ feasibility and did not support the change.
Adjusted tactics	The MaaS-team hired external consultants and <i>activated and informed an ecosystem</i> outside the Ministry to counter the lack of support.
Effects	Pilots were initiated but lacked broad internal support.

Round 2 – Mobility data

Initial tactics

The MaaS team used *political activation* by using the frame of MaaS from the coalition agreement. They encouraged companies to form consortia, forming new networks (*forge partnerships*). Their main focus was to build a level-playing field for startups, incumbents, and commercial parties from other domains (*stimulating beneficiaries*).

Opposition and contestation	Higher management temporized and was partly unwilling to create too much instability in the system by instructing semi-public mobility providers to participate in the pilots.
Adjusted tactics	MaaS-team focused on the ecosystem instead of the internal organization by partnering with commercial MaaS-parties.
Effects	MaaS-team created broad interest in the market and subsequently became a lobbying instrument for commercial parties in their colleagues' eyes.

Round 3 – Escalation in the ecosystem

Initial tactics	The MaaS-team positioned MaaS more firmly to acquire resources (<i>problem-solution framing</i>). The MaaS-team moved its development via MaaS-worthiness principles to concession negotiations and data regulation domain to influence policy-making (<i>Venue Shopping</i>).
Opposition and contestation	The fundamental interventions of the MaaS-team led to a semi-public MaaS providers' counter initiative, securing their position in the market.
Adjusted tactics	To keep supporting commercial MaaS-providers, the MaaS-team had to destabilize current configurations. To ensure all parties would abide by data sharing, the MaaS-team advised activating the Authority of Consumers and Markets at risk of estranging National Railways (<i>risk-taking</i>). Furthermore, they sent letters to Parliament, positioning MaaS and signaling parties to comply (<i>disseminate information</i>).
Effects	The MaaS-team guided the discussion toward integrating the innovation into the system, creating much resistance.

Round 4 – The legal predicament

Initial tactics	The pilots aimed to collect data and analyze this in the learning environment to gather evidence for MaaS (<i>Gathering evidence to show policy's utility</i>).
Opposition and contestation	The legal department firmly repeatedly posed questions about the actions' legality.
Adjusted tactics	The MaaS-team conducted a second opinion of the legal directorates' assessment.
Effects	The MaaS-team had to scale down ambitions with the learning environment.

6. Discussion

This paper aimed to bring transition literature's considerations for policy-making, i.e., transition tasks (Braams et al., 2021), into the Public Administration's interdisciplinary congregate to create a heuristic rounds-model able to study the contestation between entrepreneurial civil servants championing transition tasks and the intraministerial opposition rationalities they face. In essence, this is a clash between the normative perspectives on public values of transition literature and the transition tasks it postulates and PA, which prescribes what role civil servants should play. Applied to the Dutch case of MaaS, our model shows the extensive contestation dynamics unfolding between proponents and opponents of governmental transition tasks. This level of contestation illustrates the need for transition literature to more meaningfully connect with PA's normative and democratic principles and values, agency within public organizations, policy and organizational models, and for PA to relate its concepts like 'emergence' to transition literature's ideas of directionality, niches and phasing out unsustainable structures to prevent inertia within highly needed transitions or

technocratic transition tendencies in democratic societies. A critical dynamic shown by the rounds-model is the tactics' temporariness. They can be helpful in a particular round but backfire in the next. For example, hiring consultants or focusing on the external ecosystem solves the continuation problem when other directorates are not committed. It, however, creates distance between directorates and limits the need for supportive internal network building, which can be crucial in a subsequent phase. Instances like this may not need a radical governmental redesign but skilled change agents. From the MaaS case, we induce the following tentative insight for skill development in future tactical work. Future research could identify comparable insights for entrepreneurial civil servants working on transitions.

From a transition perspective, anticipative capacity could help prepare for change within public organizations. Change agents can build scaffolds⁷ between the old and the new, thereby softening potential resistance. Tentative insights hint in such a direction, creating reflexivity in an open system, with a tolerant view toward unorthodox information benefits transition in ministries. However, from a traditional PA perspective, demanding drastic changes quickly in the system's core without trusted evidence cannot be accepted. To activate and change the attitude of the internal organization, the MaaS-team made waves in the external ecosystem. What is considered 'the system' is an implicit battle between the different rationalities; is the system an internally focused, autonomous, and rational hierarchy or an organic ecosystem, responsive and with fuzzy boundaries (Porter, 2006)? However, working outside-in can backfire when the internal organization feels ignored and is needed to change existing structures. This dynamic may be the transformation's tragedy within public organizations; the need to disrupt the current system isolates the entrepreneurial civil servant.

Three points stand out in this paper. First, is the experienced resistance opposing rationality, a matter of conflicting interest, or a legitimate attempt to keep the gate closed towards unfavorable influences? Second, the transition concept of the regime seems to inherently exclude novel practices, which are, as a consequence, often unnoticed. We propose unpacking niche practices within the regime. Developing a new understanding of innovations within regimes could help overcome the third point, the difficulty of integrating successful experiments in the regime.

The question can arise, is the resistance of PTRD based on 'opposing rationalities,' or is it a matter of conflicting interests or even legitimate gatekeeping? Is MaaS a threat to a vested interest in the public railway? As opposing rationalities contain undifferentiated logics or sticking points hindering transition tasks, they are based on other legitimate assumptions, delegitimizing the innovation. Arguments on a level-playing field, continuity, and cost efficiency are legitimate remarks but are part of the opposing rationale and can be an occasional argument used for conflicting interests. The contestation was resolved when the discussion evolved into working together on future proving standardization and concessions. This settlement may indicate that the underlying conditions of PTRD's rationale were met when the frame used was not too disruptive anymore. A disruptive urgency frame can, when not accepted, disqualify the project. Such messages are generally not understood within ministries because unorthodox, codified information is considered unplanned and unexpected (Cunha et al., 2003) and therefore shunned; however, it is essential for new information to emerge (Van de Walle & Vogelaar, 2012). The reflex not to make drastic changes because of uncertain outcomes from pilots is understandable; these are highly susceptible to legal action or popular disapproval (Van de Walle & Vogelaar, 2012). It seems helpful to resist in the resisting regime by installing an account manager, which helps relieve workload and change

7 See forthcoming work of Maessen, Lauche and Van der Lugt.

the systems' basic configurations to benefit innovation. Such incremental steps (Termeer & Dewulf, 2019) can mitigate tension between new stimuli and old habits.

The multi-level perspective is one of the central heuristics in the transition literature. It distinguishes three levels: 1) macro trends in the landscape, 2) dominant practices and institutions in the regime, and 3) novel practices in the niches. Macrotrends can disrupt the homeostasis of the regime, giving space for innovations (Geels, 2005; Avelino, 2017). The regime exists in policies, markets, industry, culture, science, and technology. It is conservative by nature and typically protects incumbents' underlying norms and interests. Therefore, civil servants are usually seen as part of the regime because of mutual dependencies (Geels, 2014). Such statements generalize and black-box civil service as a single actor without internal dynamics or agency. However, as previously empirically described, there are niches within the civil service. The MaaS-team, for example, positioned MaaS both inside and outside the Ministry. They kept the political and policy regime out by initiating seven pilots and preventing capture by political interests. It would be interesting to explore such 'regime niches,' which may be hard to maintain or protect because of their proximity to stabilizing institutions. We expect such phenomena to be abundantly available as creating such niches is increasingly advised to governments (Diercks et al., 2020) and fits well with Public Administration ideas of emergence (Van de Walle and Vogelaar, 2010) and energetic society (Hajer, 2011).

Torrens and Von Wirths (2021) critically reflect on the new mode of governing through experimentation, situating a problem by design in a temporary, controlled environment with specific learning objectives. Such an approach, by definition, causes problems bringing the learnings back in an uncertain, wicked, and ambiguous polity. Civil servants experience one of the core scientific dilemmas – working on internal or external validity. Transition literature stresses that experimentation should cooccur with a shift in the landscape; otherwise, the outcomes will not influence the regime (*ibid*). However, it could be that niches within regimes have more possibilities to create institutional change with their experimentation (Fuenfschilling et al., 2019). The MaaS pilots hint at structural changes in data policy and concession systematic laying groundwork for future digitalization innovations. Such changes were necessary because all pilots had to aim to scale up to nationwide coverage. The MaaS project may be a case that brought institutional blockades in the scope, and with that so much complexity and uncertainty, it had to scale down its ambitions. A high-level civil servant sighted in an interview: 'we did not demarcate the goal of the pilots enough'. The diffusion of experimentation outcomes in a complex system should thus, early on, understand its different follow-up scaling processes more distinctly, including institutional and constitutional change (Van Hout et al., forthcoming).

7. Conclusion

In synthesizing several components of influential policy models (Easton, 1957; Kingdon, 1984; Lasswell, 1956; Teisman, 2000) with tasks for government prescribed by transition literature (Borrás and Edler, 2020; Hekkert et al., 2007; Rogge & Reichardt, 2016), we studied the opposing roles within ministries in grand societal challenges. We open the black box of government dynamics in transition projects and provide an understanding of seemingly contradicting courses of action. Although it was too early to assess if a general normative change occurred, this paper has shown how the government's realization of tasks aimed at facilitating societal transition should be understood as an internal political struggle between opposing rationalities. This struggle can be

understood as a series of contestations in which tactics are applied, adjusted, and readjusted to push the realization of transition tasks forward in the government organization.

This in-depth illustrative study shows how the model can be used to provide a rich empirical understanding of the complex microdynamics of realizing transition tasks in government. The study has provided insight into dynamics that play a role in these struggles between entrepreneurial civil servants and opposing rationalities. To work with these struggles, we identified tentative insights on the trade-offs in their future tactical work regarding creating abundance in design; making waves; taking small, helpful steps; and introducing codified unorthodox information in traditional ministries.

“I think you need a lot of context to seriously examine anything”

Gus Haynes in *The Wire* (S2E05)

5. Institutional conditions for governments working on sustainability transitions

Highlights

- How to create the institutional conditions for a government working on sustainability transitions?
- This chapter contains results from design research in the Dutch Ministry of Infrastructure
- We observed civil servants, in design groups, discuss institutional blockades and generate possible solutions.
- This chapter identifies twelve preliminary institutional conditions for a government working on sustainability transitions and four dimension for a Transformative Government to improve its transformative capacity.

Abstract

The literature on societal transitions offers many policy recommendations. The implicit assumption is that civil servants can follow these recommendations and design policies to accelerate transitions. This article shows that governmental transformation is needed to enable civil servants to act upon these, which is currently far from straightforward due to institutional constraints. We used a research-by-design approach with four design groups of civil servants working on transitions within a Dutch ministry. By studying how they interacted and designed alternative scenarios for resolving real-life, deeply rooted institutional constraints, we identified twelve preliminary institutional conditions for a government working on sustainability transitions. The institutional conditions relate to working with uncertainty, implementing operational management, implementing interdependent stewardship, and detaching from the current system.

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1. Introduction

Governments are key agents in steering and accelerating societal transitions. To overcome societal challenges like climate change, scholars of societal transitions, therefore, frequently close their articles with prescriptions of policy recommendations for governments and civil servants. We define the actions by civil servants to follow up on these societal transition-based recommendations as transition tasks. Examples of such tasks are agenda-setting (Kuhlmann and Rip, 2018), coordinating between transition stakeholders (Weber and Rohrer, 2012; Hekkert et al., 2020), creating markets for low-carbon technology (Edler and Fagerberg, 2017; Gomes and Silva, 2022), accelerating transitions through phasing-out unsustainable practices (Hebinck, 2022), and creating new capabilities (Borrás and Edler, 2020).

Pursuing these transition tasks by civil servants is challenging because they do not align with the dominant institutional logics ingrained in public organizations' everyday praxis (see Fuenfschilling and Truffer, 2014). The Public Administration literature characterizes policy traditions that have dominated the policy rationale in many western democratic societies in the last decades (Strange, 1996; Bevir, 2010) as a 'hands-off' approach (New Public Management) and an 'all actors around the table' paradigm (New Public Governance). These traditions determine which actions and arguments are considered acceptable when civil servants decide on their roles and actions (Stout, 2013). Transitions literature seems to call for a more interventionist approach. In this approach government is a central agent in overcoming transformative system failures to resolve societal problems (Weber and Rohrer, 2012; Wanzenböck et al., 2020; Robinson and Mazzucato, 2019). Thus, while governments are called upon to be central actors in facilitating highly needed socio-technical transitions (Weber and Rohrer, 2012; Borrás and Edler, 2020), they are burdened with institutional inertia stemming from a lack of accepted models advising civil servants on how to undertake these transformations.

The institutional inertia stems from public organizations containing administrative configurations made for stability, not system change. Civil servants who aim at system change, therefore, meet institutionalized opposition (Braams et al., 2022). In other words, the mismatch between Public Administration traditions and transition thinking creates restrictive legitimacy mechanisms for civil servants to pursue transition tasks (Bourgon, 2011; Braams et al., 2021; Stout, 2013), explaining why they are often not successful (De Geus, 2020). Therefore, a new transformative rationale for civil servants may be needed to legitimize the execution of tasks suggested by transition scholars.

Braams et al. (2021) argue that Public Administration traditions lie underneath the institutional constraints experienced by civil servants who try to execute these transition tasks. As Public Administration is both prescriptive of and descriptive toward government, its dominant rationales determine what actions are considered legitimate. PA traditions currently fail to understand or model civil servants working on transition dynamics as they were not designed for system change. Grin (2012: 4) argues that because input and output legitimacy of government actions are hard to realize due to too long time horizons, sustainability 'transitions are unlikely to result from traditional, democratically legitimated governmental action'.

We argue that civil servants need favorable institutional conditions to work based on a transformative rationale. Understanding and anticipating potential constraints is essential to increase the probability of successfully finding such conditions. When institutional constraints to transformative change can be overcome and combined with a legitimizing transformative Public Administrative paradigm that repositions the role of civil servants, governments may be better capable of being a central actors in sustainability transitions, as many transition scholars propose.

We designed to find new specific interventions for civil servants, but from this, identify broader underlying constraints.

This article aims to identify (1) how civil servants working on transition tasks experience constraints resulting from dominant legitimation rationales and (2) which institutional conditions can help civil servants to tackle these constraints and work on transition tasks. Guided by the research-through-design method (see, for example, Zimmerman et al., 2007), this article analyzes four conversations groups of civil servants had about their experienced constraints in executing transition tasks. The method disengages respondents from their daily routine and, by doing so, foregrounds more general conditions. By understanding their often implicit, underlying problem space, some root causes appear that hamper civil servants in engaging in transition tasks. We present a first attempt at combining the tacit knowledge of civil servants in a design setting with insights from Transition Literature and Public Administration. New to the Transition Literature, the research-through-design approach engages in a creative design process with respondents to explore problems and opportunities while uncovering their experiences, frustrations, and fears in a safe, partly fictional environment (Bason, 2017). Because the participants feel freer to contribute, they may suggest favorable institutional conditions appear, which are at the moment not possible. These stories thus provide insights into the comprehensive and immersive change needed within the civil service.

We structure the theory and results of this article by using the main steps of design research. The theory section is subdivided into 1) exploring the problem space of constraints for executing transition tasks and 2) generating alternative scenarios by creating the institutional conditions that provide space for implementing the transition. Afterward, we introduce our design method. The result section presents four conversations about the participants' specific problem space, in which they generated alternative solutions. We reflected on these themes and formulated new critical dimensions for a *Transformative Government*. We then present some preliminarily favorable institutional conditions that may help government and civil service undertake transition tasks.

5

2. Theory

2.1 Exploring the problem space – transitions require institutional reconfiguration.

Societal transitions require fundamental changes in deeply-rooted policy regimes, with their persistent and rigid structures and customs. Exploring the problem space of public organizations contributing to transitions requires an agency perspective, such as institutional work. The literature on institutional work describes individuals as embedded agents in a 'permanent recursive and dialectical interaction between agency and institutions' (Lawrence et al., 2011, 55). It focuses on the tacit understanding of practitioners' day-to-day work (e.g., their mental categories, embodied practices, and social organization) and how they recognize, locate and implement this understanding into actions shaping future possibilities (Emirbayer & Misch, 1998).

Within policy regimes, civil servants' behavior is coordinated and guided by rules, beliefs, norms, and practices (Fuenfschilling and Truffer, 2014). Individuals, in most cases, just reproduce these institutional structures but, in some cases, also can operate intentionally and strategically to change or disrupt their context (Lawrence et al., 2011). Institutional work helps to understand how and why civil servants 'interpret, translate, transpose, edit and recombine institutions' (Lawrence et al., 2011, 55) and challenge their organizations by initiating change to dismantle existing structures (Fuenfschilling, 2017).

Changing the policy regime from a transition perspective disrupts the institutional configuration of public organizations; for instance, as a transition dictates a new hierarchy of overarching public values, ministries must work beyond their existing practices. Such changes might bring new collective meaning-making processes (Deephouse and Suchman, 2008) based on new premises and logics, which confront the existing hegemonic logics (Dacin et al., 2002). A new logic may reshape the game's rules on redistributing power and status (Thornton and Ocasio, 2008). It may coexist and complement the pre-existing logic but can also compete (Fuenfschilling and Truffer, 2014).

The deeply rooted institutional logics in government agencies are not favorable for engaging in transition tasks. The institutions that dominate government agencies have been set in place through implementing and maintaining normative traditions over the last 100 years (Stoker, 2016; Stout, 2013). In a democratic society, these institutional structures are established as checks and balances to secure the individual rights of citizens. Examples of these institutional structures are: 1) the rules to protect individuals against possible state arbitrariness, 2) rules to ensure expedience and legality, or 3) rules that prescribe that acting is only possible with broad societal support. These rules become constraints that prevent change agents in public institutions from countering dominant logics and attaining the required legitimacy, resources, and network capital. Still, these rules should also be considered rigorously executed democratic principles (Braams et al., 2022). However, seen as constraints, they also hinder change and restrict the administrative potential to guide transitions.

Change agents in government agencies willing to execute transition tasks are pushed back by their colleagues, who are backed by institutional conditions erected on current democratic principles (Swyngedouw, 2010; De Geus, 2022; Braams, 2023). Their transition narratives thus collide with existing rules, beliefs, norms, and practices that maintain stability. This dialectic relationship between change and stability is recognized within Transition Literature (Köhler et al., 2019). However, Transition Literature is scarcely sensitive to civil servants working in an administrative context where appeals to urgency and necessity are not seen as legitimate claims. Essentially it is a contestation between urgent and necessary transformative change and democratic principles aimed at stability in highly contingent, contested, contextual, and wicked situations (Head and Alford, 2015; Wanzenböck et al., 2020).

2.2 Generating new scenarios in the solution space

An agency perspective is crucial to understand a governmental organization's internal change dynamics. It avoids seeing a government as a single actor that achieves public values only through deliberation and resists internal subordination (Verhoeven & Duyvendak, 2017). Although civil servants are, per definition, restricted by democratic norms, change agents within the civil service have innovative agency when they work on societal transitions. There are no official procedures yet to criticize their output (Mair and Marti, 2009), so they work in relative institutional voids (Hajer, 2003). Several authors have tried to understand these actors, who position themselves on the borderline of working with internal procedures while allowing disruptive change into the organization (see Verhoeven & Duyvendak, 2017 on governmental activism; Hysing and Olson, 2018 on green inside activists; Pettinichio, 2012 on institutional activists; and Braams et al., 2023 on entrepreneurial civil servants). These concepts introduced by these authors break with a clear distinction between actors working from either inside or outside the civil service when explaining governmental actions (Pettinichio, 2012), which may be more prevalent when governments try to steer a transition (Braams et al., 2023). These different strands of change agents share common challenges in attaining legitimacy, resources, and network capital (Pel et al., 2018).

There is a need to understand both the capacities of change agents and their resisting institutional constraints. Institutional conditions may need to be altered for new practices to be enacted by civil servants. Braams et al. (2023) modeled the internal resistance within public organizations when change agents work on transitions. They showed that internal opposition could be of such force that the execution of transition tasks cannot proceed successfully (ibid). However, public institutions must also conform to changes in their surrounding and adjust their structures (Battilana and D'Aunno, 2009). New practices need favorable organizational characteristics for executing transition tasks, as existing structures can be too pervasive to allow change.

Battilana and D'Aunno (2009) describe three dimensions of institutional work: creating, maintaining, and disrupting institutions. Change agents mainly act by creating and disrupting institutions. Conversely, opposition to transformative change focuses on maintaining institutions by repairing and defending the current situation (Battilana and D'Aunno, 2009). Higher-status organizations, such as ministries, are more inclined to the maintenance of the status quo (ibid). Organizational-level institutional conditions for change lie in the configuration of structures and practices (Greenwood and Suddaby, 2006). These may be found in interspaces between organizations using weaker networks (Battilana and D'Aunno, 2009).

From a transition perspective, countering the pervasive maintenance work demands changes from the most fundamental institutional aspect of organizations, such as beliefs, leadership, organizational set-up, cultivated culture, and the opportunity for agency and discretion. To identify institutional conditions that help civil servants work on transition tasks through a transformative perspective, we organized four design groups in which civil servants came up with possible institutional conditions that favor new practices.

5

3. Method

3.1 Research-by-design

The institutional conditions which can help civil servants work on transition tasks can be studied when researchers take a design perspective (Zimmerman et al., 2007; Roggema, 2017). Instead of starting hypothesizing from an analytical knowledge base as a researcher, as is usually the case, design approaches incorporate user engagement and creativity (Romme and Meijer, 2020, Zimmerman, 2007), exploring via proposed artifacts¹, and creating new preferred states beyond the current body of knowledge and institutional logics (Roggema, 2017). Bason (2017: 4) defines this approach as a 'systematic, creative process that engages people in exploring problems and opportunities, developing new ideas, before visualizing and testing new solutions'.

Research-by-design is described as a conversation through iterative doodling in a specific context where novelty can arise (Roggema, 2017). Design researchers report on the results of interventions in the design groups² as they observe the present but explore situations that do not yet exist (Bason, 2017: 91). Our design facilitated exploring new possibilities to work in a relative

- 1 Desirable and attractive design output such as a visual expression, service or product created to physically and emotionally engage with experiences (Bason, 2017).
- 2 Design groups go beyond 'normal' focus groups (defined as a 'carefully planned series of discussions designed to obtain perceptions on a defined area of interest in a permissive, non-threatening environment,' Burnham et al., 2008: 129), by aiming to learn about people's views and perceptions to generate new hypotheses and stimulating new ideas (Bason, 2017).

institutional void of civil servants in the context of transitions and aimed to combine general aspects of transition theory with practical now-how of civil servants. This design benefited our setting because staying in the existing context could be too restrictive and complex to reflect freely on possible alternatives. A design session's partly fictitious character helped break free from the day-to-day context and facilitated conversations on crucial conditions.

3.2 Research design

Our design consists of two steps (see Figure 5). First, we observed civil servants' discussions about their problem space to understand its structure. Bason defines this as 'the process of exploring the characteristics, dynamics, and boundaries of the problem at hand; and making those dimensions explicit: 'formulating the mess' (Bason, 2017: 99). The second step consisted of two attuned parts, a) was generating alternative scenarios, in which the participants ideated and developed new actions starting with an ambition and vision to create change (ibid, 121) and b) was the enactment of practices. This phase involved engaging physically and emotionally with the result and comprehending what is needed to make it work (ibid).

Figure 5: The steps taken in the design group

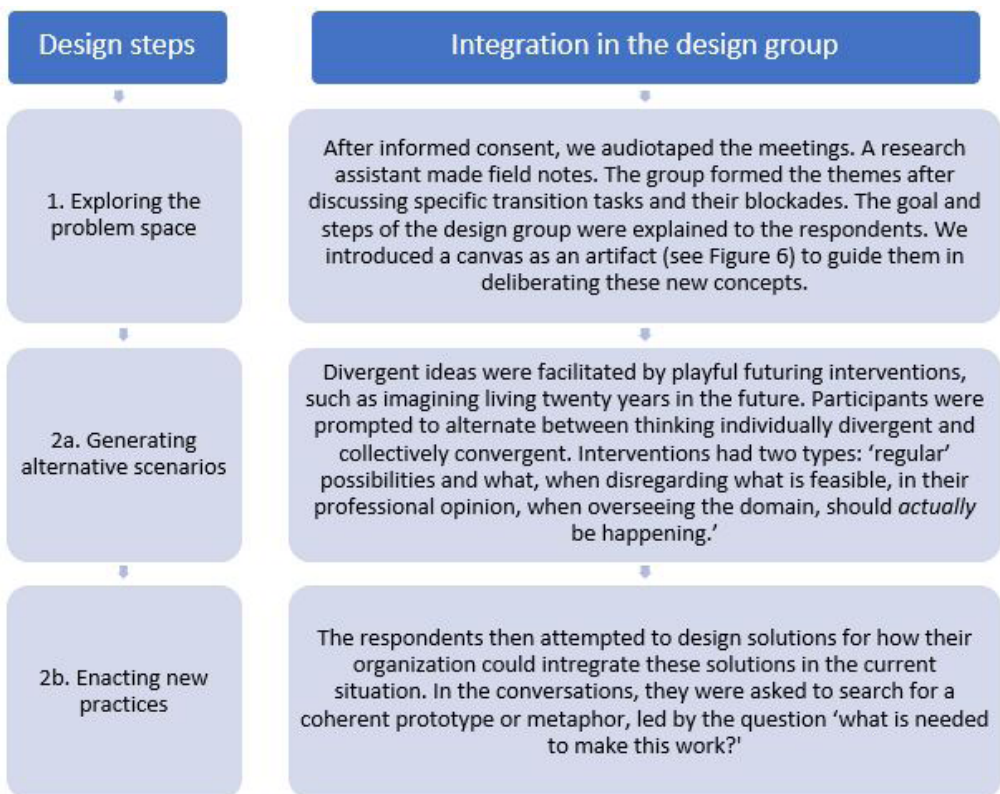
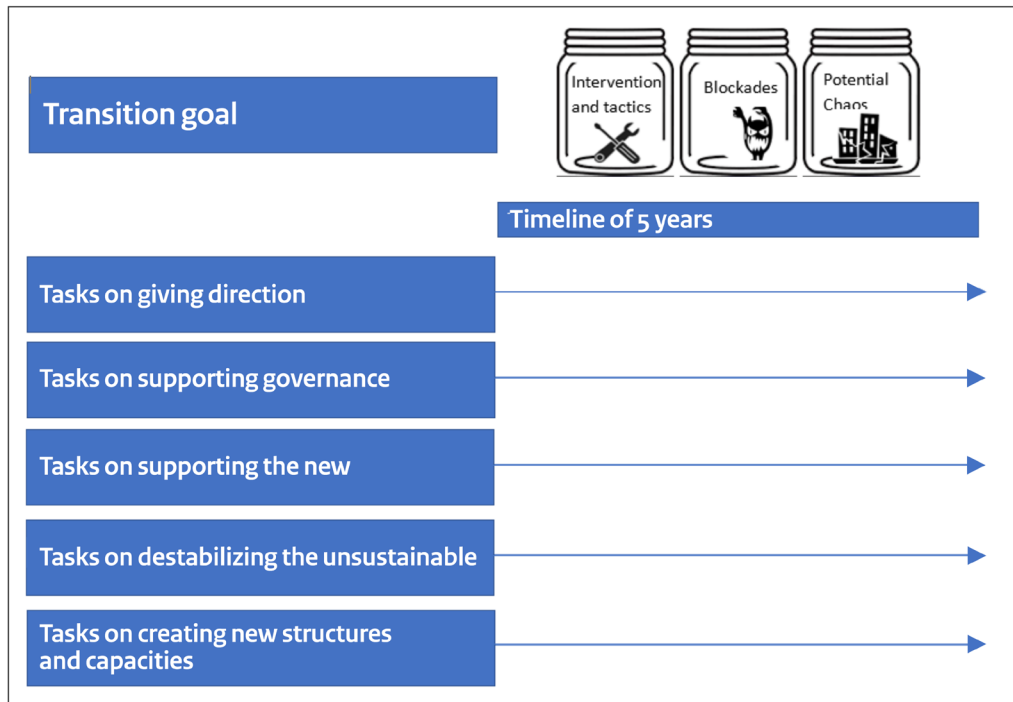


Figure 6: Canvas used in design groups

3.3 Case selection

Within the Dutch Ministry of Infrastructure and Water Management, four units were selected: a multidisciplinary team on making public transport energy positive, the program directorate Schiphol (the main airport of the Netherlands), a unit aimed at redefining mobility assessment frameworks with new data sets on economic wellbeing, and a temporary toll program for freight. We choose these four cases from a longlist to maximize internal variation on urgency perception within society and politics. These cases also vary in policy scope and closeness to the regime. We assumed a broader array of novel ideas would be proposed when these perceptions varied. As design group methodology is highly contextual and situational, finding a wide array of new ways of thinking is the objective. Representativity across contexts is, therefore, not necessary (Roggema, 2017).

The units are each struggling to implement policies to reduce carbon and nitrogen emissions within the transport and mobility domain executing the Dutch Climate Agreement³. We recruited four to seven persons per design group (see Table 9). Each design group's conversation was on their (real-life) transition strategy. Their strategies reached from agenda setting to accelerating phasing out unsustainable practices. The design groups took three hours, during which the specific transition paths of the respondents were determined, the expected or experienced obstacles were formulated, and possible interventions were explored. The design contained several steps in which theoretical elements were constructed into artifacts to let practitioners design and discuss their transition path.

³ [Mobiliteit | Klimaatakkoord.](#)

Table 9: *Number of participants per design group and their seniority.*

Design Groups (in random order)	Directorate-General (DG)	Transition tasks	Number of participants	Function and seniority
Multidisciplinary team on making public transport energy-positive	DG for Mobility	Agenda-setting; coordinating between stakeholders	4	Coordinating- and senior civil servants and heads of units.
Program directorate Schiphol	DG for Aviation and Maritime Affairs	Accelerating transition through phasing-out	7	Coordinating civil servants and heads of units.
Unit to redefine mobility assessment frameworks	DG for Mobility and DG Aviation and Maritime Affairs	Creating new capabilities	5	(Senior) civil servants and coordinating civil servants.
Program for the temporary toll for freight	DG for Mobility	Creating low-carbon markets	5	Coordinating- and senior civil servants.

3.4 Data collection

The lead researcher attended and observed the design groups. A highly regarded external moderator, knowledgeable on transitions and government, was also hired to structure the conversations and question and confront the respondents (Morgan and Krueger, 1997). Researchers were sensitive to group dynamics because the units were invited as a team. They instructed the external moderator to give everybody equal opportunities for speaking time, aiming to create a level playing field and a safe space to suggest ideas. Immediately after it finished, every design group was evaluated by the moderator and the lead researcher on the process, invention, relevance, and extensibility (see Zimmerman, 2007). As the transition tasks of the units had already started, and the teams were experiencing difficulties undertaking necessary action, most participants perceived the sessions as highly constructive.

3.5 Data analysis

The recorded audio of the design groups was transcribed and coded in NVivo. We coded inductively for problem spaces (such as risk aversion, a lack of operational transition management, and a lack of responsibility), solutions spaces (a designing government, restructuring the polity and responsibility mechanisms), and possible interventions (taking over the most difficult dossier of their colleagues, advising paradoxical, advising the Minister to be brave). We looked for repeated attitudes or opinions and identified dissenting opinions. In the first coding round, we adopted the words used by the respondents (such as ‘hedgehog work’, ‘transition goals as a perk’, and ‘everybody points toward each other’). These obstacle codes were grouped and matched with the possible solutions and interventions in the second round (such as ‘difference between risk and uncertainty is not recognized’, ‘civil servants are no transition managers’, and ‘urgency is not felt collectively’). Each design group focused on one central overarching theme in the solution space stages, which were distinct from each other. We structured the results around these themes. To validate these themes, we interviewed three civil servants who coordinate transition projects of this Ministry (two of them

did not participate in the design groups); they separately verified the relevance of these themes for the civil service.

Directly after every problem space and solution exploration, we discussed how these findings could be related to four extensive theoretical discussions. This discussion allowed us to enrich the central themes of conversations with some theoretical insights and construct dimensions for implementing a transformative rationale for governments. Our depiction of these discussions is modest; we present only some core insights, which could be a start for further explorations and a research agenda for questions central to a *Transformative Government* paradigm. We reflect on each theme and formulate central dimensions per theme and give some indications for solutions. To protect participant anonymity, precise actions and contexts have been obscured.

4. Results

This section presents four problem spaces faced by civil servants working on transition tasks. In each design group, the central theme was identified and highlighted. Every group shows a specific prism why ‘the transition just does not start’⁴. We structured the results by presenting the exploration of the problem space by the participants per group. Table 10 summarizes all the problem spaces and alternative scenarios.

4.1 Design Group 1 - Countering the risk-averse bureaucratic culture

4.1.1 Problem Space

The first design group observed the underlying constraint of a risk-averse culture deepening the institutional logic of hesitance in advising on transition tasks. The respondents discussed that it seemed the internal transformation simply did not get started because the responsibility was scattered over many actors who were not accountable for the whole. The underlying constraint they focused on was the risk-averse culture within their ministry. A respondent labeled the dominant institutional logic ‘hedgehog work’ because the civil service is so careful and hesitant in advising the Minister to make clear choices, afraid of prickly spines. The respondent gave an analogy for the cautious dynamic of civil servants advising the Minister:

“We do not act maturely [as civil servants]. You may exhibit reactive attitudes toward your parents when you are a child. If you [for instance] had a mother who never took good care of herself, you may parentify. When you become an adult, you make a deliberative choice; [...] ‘I will not constantly wonder what my mother wants. I am going to live my own life.’ We have never reached such a point within the civil service, [...] an independent role toward the Minister. We have never [...] seen ourselves as powerful and able to make adult choices. [...] Such behavior may have been effective in the past, but not for what we want to achieve.”

The quote above highlights a few central themes of the discussion: 1) the profound realization of the hierarchical relationship between civil servants and their ministers, 2) a heartfelt need for autonomy in implementing the necessary reforms, and 3) a question of whether the current behavior is beneficial. The moderator asked the respondent: “if you break through this relationship, what kind

4 Emblematic quote from a design group.

of reaction will you get?” Respondents: “Friction,” “Resignation,” and “Criticism: ‘this is not your role.’”

The respondents discussed the consequence of this risk-averse constraint. ‘Our managers do not wake up in the middle of the night worried if the transition will succeed’. This suggestion of inertia and lack of felt responsibility was immediately contrasted in the group; they did see their role as a guide for transitions. ‘What strikes me, like you said, who gives direction? We should, as everybody looks at us. However, we list all the people who should give us directions’. The exchange continued: ‘we do not have the mandate to make decisions’. A manager mentioned that they, as a group, should not underestimate themselves because ‘we have the monopoly on making the policy ... we may not have the ultimate mandate to give directions, but we can turn the levers in our domain’.

This conversation focuses on an inadequate culture to work with uncertainty, incompleteness, and risks. The design group recognized that the conceptual differences between uncertainty and risk are often unnoticed within the Ministry. Not much innovation will get through when uncertainty is immediately categorized as a risk. Respondents remarked they lack the institutional backing to work with more significant uncertainty. Partly because of this, an inert, risk- and loss-averse culture can become the default. They named many reasons not to innovate⁵. These enhance an inclination not to choose any direction because of fear of consequences. Although respondents acknowledged that choices are needed, the uncertainty of which option is the best leads to inertia. Consequently, they mentioned that pilots are frequently not set up when civil servants see too many risks and uncertainties. Thus, initiatives aimed at working on the transition goals are kept ‘in scope’ and managed as a limited ambition project, leaving uncertainty, complexity, and more fundamental questions out ‘to preserve prospects for action’ and not hurt the economy.

4.1.2 Solution Space

An example of the risk-averse culture was when the moderator noted the teams’ desire for more autonomy in deciding what innovations would benefit their sector. They agreed and continued by mentioning their greatest fear that a single innovation, in its developing phase, would create a deadly accident that would harm society’s support for the entire transition. This creates a strong emotional reflexive reaction to stop all innovative trajectories within politics and, therefore, with their administrative superiors. The institutional logic is that a specific incident would create a general risk aversion at such times, diminishing their autonomy and professionalism. One respondent offered a possible solution:

“We, as civil servants, go along with their emotional reflections [of their managers and their ministers], ‘yes, we understand the importance of emotions,’ we concede very much. Therefore, we endorse that kind of behavior, which eventually means inertia. We maintain it. We could stop saying to our managers, ‘we understand it is precarious.’ We should collectively push back [against a risk-averse attitude from managers].”

The group discussed their solution space on how to push back against this institutional logic without overstepping their democratic mandate. They explored a counter-intuitive proposal that inertia is made explicit by paradoxically advising for inertia. “We advise you, considering all uncertainties,

5 1) New things may fail, 2) There is no guarantee that innovations will work, 3) Not innovating prevents disinvestments, 4) Innovations may not work in themselves, 5) Expensive infrastructure is sometimes needed, and 5) The cost of scaling up is too high.

... to sit on your hands for the next five years. Then society may be much more inclined to agree. However, we will not reach the climate goals, but that is not your problem.” The advice of doing nothing contains its risks and counterfactuals, exposing the responsibility of doing nothing.

4.1.3 Working with uncertainty and risks

An essential dimension of a *Transformative Government* is civil servants with skills and analytical tools to work with political urgency, high systems uncertainty, deep value contestation, and high decision stakes (Functovicz and Ravetz, 1993). Uncertainty can be recognized as complexity, ignorance, indeterminacy, or incommensurability (Wesselink and Hoppe, 2010) but is, in essence, value-free until labeled. Labeling uncertainty as risk or opportunity seems dependent on a person’s worldview (Douglas and Wildavsky, 1983). Eventually, these perceptions and values are at odds but should be explicitly taken into the problem analysis (Functovicz and Ravetz, 1993). The regime is often too invested in the status quo to be critical of its assumptions. Societal actors bordering the regime are needed, as they are freer from entangling social and institutional habits and hold different insights which come with distance (Douglas and Wildavsky, 1983).

The nature of policy problems is wicked, urgent, uncertain, and contested. Civil servants can also be considered boundedly rational, labeling uncertainties as risks. Therefore, formulating the problem space together with bordering actors such as scientists or citizens’ councils could be part of the solutions. Otherwise, ‘crude commercial pressure, inept bureaucracy regulations, or counterproductive protests will dominate’ (Functovicz and Ravetz, 1993: 751).

The first dimension of a Transformative Government is that ministries should formulate their problem space with actors free from institutional habits and constraints.

Three possible favorable institutional conditions can be uncovered by acknowledging the deep uncertainty from working on transitions while the regime’s nature is to stabilize: 1) having a working force with skills and tools to work with uncertainty and deep contestation, 2) stimulating reflections on how personal and collective worldviews determine assumptions, and 3) engaging with actors free from institutional habits.

4.2 Design Group 2 - Overcoming traditional value prioritizations

4.2.1 Problem Space

The second group observed the underlying constraint of colleagues unfamiliar with new analyses, which deepened the institutional logic of low priority to add features to their routines. They discussed how they, as a small advisory team in a complex organization, could potentially create a significant impact by changing the parameters in the social cost-benefit analysis on which current policies are needed. They would be influential if their colleagues were convinced and not skeptical or afraid of drastic change. They mentioned having difficulty catering to the entire organization. The underlying constraint is that the intended changes had to be implemented at multiple layers and corners of the organization. Many of their colleagues are unfamiliar with innovative analyses and do not know how to integrate these necessary procedures into existing structures. The institutional logic is that new tools and value prioritizations are added to their everyday work and are not felt as urgent. It, therefore, has low priority.

This conversation focuses on the fact that the organization is not yet equipped to implement work on transitions, such as establishing new social cost-benefit analyses. Transition goals are based

on a new hierarchy of public values, such as sustainability next to economic growth and accessibility. Still, these are not yet operationalized, quantified, or integrated into the accountability structures. These structures, optimized for the current regime, are so complex that an overview of where change could be initiated is lacking. Moreover, the relatively small teams working on transition goals are seen as experiments that are not expected to affect the direction of the central policies. The group mentioned that urgency is not always internalized within the organization. There is usually a commitment to subgoals but not to working on the transition as a whole. When the organization is under political or societal pressure, already operationalized conventional values can become overriding. Although the Ministry stands for a broader array of public values, assignments aimed at transitions get less priority and are considered something 'extra'.

The group discussed the implication of this underlying constraint of unfamiliarity. They saw it as a paradox, the need for fundamental change but only being able to start by innovating incrementally. "It is new for people; starting dismantling something from a lighthearted and cooperative perspective may be better." They argued that a narrative of 'everything is wrong' would not be the right message to form a transition movement within the organization. Not being willing to use frames that criticize the totality of institutionalized complexity means working on other urgency strategies, which they found challenging. A respondent acknowledged that persuading the organization by painting a positive picture, referring to an even better world without denouncing the current state, has the risk of not being forceful enough.

4.2.2 Solution Space

The respondents combined the problem of the organization's complexity and the incremental space for change in their proposed solution, worrying about unsolicited advice not being appreciated. "Ideally, other directorates ask us to help them," but "maybe we should adopt a hot potato from another directorate, offering to share responsibility and then implement new data-driven methods." Such an offer could be incorporated with changing the policy evaluation structure. In this way, the set-up of pilots and new types of evaluation should work much more closely. Respondents mentioned that holding people accountable can create an unsafe working environment; therefore, "we could go back to smaller steps; we are not going to measure impact over two years but on a weekly scale." Such adaptive learning allows finetuning and diminishes that a person can feel threatened to be accountable when making mistakes.

To counter the constraints, respondents suggested taking transition goals seriously; these have to be operationalized, quantified, and integrated into the organizational, accountability, and financial arrangements. Installing some management on transitions should help internalize and institutionalize the urgency, uncertainty, and complexity. Data-driven, 'live' evaluations may have a shorter and more cyclical structure to prevent an unsafe environment for making mistakes. Respondents suggested investment in existing policy skills such as understanding the right policy incentives, making overarching roadmaps with adjacent sectors, and helping their colleagues by getting co-responsibility with their most difficult dossiers.

4.2.3 Operational management around transition tasks

An essential dimension of a *Transformative Government* is the implementation of operational management around transitions. Although, the solution of extra management proposed by the respondents presupposes an analytical vision of policy, which does not align with transitions' contested nature and power dynamics. Proponents of transitions within the organization seem unable to influence the restructuring of the Ministry's processes. Such a denial of getting on the

agenda may indicate a latent conflict and structural lack of power of change agents (Lukes, 1974). Repositioning the regime, with its power reproduced through ‘embodied rules, resources, actor configuration, and dominant images’ (Grin, 2010: 283) and aiming it at system change may be seen as Sisyphean labor. Avelino (2017) suggests that change agents can engage more horizontally. For instance, they can search for non-traditional forms of power, which their organizations do not have, and by creating synergy to support each other or antagonism to disrupt. From a multi-level perspective, such attempts could be classified as coming from a niche within a regime, which may be very hard to maintain or protect.

The second dimension of a Transformative Government is to implement transition management, which should be a core agenda topic of a ministry.

When recognized that operational management to implement transition tasks is lacking, the following favorable institutional condition for public institutions could be: 1) setting up operational management for transition tasks, 2) valuing change agents and giving them specific channels to influence the process, and 3) setting up regime niches with the understanding of the inherent paradox.

4.3 Design Group 3 - External problematization as a tool for co-responsibility

5

4.3.1 Problem Space

The third design group observed the underlying constraint of an unassigned set of transition values, which deepened the institutional logic of policy losing its added transformative potential when responsibility is transferred to another organization. They discussed how the operationalization of sustainable transition goals needs sufficient intrinsically motivated civil servants. “We cannot improve our internal structures and capabilities because transitions are not internalized. ‘In-house,’ we do not yet align processes, procedures, and finances [to work on the transition goals].” A respondent underscored the underlying constraint, the dire need to operationalize the new set of underlying values, especially when the policy is transferred from ministries to agencies in order to be implemented. The institutional logic is that policy quickly loses its conditional transformative potential when transferred beyond the initial organization. “Implementing agencies need to think, per definition, in existing structures and solutions; renewed, abstract policy goals are so far away. It is, therefore, essential to introduce clear intermediate steps. Thus, overarching strategies are important, as these make you understand what a logical, achievable goal is.”

The moderator questioned why this was not yet solved. A manager responded: “we try to; it just costs time. Apparently, we find other things more important, such as economic growth, political success, etcetera, and money.” Another respondent reacted: “we would prefer to define growth differently. But that is difficult to change because the old values are institutionalized.” The group explained that implementing agencies have not yet been mandated into prioritizing sustainability goals when these collide with the agencies’ core tasks on mobility. “They see our requests on sustainability as a perk, a bottom-up initiative, as a possibility that we have not officially asked for.”

The group found consensus on the need for ministries and implementing agencies to be given broadened, overlapping mandates through which sustainability could be legally prioritized. “Our Ministry does not consider the energy transition as its problem; it is a problem of the Ministry of Economic Affairs; therefore, steering our executive bodies [to innovate to be more energy efficient] is very hard.” They illustrated this problem with the current impossibility of giving these agencies

an energy budget or being energy positive with all their acreage, thus becoming a mobility provider and an energy company.

This conversation focuses on a lack of possible interdependent stewardship. The question of who is ultimately responsible for directing the transition remains open. As the transition is a gigantic process in and of itself, no single societal actor can take full responsibility. This logic applies to public institutions; transitions go beyond artificial human structures like departments. Consequently, no single Minister can take responsibility for the transition as a whole. Questions on responsibility become even more difficult on a European or global scale. Who undertakes action to go beyond inertia around responsibility? A design group mentioned that the role perception of civil servants is sometimes skewed towards being too serving towards the short-term goals of politics and society instead of the long term. Civil servants sometimes deradicalize their analysis for their superiors and do not propose (necessary) fundamental shifts. Consequently, no reports or research that could not be in line with the current political line is requested. Thus, advice on transition goals and tasks stays away from fundamental decisions.

4.3.2 Solution Space

During the conversation, the group became intrigued by the possibility of more proactive and directive instruction to the implementing agencies in order to enforce cross-ministerial responsibility for the energy transition. This would enable the right questions to be asked within the Ministry with the proper sense of urgency or problematization. The group discussed unconventional ways of creating such urgency. Ideally, “we ask a climate activist to start a court case.” They continued, “Of course, we will not ask this. However, we could talk with network energy companies and say: ‘you have a problem with increasing capacity; if you bring it forward in the political debate, it will become urgent, and [via the parliamentary procedures] I can be given a mandate.’” Others reacted: “how ridiculous, that we need external pressure to do our jobs.”

Respondents mentioned that ministries and their executive bodies might need different assignments and responsibilities in the national polity to counter this constraint, by which they not only prioritize their initial tasks. Policy coordination between ministries beyond ministerial responsibility is crucial for the co-responsibility of the transition. Civil servants of different directorates, institutes, and ministries should work more from the understanding that they all work towards the same public values prompted by the transitions. Scaling specific domains down or phasing certain practices out to help another ministry reach its transformation goals is a win for all. Respondents argue that they should support their Minister more to be brave and yield less to her fears. They should constantly make a compelling narrative toward a society with elements expressing considerations of urgency, necessity, and ethical conundrums.

4.3.3 The complexity of shared responsibility

An essential dimension of a *Transformative Government* is creating co-responsibility and working beyond explicit responsibilities in a relative institutional void (Hajer, 2003); administrative leaders may guide the organization between utopianism (relying on overgeneralized wishful thinking to steer their directions) and opportunism (pursuing immediate advantages to exploit) (Selznick, 1997). Selznick states that their responsibility lies in ‘accepting the obligation of giving direction instead of merely ministering to organizational equilibrium (1997: 25)’. Boin et al. (2021) argue that these executive tasks of leaders remain relevant in a network society where wicked problems have become the default. To work within networks, leaders must learn to align their operations, norms, and identities with network partners to serve a common purpose (2021: 30). Boin et al.

propose that public institutions must update distinct missions, structures, values set, created value, and membership in co-creation with public-private, intergovernmental and transnational partners (2021) to guide transitions.

The third dimension of a Transformative Government is that transition managers should implement institutionalizing interdependent stewardship.

By observing that intrinsic interdependence is needed but very constrained, the following favorable institutional conditions for public institutions could be: 1) acknowledgment of leaders that they have to work on the borderline of change and stability, 2) aligning the common purpose of network partners with organizational operations, and 3) updating their mission, structure, and value set.

4.4 Design Group 4 - Penetrating through the current impermanent system

4.4.1 Problem Space

The fourth design group observed the underlying constraint of the attachment to the current system, which deepened the institutional logic of feeling responsible for their sector. They explored the topic of reducing transport movements to bring down emissions. A respondent started reflecting:

“Until recently, the option of reduction did not exist. In our minds or the minds of politicians. [In response to externalities], all kinds of complicated measures were taken to protect [mitigate the impact on citizens]. However, these measures could not be wholly executed because this would mean fewer transport movements. Thus, you will construe something complex by which the existing maintains and something is supposedly arranged. That is why you get things that cannot be explained.”

They considered how such dynamics could lead to problems that do not exist on paper:

“I am unable to detach my thinking from within the current system or the reality existing on paper, for instance, the accumulation of noise nuisance. Citizens say, ‘this is a problem; we do not sleep,’ we say: “based on the paper, there is no fundamental problem because there is an option to deviate from the norm [these available exceptions were just not used]. After which it is concluded, there is no problem at all.”

The question then developed into the institutional boundaries of a new reduction discourse. A respondent reacted: “what we want to reduce in order to meet people planet profit goals ... we are not going to because we do not want to throw away our network capacity.” They saw the risk of reducing too much and losing their competitiveness. Respondents recognized the institutional logic that ministries and their Ministers feel responsible for their sector and perhaps are inclined to listen when the sectors promise noninvasive ways for sustainability with technofixes. “The industry let us know; ‘just trust that it will improve in fifteen years.’ They are, of course, right, but how much better? They do not commit to numbers.” These appeals from industry resonated with institutionalized belief within administrative procedures and processes of the limitlessness of economic growth.

These are wrapped in moral narratives. “It comes from 1944, we thought, we are going to connect the world and sponsor kerosine, from the noblest thought of world peace.”

This conversation focuses on the attachment to the current impermanent system. A central question within all innovative projects is how to bring positive outcomes from pilots that advocate disruptive change back into the system if the same system is responsible for their entire sector. Results from pilots do not carry the same weight in the scale as the current optimized configuration. Moreover, incumbents are situated for preferential treatment and priority. These deeply rooted ideas make some civil servants doubt the usefulness of transitions. Too much dismantling of the current systems is considered counterproductive, as a society may need this configuration in the future.

4.4.2 Solution Space

The respondents noted the underlying constraint of attachment to the current system. However, when they took a perspective in which reduction is possible, “a conclusion follows logical reasoning, and you have to say, ‘we should not build there.’” These new conclusions opened the conversation to questions, previously outside the institutional discourse, about healthy living standards in the surrounding communities. Freedom from avoiding reduction allows them to follow new research and policy lines previously far from the Overton Window. When the phasing-out rationale is justified, it opens prospects for action. Thinking on reduction new perspectives can become legitimate, which problematizes the current situation. Other research outcomes questioning the current regime are welcomed instead of ignored. This recalibration of the current regime with a reduction perspective asks for paradoxical management and ambidextrous skills in holding two perspectives next to each other.

4.4.3 Detachment from the current system

An essential dimension of a *Transformative Government* is using external shocks to loosen the relationship with the current system. The advocacy coalition framework (Sabatier, 2007) could help understand these teams’ shifts in belief and perspective. It emphasizes external shocks as a core dynamic for system change (Markand et al., 2016). External shocks, such as lawsuits against the state on insufficient measures to protect citizens against carbon and nitrogen emissions, shake the core beliefs and open the rationale for reducing mobility. These will shock the policy regime and create new rationales. Such a new rationale legitimizes new perceptions, ideas, and assumptions and brings cognitive freedom to civil servants.

The fourth dimension of a Transformative Government is a ministry using external shocks to detach itself from the optimized impermanent system.

By penetrating through the impermanent systems, the following favorable institutional conditions for public institutions could be: 1) seeing working with external shocks as a core capacity, 2) learning to integrate the implications of the shocks in the current rationale, or 3) using the implications of the shock as a reflection of whether current assumptions are still valid.

Table 10) Summary of the problem spaces, solution spaces, and dimensions for a Transformative Government.

Underlying constraints in the problem spaces	Favorable institutional conditions from the solution spaces	Dimensions for a transformative government
A risk- and loss-averse bureaucratic culture	<ul style="list-style-type: none"> • A working force with skills and tools to work with uncertainty and deep contestation. • A reflective culture on worldviews that determine assumptions. • Engagement with actors free from institutional habits. 	A transformative public organization formulates its problem space with actors free from institutional habits and constraints.
A lack of operationalization, quantification, and integration of transition goals into the organizational arrangements	<ul style="list-style-type: none"> • Operational management for transition tasks. • Installment of specific channels which allow change agents to influence the core processes. • Operational management for niches within policy regimes. 	The implementation of transition management is the core of a transformative agenda.
The complexity of shared responsibility	<ul style="list-style-type: none"> • Leaders who work on the borderline of change and stability. • Alignment of organizational purpose with network partners. • Updated mission, structure, and value set. 	The implementation of institutionalizing interdependent stewardship by managers.
Attachment to the current system	<ul style="list-style-type: none"> • Capacity to work with external shocks. • Processes to integrate the implications of external shocks to the current system. • Continuous reflections on the implications of shocks and whether current assumptions are still valid. 	The usage of external shocks to detach itself from the optimized impermanent system.

5. Conclusion and discussion

The fundamental misalignment between Transition Literature and Public Administration on what tasks civil servants should execute in a societal transition is already stated in the literature (Braams et al., 2021). This article's novel 'research-by-design' approach led to newly formulated problem and solution spaces for civil servants working on transition tasks. Moreover, this approach directed us to relate these findings to broader academic discussion and the contours of a new research agenda on how governments can execute transition tasks. This article aimed to reveal potentially favorable institutional conditions for the execution of transition tasks within public organizations. We found twelve preliminary conditions (see Table 10) from four conversations that could aid civil servants at the Dutch Ministry of Infrastructure and Water Management in their struggle to implement policies to reduce carbon and nitrogen emissions.

After exploring respondents' problem spaces and generating alternative scenarios in design sessions, we formulated central themes. These themes are working with uncertainty and risks, lack of operational management, the complexity of shared responsibility, and attachment to the current system. After an initial reflection on these themes from four separate important bodies of literature, we formulated four new practical dimensions needing an academic contribution. With these dimensions, we aim to find guidelines for an operational approach to implementing a new transformative rationale for government: 1) A ministry formulates its problem space with actors free from institutional habits and constraints, 2) A ministry puts the implementation of transition management at the top of its agenda, 3) Administrative managers implement institutionalizing interdependent stewardship 4) A ministry uses external shocks to detach itself from the optimized impermanent system.

Ministries are considered part of the conservative policy regime within transition frameworks. Although civil servants are expected to implement transition tasks, their executive power is met with low expectations due to limited legitimacy (Grin, 2012; Braams et al., 2021). The constraints participants observed and analyzed are regime-stabilizing institutions. The twelve preliminary, favorable institutional conditions may help civil servants work on transition tasks. The related dimensions may help implement a new transformative rationale for government and contribute to both Transition Literature and Public Administration.

This article examined practical 'how-knowledge' to understand experienced pitfalls and challenges via design groups. Research-by-design proved appropriate for these delicate topics. In a safe, partly fictitious environment, the civil servants dared to work with their experiences, frustrations, and fears in a co-designing process. They explored the problem space earnestly and generated unconventional new scenarios via dialogues and joint idea generation. In their conversations, these ideas collided with the current trajectory. We noticed that these dedicated experts encounter tremendous problems when facing extra transition tasks, which cannot be solved merely by increasing efforts but do indeed need favorable institutional conditions.

These institutional conditions came forth from conversations specific units had. Although the exact conversations are highly contingent and context-dependent, the topics are universal. How can they work with system change in an environment constructed to be stable? To allow uncertainty, implement favorable structures, work together with intrinsic motivation, and simply accept change. Therefore, the favorable conditions for a government working on transition seem generalizable beyond this ministry. Our findings in situational and contingent settings are hardly representative as they were conducted within a single public organization but highlight novel solutions to essential dimensions. Future research may repeat such design sessions in other settings and would likely add new constraints, interventions, solutions, conditions, and research questions.

A limitation of this study is related to the proximity of real-live casuistry to the political arena. The cases are not yet uncontested within politics. Respondents had to weigh their words. Respondents in historical cases could speak more freely. However, these cases miss the current transition dynamics. Moreover, this research-by-design approach has the most relevance when participants can design solutions useful for them in the present. Another limitation was that some participants went in and out of the session during the design group. This seems unavoidable as this type of respondent is usually overbooked in their agenda, and more urgent matters arise constantly. It did cause a delay in the design groups, causing spending less time on the third step, enacting new practices. The three hours were minimum to honor and acknowledge the complexity as we discussed their projects.

Lastly, some methodological reflections for further research. Research-by-design appeared helpful in exploring more general, underlying structures in this context and suggesting new avenues of exploration. Therefore, it is a suitable method for developing the concept of *Transformative Government* in close collaboration with the intended recipients. We were able to direct the conversation toward the crucial conditions by loosening the participant's retention from their immediate context. The experienced and respected moderator, who explicitly showed respect and admiration for their profession, was essential for building thrust. The question 'what *actually should be done*'^x was essential to detach from the current situation and acknowledge their expertise and overview of the whole system. Three groups were energized as they noticed that the designing process and thinking on transition tasks helped them understand their transition process. One group consisted of individuals with highly attuned political antennas; they were more reserved in thinking freely beyond the current political landscape.

Asking the actors who have to integrate the transition insights into policy about what is helpful and what is blocking them on a discourse, institutional and operational level is crucial for serving society towards a sustainable future.

6. In Dutch: Wat zou er *eigenlijk* moeten gebeuren?

“Consistency is a virtuous small mind”

Alan Watts

6. Conclusion - Towards Transformative Government

1. Overview

In this conclusion, I position *Transformative Government* as an answer to the overarching research questions, “What are the struggles civil servants experience when they try to execute tasks to guide sustainability transitions?” And, “What could be a new legitimizable rationale to rethink administrative institutions to take transformative action and explore favorable institutional conditions¹ beyond the current civil service’s inertia?” The research suggests that the struggles civil servants experience when trying to execute transition tasks are severe and often lead to inaction. An overarching rationale is missing that legitimizes them to act, and the current dominant Public Administration discourses² in place delegitimize the execution of many transition tasks. These delegitimizing discourses are institutionalized in implicit rules that determine action and contestation between proponents and opponents within the ministry.

In the introduction, I depicted the relationship between the different substudies in Figure 1. This figure indicates how discourses, institutional structures, and agency are interconnected and are in a state of mutual influence. Chapter Two analyzed all the transition tasks prescribed by Transition Literature to government, which civil servants must execute. Execution is, however, complicated due to current Public Administration discourses. I introduced *Transformative Government* as a potential solution for this inertia. In Chapter Three, I argued that this new discourse should focus on interpreting and diagnosing how dominant, implicit institutional regime structures can hinder system change. In Chapter Four, I discussed how *Transformative Government* could aim to legitimize agency within public organizations. Furthermore, I argued that *Transformative Government* should be sensitive to struggles internal to these organizations, as it can develop its ideas from these struggles. Chapter Five introduced four new institutional dimensions that *Transformative Government* needs to unpack to support practitioners in executing transition tasks. See Appendix 4 for a summary of insights and arguments per chapter and their application to *Transformative Government*.

As the climate crisis spins out of control, I tried to balance descriptive and prescriptive elements in this conclusion to find a solid base for the role of the government in guiding sustainability transitions. I searched for a legitimizable transition rationale, favorable institutional structures, and transformative agency for governments undertaking transition tasks. Such a new rationale is needed because current Public Administration discourses, which (de-)legitimize actions of civil servants, work inadequately with societal systems change. The notion of *Transformative Government* needs to connect sustainability Transition Literature to accepted legitimacy claims from Public Administration Literature. In praxis, a *transformative government* is a government that understands, accepts, and executes transition tasks and creates new institutions based on a new normative

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- 1 In my analytical model, I use the term institutional structures. I call these structures *conditions* when these show potentially favorable circumstances in which civil servants can undertake transition tasks (despite other institutional structures).
 - 2 As described in Chapter One, I use ‘Public Administration discourses’ or ‘discourses’ as the analytical term in the conclusion to highlight their relationship with institutional structures and the agency of civil servants. In Chapters Two until Five, I used the Public Administration term: ‘traditions’ conceptualized as different repositories of truth as it is understood, indicating the stable and structured yet open governance context (Stout, 2013: 64). I use ‘transition rationale’ or ‘rationale’ as a counterpart of Public Administration discourses because a rationale may not yet be institutionalized. Moreover, when elaborating on a new *transformative rationale*, I demarcate the possibility of actively working to add a new one to the existing Public Administration discourses (or traditions).

framework that prioritizes sustainability. As an additional rationale and new Public Administration discourse, it prescribes what needs to be done, legitimizes these actions, and ‘synthesizes notions of system change with an understanding of administrative processes, legitimacy, and democracy to enable a legitimized pursuit of transition tasks’ (Chapter Two: 50).

If we accept that the civil service, as part of the executive power of government, has a vital and urgent role in transitions; and if we accept that transition scholars prescribe the right tasks that only governments can execute; and if we observe that these tasks are at odds with current discourses; then a new rationale is needed that restructures administrative institutions to enable transformative action. Therefore, in this dissertation, I provide the contours of this new rationale and its impact on beneficial institutional structures and transformative action.

The implications of the previous chapters for public organizations that want to accelerate their contribution to the sustainability transition can be structured with the analytical levels of discourse (consolidated systems of meaning), institutions (structures that shape and legitimize individual and collective action), and agency (acts of interpretation, translation, transposition, editing, and recombining institutions). In the interplay between these three levels, obstructions to transition tasks emerge. To illustrate, prescriptive Public Administration discourses often obstruct civil servants from acting on transition tasks. This obstruction often works through latent institutional rules that legitimize the internal opposition to change. Managing these levels and paradoxes needs practical wisdom (*phronesis*). With *Transformative Government*, I provide a map of directions, potential pitfalls, and recommendations that could help governments find their role in a sustainability transition.

The first three sections of this concluding chapter culminate into the contours of a transformative discourse, favorable institutional structures, and transformative agency for government. Each section briefly reflects on the current situation and its problems, proposes new contours, and searches for practical wisdom (*phronesis*) to balance change and stability. The argument starts with the assertion that a new Public Administration discourse is needed: the *Transformative Government*. Then, by combining insights and arguments from all previous chapters, I create building blocks for applying *Transformative Government* as a scientific synthesis of Transition Literature and Public Administration Literature, and I search for preliminary contours of the new Public Administration rationale³, new transformative institutions, and new transformative agency. In the fifth section, I consider implications for theory; in the sixth, I reflect on my position, in the seventh, I discuss the main limitations; and in the second to last section, I propose questions for further research. I end where I began, with a final reflection on allegory on the cover.

2. In search of a new transformative discourse

More and more governments realize that they have a role not only in supporting sustainable solutions but also in phasing out unsustainable structures (Pontikakis et al., 2022; Van der Steen et al., 2022). This realization makes any pure bottom-up approach inherently problematic in coordinating phasing-out because different sets of local or regional regulation will greatly enhance arbitrariness, also leading to societal rejection and, thus, failure to change. Rather than introducing a new standalone rationale for governments, *Transformative Government* recognizes the essential values of its predecessors and follows Bourgon (2009, 2011) and Van der Steen et al. (2018) in

3 Installing a new rationale can, of course, not be done in a single dissertation, and I invite fellow scholars and practitioners to continue this discussion.

conjoining them. It tries to achieve and aims to occupy an extra place in the pantheon of necessary legitimate discourses (see Bourgon, 2011, and Van der Steen et al., 2018), as the others do not address systemic change and phasing-out of unsustainable structures.

2.1 The contours of a new Public Administration rationale

The previous chapters indicate the extensiveness of developing a *Transformative Government*. However, for it to become an accepted rationale within Public Administration Literature in the (near) future, it should be grounded in Public Administration philosophy and theory. This section starts outlining the contours of a new rationale following the comparative criteria set out by Stout (2013) on problem-solution diagnosis, role perception, and characterization of legitimate action (see Chapter Two). Stout described the three existing Public Administration discourses (the Constitutional, the Discretionary, and the Collaborative) in this way. Seen as ideal types, the main critiques on these discourses are political micromanagement (Constitutional), over-empowerment of administration (Discretionary), and disempowerment of politics and administration (Collaborative).

Few theorists suggest a pure stance; instead they advise a balance and compromise of the three discourses at any point in time (Stout, 2013). However, a fourth rationale is needed when *all* three discourses hinder systemic change to the point of inertia. This fourth rationale is proposed as the solution to governmental lock-in and the impossibility of executing transition tasks within the current discourses (see Chapter Two). With Table 11, I propose the contours of a new Public Administration rationale, the *Transformative Government*.

Table 11: *Contours of the Public Administration rationale Transformative Government (elements and definitions derived from Stout, 2013: 100).*

Generic elements	Basic definition	Transformative rationale
Political ontology	Philosophical and theoretical assumptions about the nature of existence that frame presuppositions about the human relationship to things such as self, world, and others that prefigure political ideology and governance structures.	<ul style="list-style-type: none"> • Reality is dynamic and becoming and has many sources of existence. Current reality can be transcended in relation to others. • Human identity is embedded in social structures through self-organization. • Collective action problems impair scaling up; hierarchy is needed to enforce different behavior. • The political theory comes from environmentalism, nonviolence, social justice, and grassroots democracy. • An emerging ontology states that humans are collectively responsible for socio-ecological resilience and should collectively adapt their socio-technical systems toward sustainability.
Political authority and scope of action	Ideas of who should have the authority to decide and act on behalf of the group and the boundaries of the scope of action allocated to the administration.	<ul style="list-style-type: none"> • The government codetermines the transition agenda with scientists, industry pioneers, activists, and 'the public'. • Decision-making for a transition agenda happens in partnership with informed citizens forums, future generations, and representatives of nonhuman entities. • Civil servants guard and steer on planetary boundaries. • Coercive elements are needed to preserve life on earth and breakthrough collective action failures that come from selfish, short-time preferences of individuals and collectives.
Criteria of proper behavior	How proper administrative behavior is measured, assessed, and ensured.	<ul style="list-style-type: none"> • Responsive towards a long-term horizon. Civil servants ensure sustainability and systemic change and are accountable for transparent monitoring and publicizing long-term goals' progression. • Through imaginaries and futuring, the needs and wants of future generations are determined, leading to new calculation models and discounting rates. • Destabilizing unsustainable practices is a core activity of civil servants, rooted in their responsibility for negative (non) policy.
Administrative decision-making rationality	The process of reason used to make administrative decisions, including technical, strategic, formal, and communicative types.	<ul style="list-style-type: none"> • Value rationality (with predetermined normative ends) is combined with communicative reasoning (informed collaboration). • Legitimacy is found in translating from supranational agreements to national and regional objectives, and in acknowledging that governments must take a central and assertive role in sustainability transitions. • Future generations and natural entities are recognized as having a rightful place in the negotiations.

Organizing style	How administrative activity should be structured.	<ul style="list-style-type: none"> • Goals and urgency determine the organizational style. • Fluid relations between actors as well as flexible structures, serve societal challenges. • Civil servants work within ecosystems that foreground goals and urgency over the process.
Assumed governance context	Assumptions about the locus, institutions, or organizations where governance is conducted.	<ul style="list-style-type: none"> • Climate change makes the world unsafe. Urgency and necessity to change are high. Transition leads to societal reconfiguring of power, pain, and loss. • A new social contract facilitates centralized regulative elements and empowers bottom-up action to reach climate goals more easily. • Government actively leads to overcoming system lock-in to the status quo in order to solve together with society and the market collective action problems and attend losses.
Role conceptualization	The character of the administrative role results from the overall patterns of behavior.	<ul style="list-style-type: none"> • Civil servants see themselves as future-oriented system architects collaborating with other stakeholders. They work holistically and abductively, aligning social and environmental challenges. • In matters of giving direction to the transition, the civil service focuses on its complementarity with politics. Civil servants depoliticize transitions when appropriate.

The contours of this transformative rationale are aimed at legitimizing sustainability transitions. Like the other Public Administration discourses (Stout, 2013), it started with a diagnosis that current frameworks are failing. Unlike the others, this rationale positions the existential crisis of climate change as urgency and necessity for change, with civil servants as essential change agents. The rationale rebalances the criteria of proper behavior of civil servants (accountability, responsibility, and responsiveness) into a new role conceptualization where civil servants take long-term responsibility. Foregrounding such virtues need new forms of authority, legitimacy, governance context, and organization styles. However, these assumptions potentially cause friction with current principles; the following paragraph highlights these critical discussions.

2.1 Integrating critical discussions into the Transformative Government rationale

Table 11 raises fundamental topics of concern for transition scholars wishing to influence transformative policy. For many actors, the climate crises give legitimation to act. However, for civil servants, the urgent need to intervene may conflict with current democratic institutions. Such a conflict can trigger technocratic and autocratic tendencies in government. Moreover, when recommending transformative policies to politicians and the public, reflecting one's normative positioning is crucial.

2.1.1 Risk of technocracy and autocracy

The field of transition studies took a normative turn (Daimer, 2012; Kattel and Mazzucato, 2018) by steering the a priori direction of innovation towards contributing to sustainability challenges (Uyarra et al., 2019). Their implicit justification for societal action is often based on urgency and necessity (Van der Hel, 2018). In a democratic society, however, this justification can only outrank other democratic principles in a state of emergency (Swyngedou, 2010). It has the danger of

justifying technocracy or of seeing democracy eventually as a transition failure (Braams et al., 2021). Due to this turn and its current impact on policy debates, Transition Literature is no longer just a mirror showing sustainable deficits in the democratic system (see Jhagroe and Loorbach, 2015). Its ideas are not just niche practices but are becoming part of the configuration of the regime (De Geus et al., 2022). Transition scholars participate in the policy arena and must, therefore, continuously reflect on its normative position.

Such a reflection comes from Avelino and Grin (2017), who state that Transition Literature combines how things are and ought to be. They argue that Transition Management could, by its nature, operationalize how things can be. Schlaile et al. (2017) question how Transition Literature can incorporate legitimate goal orientation in transformative innovation by and for society. They argue that sustainability is a complex normative issue that must be explicit as the literature is also prescriptive about practices. Such prescriptions by Transition Literature should include questions like: What? Why? By and for whom? For how long? At what costs? At which scale? (Schlaile, 2017: 2252). Thus, scholarly reflexivity is needed to acknowledge the recursive relation between interpretation and the object (Avelino and Grin, 2017). As we advise and recommend, we intervene and are, therefore, essentially part of the system we want to change. This position demands responsibility for the maintenance and, perhaps, the improvement of the democratic system.

2.1.2 Normativity

One specific branch to highlight for reflection is the complex relationship between sustainability transitions and normativity, especially now that Transition Literature gets more attention from policymakers⁴ and becomes part of the regime itself. Due to their normative turn, parts of the transition field became activist (see Van der Hel, 2018, shifting the research *on* sustainability to research *for* sustainability). It now pre-assumes a specific direction, such as becoming carbon neutral⁵. Some scientists feel the need for *science activism*, as the urgency is that high. For example, 31% of a sample of the researchers of Future Earth think science is a political act (Van der Hel, 2018).

This collective pre-assuming removes pluralism and creates a universal set of assumptions. However, a universalist normative position is essentially oppressive as it seeks to impose a single normative perspective; it answers questions from 'one set of experiences, cultural outlook, and sense of identity' (Buckler, 2002, 189). Sustainability is also recognized as a potentially oppressive structure when unquestioned (Pel et al., 2016). As transitions theory is guided by urgency, necessity, panic, engagement, and the desire to avoid climate skeptic, relativistic explanations (ibid), it perhaps tends to close ranks against climate skeptics or a society unwilling to democratically implement the economic costs of safeguarding a sustainable way of life for future generations. This normative turn, although understandable, asks for an ongoing internal dialogue on its pitfalls.

2.1.3 Dealing with the democratic public

An a priori normative position has consequences within science. The first problem, normative presuppositions have to be aligned with 'objective models' (or not yet thoroughly deconstructed models) of other sciences. This dissertation shows that such alignment is especially the case in public organizations. These models of, for instance, Public Administration Literature expect civil

4 Normally, I would refrain from using the concept of policymaker, but in this context, the conceptual inherent vagueness and all-inclusiveness are helpful.

5 Although not which pathways to take.

servants to act from a value-neutral preposition, which does not align with a pre-defined normative one. The second, more significant, problem is that a normative position opens the rhetoric about politicizing science. These critics may lead to mistrusting science eventually, accelerating the deslumbering of the publics' modernism (Aupers et al., 2012). In which the public no longer doubtlessly accepts the science's authority, which they thought was based on objectivity, but now seems to be 'another opinion'.

Central values expected from science by politics and the public are impartiality, skepticism, universalism, and open-mindedness (Anderson et al., 2010). Impartiality is essential, but when it is no longer possible, it must be explained that scientific knowledge gets a contrasting character (Hulme, 2009). Following Mitroff (1974), it can be argued that norms of solitariness, particularism, interestedness, and organized dogmatism are also essential for scientific progress and society. It is, however, important to explain that when dominant normative structures of science are seen as the only vocabularies of justification, sets of norms become presuppositions, and science begins to look like an ideology (Mulkay, 1976).

Normativity, uncertainty, and scientific objectivity have a complex interplay, especially while interacting with democratic governmental agencies. As Transition Literature developed from economics, sociology, and innovation, it is relatively new to contested societal values and norms' (Schlaile et al., 2017). It has acknowledged its own bounded rationality, the wickedness of its subject, and discursiveness conditions (Wanzenböck et al., 2020) and may become a progressive branch of a Public Administration discourse over time. However, acknowledging this means dealing with both severe and subtle consequences of its normative position when advising a power in a democratic society 'objectively'.

Contrarily, it can be argued that Transition Literature just studies how sustainability transitions work. Socio-technological transition is a given phenomenon (see Geels and Schot, 2007) and does not hold any pre-given value to the researcher. Describing the study object and combining this with the urgent messages from other climate researchers gives transition scholars an area with vast social impact. However, their research questions are often about how to stimulate *the highly needed transition* and not *finding ways to prevent or slow down sustainability transitions*. It may be unethical to advise opponents of sustainability transitions, especially from a collective green and progressive outlook. However, there is a need for close-up reflection in deconstructing the collective perspective when advising policy maintaining democratic diversity. Pel et al. (2016, 455) highlighted the risk: 'Once transitions theory starts to obscure the diversity of possible transition pathways and the attendant political choices, it will lose its critical contents'.

2.2 Phronesis at discourse

Transformative Government recognizes and acknowledges the challenging position of civil servants in a forcefield of urgency and necessity, and democratic values. Practical wisdom, or phronesis, is needed to balance the push and pull of change and stability and to maneuver between extremes. It is crucial not to let sustainability and democracy become a dilemma but to stay within the tension of paradox. The *Transformative Government* aims to help by adding an extra layer on the existing Public Administration matryoshka, legitimizing sustainable system change. It, however, needs to keep reflecting on the extreme consequences of urgency and necessity but is also kept in check by the Constitutional, Discretionary, and Collaborative discourses. Phronesis helps to understand the origins, intention, recommendations, and consequences of Public Administration Literature and Transition Literature discourse, institutional frameworks, and agency and how these interact.

Transformative Government may work as a rationale that gives public organizations legitimacy to undertake transition tasks. It is a counterweight for delegitimizing Public Administration discourses and allows civil servants to find legitimacy in being supranational climate agreements and recognize the interests of future generations and national entities. *Transformative Government* invites them to access how their dominant discourses amplify internal struggles around their transition goals.

3. In search of new transformative institutions

During my research, when I asked civil servants to explain why executing transition tasks is challenging, they gave various reasons. They show a deep and subtle understanding of what it means to be a civil servant. Many transition tasks are hard to execute legitimately without a recognized market failure or a direct order from a Minister. The reasons they give are summed up in Chapter Two as (often implicit) institutional rules⁶. These rules can be related to dominant Public Administration discourses. Therefore, provocatively, you may say, that a 'good' civil servant creates hindrances to the execution of transition tasks. That is, of course, reasoned from the current Public Administration discourses. These institutional rules mediate between agency (the willingness of civil servants to translate prescriptions into action) and discourses (the underlying, core ideas from which the institutional rules are derived). This mediative, socializing layer is needed as civil servants are not Public Administration scholars who walk around with Collected Essays from Max Weber under their arms.

Hindering institutional structures, to undertake transition tasks, are highly pervasive and deeply ingrained into the praxis of civil service. Four general problem spaces⁷ explain the underlying constraints of inertia. These may be seen as unwanted institutionalized bureaucracy excesses or consequences of invoked dominant Public Administration discourses creating an unhospitable environment for system change. This section provides further reflections on a preliminary outline for institutional structures that shape a new equilibrium between change and stability.

3.1 The contours of new favorable institutional structures

Institutional structures can be changed through a new discourse that challenges hegemonic ideas or through agency (actors reinterpreting and transposing practices). New favorable institutional structures⁸ proposed by civil servants and inspired by their ideas and practices help the execution of transition tasks. These favorable structures relate directly to the underlying problem areas civil servants perceive⁹. The central question is what new institutional structures could be helpful for civil servants to work with system change in an environment constructed to be stable.

As Public Administration discourses inherently restrict civil servants to safeguard democratic principles, little unauthorized agency can be expected (or desirable). Therefore, institutional structures have to change together with a new transformative rationale. Institutional structures

6 In Chapter Two, institutional structures are called institutional *rules* because these function as a decision heuristic.

7 The risk-averse culture, incongruent organizational management, the complexity of collaboration, and attachment to the current system (see Chapter Five).

8 In Chapter Five, institutional structures are called institutional *conditions* because these show potentially favorable circumstances in which civil servants can undertake transition tasks (despite other institutional structures).

9 See Table 10 (p110) of Chapter Five for a list of favorable institutional conditions to execute transition tasks.

prescribed by *Transformative Government* rationale could for example be (see also Chapter Three p.69 for a more complete overview):

- Understanding transition goals as public values. Public values are the principles on which policies are based and provide a normative consensus. To mark transition goals as public values gives them a higher status securing them from other blockading institutional rules.
- When recognizing the distinct stages of transition, it could be explored whether long-term projects can become a more administrative issue over a specific period. Depoliticizing through giving a democratic mandate to specialized public organizations that shape and prioritize its program could help to lessen inertia. For instance, is it not a question of politics whether drinking water should be safe.
- When transition goals are given the status of public value and are, in specific periods, seen as administrative objectives, civil servants must rethink their role perception. Civil servants may see themselves as the guardians of transitions because, as opposed to politics, they have a neutral, long-term horizon. Again, the danger lies in overstepping a democratic mandate, and it can lead to technocratic tendencies without much accountability.

Because these supportive institutional structures are currently lacking¹⁰, often-heard questions from civil servants start with “how.” For instance: How can we set a long-term direction? How can we work with newcomers? For answering how-questions, it is essential to understand their pitfalls and challenges. These prescriptions partly answer the how-question: how can we work in a regime that does not work for transition tasks? See Table 12 for the contours of transformative institutions.

Table 12: *Contours of the institutions of the Transformative Government (see also Chapter Five).*

Contours Transformative institutions	Conditions
Public organizations need to strengthen their capacity to work with transitions' inherent uncertainty and incompleteness to counter risk and loss-averse bureaucratic culture.	<ul style="list-style-type: none"> • A working force with skills and tools to work with uncertainty and deep contestation • A reflective culture on worldviews that determine assumptions • Engagement with actors free from institutional habits
Public organizations need to implement operational transition management and create anticipatory capacity to fill the current structural void.	<ul style="list-style-type: none"> • Operational management for transition tasks • Installment of specific channels which allow change agents to influence the core processes • Operational management for niches within policy regimes
Public organizations need to collaborate and share the responsibility in broader governance to respond to the uncoded complexity of transitions.	<ul style="list-style-type: none"> • Leaders who work on the borderline of change and stability • Alignment of organizational purpose with network partners • Updated mission, structure, and value set

¹⁰ See Chapter Three and Five.

Public organizations need to learn to detach themselves from the optimized permanent system on which they worked for many years and create reflexivity in the system.	<ul style="list-style-type: none"> • Capacity to work with external shocks • Processes to integrate the implications of external shocks to the current system • Continuous reflections on the implications of shocks and whether current assumptions are still valid
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3.2 Phronesis at institutions

On the level of institutional structures, public organizations should be mindful that their institutionalized practices and rules can currently obstruct civil servants from executing transition tasks. When asking *how to solve* this, a step back is needed to understand the relationship with dominant discourses safeguarding democratic values. New institutional structures should therefore be developed in cohesion with a transformative rationale. Expecting entrepreneurial civil servants to alter institutions without a rationale will put them in conflict with other parts of the organization¹¹.

It is helpful to ask civil servants ‘what should *actually* be done’¹²; this is to acknowledge their expertise and overview of the entire system and is, therefore, essential to understanding which institutional conditions may be favorable for change. In this research, civil servants have shown their fruitful insights and understand what is needed when they can momentarily disregard the political feasibility.

4. In search of a new transformative agency

Because the civil service is not ideal for innovation due to its complicated institutional routines, structures, and tasks (Thompson, 1965, Wilson, 1989), entrepreneurial civil servants are essential to challenge the current institutions and overcome resistance (Brouwer and Biermann, 2011). These change agents are part of the policy regime that, by its nature, tries to stabilize. Therefore, entrepreneurial civil servants are a unique type of change agent because of their inherently restricted situation and deserve more scholarly attention. This section provides further reflections and recommendations for civil servants working as transition managers and transition leaders.

Conceptualizing civil servants working on transitions as policy entrepreneurs (Frisch Aviram et al., 2019; Mintrom & Norman, 2009); institutional entrepreneurs (Battilana et al., 2009); brokers (Stovel & Shaw, 2012); intermediaries (Kivimaa et al., 2019); inside activists (Hysing & Olsson, 2018); champions (Sergeeva, 2016); or deliberative practitioners (Forester, 1999), frames them one-dimensionally. Combining multiple contextual elements gives a better understanding of their position in executing transition tasks. For instance:

- What are the dominant discourses specific to the domain and directorate? (Chapters Two and Three)
- What are the accepted institutional rules? (Chapter Three)
- What are the political color and their room to maneuver? (Chapter Four)
- What is the responsibility of guaranteeing the stability and continuity of the current system? (Chapter Four)
- What are the availability and scalability of alternative ideas? (Chapters Four and Five)
- Is there potential political and societal pressure and contestation? (Chapter Five)
- What is the organization’s culture in dealing with risk and uncertainty? (Chapter Five)

11 See the heuristic round-model and the case of MaaS in Chapter Four..

12 In Dutch: Wat zou er nu *eigenlijk* moeten gebeuren?

- Is there an applicable operational transition management and ideas on how to share responsibility? (Chapter Five)

When asked, civil servants seem to confirm having trouble executing transition tasks¹³. Specifically, destabilizing unsustainable practices, a core task for the civil service in transitions, is considered challenging. Therefore, this task is significantly less often on governments' agenda (Kivimaa and Kern, 2016; NewForesight, 2023). Moreover, I found that innovative practices often lack legitimacy within public organizations from existing Public Administrative discourses and thus need explicit approval (see Chapter Two). Entrepreneurial civil servants, willing to invest and risk personal and organizational capital to administer change, must be understood by public organizations and internally supported. Currently, in these public organizations, entrepreneurial civil servants are often opposed and delegitimized by their colleagues¹⁴. Therefore, a transformative rationale and favorable institutions are needed to support them.

4.1 The contours of a transformative civil servant

In this dissertation, I prescribed many governmental transition tasks while acknowledging that these tasks are challenging for civil servants. Transformative civil servants are needed to recombine existing institutions and build new, transition-oriented practices. Entrepreneurial civil servants can build scaffolds, organizational tissue between old and new practices (Maessen et al., forthcoming), to make novel solutions more viable. Scaffolding and learning to experiment and design are new skills for civil service. These actions require and interface with new institutional structures. I argue that niches within the policy regime should be cultivated where these new skills can flourish. Regime niches¹⁵ may sound paradoxical, as change does not usually manifest within one of the most stable parts of the system. However, with an extended role perception of civil servants, i.e. future-oriented, holistically, and abductively thinking system architects who work with a broad array of stakeholders, these regime niches may be beneficial to consciously loosen the dominant institutions that keep the status quo intact.

My recommendations for transformative civil servants contain two levels: 'the transition manager'¹⁶ and 'the transformative administrative leader'. Firstly, for the *transition manager*, tools out of the usual policy toolbox are useful, such as: creating the right incentives for supporting new developments and destabilizing unsustainable ones; investing in stakeholders, inside and outside of the organization, both newcomers and incumbents. Pursuing good relations with their colleagues working on the maintenance and continuity of their domain is important as they are often the gatekeepers for change. Moreover, timing is critical; transition managers should learn to use crises to launch alternatives for current unsustainable practices. When a crisis hits, proper preparation implies having functional niches that produce these alternatives. Skills that may still need to be developed are giving paradoxical advice¹⁷; working with coalitions of the willing; and tendering with

13 1. Give Direction, 2. Support Governance, 3. Support the New, 4. Destabilize the Unsustainable, and 5. Create new Capacities and Structures; see Chapter Two.

14 See Chapter Four for the heuristic round-model that captures the dynamic between entrepreneurial civil servants and their internal opposition.

15 Proposed concept, a play on 'niche regimes' (Avelino, 2017) but indicates location instead of progression.

16 A mid-level civil servant coordinating certain aspects of the domains transition.

17 Advise contrary to what the analysis and research suggest, but with the counterfactual, to make the consequences of not-acting clear. See Chapter Five.

functional instead of operational requirements, which gives discretionary space to creative solutions of transformative civil servants at other governmental levels.

Key recommendations for transition managers from the previous chapters include:

- Put transition tasks on the agenda¹⁸, and operationalize them in action plans and road maps.
- Make a diagnosis of institutional structures hindering transition tasks¹⁹.
- Invest in relations with colleagues that hold the keys for changes in the policy.
- Understand the possible opposition of colleagues as standing guard for other public values²⁰.

More specific tactics could be²¹:

- Dare to undertake actions that create possible tensions in the organization. Use information strategically among actors in the policy process.
- Force intra and inter-organizational, and cross-sectoral partnerships with politicians, civil servants of other governments, and with private and third-sector actors.
- Involve civic engagement by organizing active public participation in transition issues.
- Gather evidence to show the utility of transition tasks by engaging with others.

Secondly, *transformative administrative leaders*, high-ranking civil servants, are crucial for transitions. They have to bring political, societal, and long-term interests together. Such a merger needs a compelling story, with urgent transition goals as new public values and their (ethical) relevance for society. These stories are often about more than only the specific policy domain these administrative leaders manage. Therefore, investment in policy coordination (Weber and Rohrer, 2013) is critical to bring overarching changes together. Thinking beyond ministerial responsibility is difficult in Western democracies but essential when working on transitions. Part of being an administrative leader is empowering the Minister to be brave by preparing sound narratives for hard choices. Empowering to be brave may seem trivial, but it is a shift from a current, dominant role perception, namely risk-aversion and protecting the Minister from potential contestation.

Key recommendations for transformative leaders from the previous chapters include:

- Legitimize a rationale for governmental interventions in support of sustainability transitions.
- Understand the delegitimization power of other Public Administration discourses on your workforce²².
- Make transition tasks a central focus of the policy reorientation.

18 See Table 2 (p46-47) Assigned tasks to government prescribed by Transition Literature of Chapter Two for an overview.

19 See Research-by-Design method of Chapter Five for a possible setup for a diagnosis and the Table 5 (p68) on the impact of Public Administration traditions on institutional rules and transition tasks of Chapter Three.

20 See Table 8 (p87-88) on Dynamics of heuristic rounds-model for the Dutch MaaS case of Chapter Four.

21 See Table 7 (p79) on Change agents' tactics of Chapter Four.

22 See Figure 3 (p50) on accepted/ rejected ratio of transition tasks in Public Administration traditions in Chapter Two.

- Be vigilant for (latent) institutionalized structures that oppose the undertaking of transition tasks and break them down²³.
- Advocate favorable institutional structures for undertaking transition tasks²⁴.

More specific tactics could be²⁵:

- Frame the problem in a politically and socially acceptable and desirable way with a solution.
- Move decision-making authority to a new policy arena.
- Use stories, images, and symbols to stir passion, capture public attention, and build support.
- Lead policy networks.
- Praise the benefits of transition policy to different audiences.

4.2 Phronesis at agency

Transitions require society to rethink the role perception of civil servants (Gronchi, 2022). We need to recognize that no other societal actor is potentially more equipped to guide society through this transition stage is crucial. Urgency and necessity argumentations already dictate heavy societal demands in adaptation and mitigation, thereby accepting loss. In Western representative democracies, these adaptations ask a lot from politics, which demand unpopular, expensive sacrifices and appeal to a 'pump or drown'²⁶ frame. The civil servants must learn to be able to steer the ship between Scylla and Charybdis and safeguard democratic values but also fully implement the Paris Agreement with a long-term sustainability perspective. However, being reflexive to the risk of sustainability and democracy becoming incompatible is essential as it may become ever more present.

5. Implications for theory

This dissertation tries to bridge Transition Literature and Public Administration Literature in the context of civil servants in a ministerial setting. Such synthesis was needed because Public Administration Literature pays scant attention to the role of public organizations in guiding sustainability transitions. Additionally, Transition Literature developed from Innovation Studies (Köhler et al., 2019) and needs to integrate further aspects of Public Policy, Public Administration, and Political Science to have more policy impact (Song et al., 2023).

Public Administration discourses focus on impartiality, rationality, justice, legality, accountability, predictability, efficiency, effectiveness, feasibility, responsiveness, inclusiveness, and broad support (see: Bourgon, 2009; 2011; Osborne, 2006; Stoker, 2006; Stout, 2013; Torfing and Triantafillou, 2016; Van der Steen et al., 2018). Although all these democratic values already manifest in a complex policy and polity, it is not enough in times of system change. Values of sustainability, climate justice, and fairness need to be incorporated. Moreover, perhaps a government, and therefore Public Administration Literature, may need to see the agreed-upon direction of a *transition* as a public value in and of itself at a certain point.

23 See Table 5 (p68-69) on the impact of Public Administration tradition on institutionalized rules and transition tasks in Chapter Three.

24 See Table 10 (p110) on Summary of the problem spaces, solution spaces and dimensions for a transformative government in Chapter Five.

25 See Table 7 (p79) on Change agents' tactics of Chapter Four.

26 Translation of the Dutch 'pompen of verzuipen,' the correct English translation is 'sink or swim'.

On the level of discourse, I suggest adding an extra rationale to the Public Administration pantheon to account for sustainability values, legitimizing building institutional structures to work on transition tasks. *Transformative Government* needs to be seen as an extra layer around the Public Administration matryoshka, meaning *not* to circumvent the previous discourses, because these represent essential democratic values. This new rationale instead should bridge the gap between a) transition ideas based on urgent and necessary climate action and b) Public Administration discourses safeguarding democracy.

On the level of institutional structures, a new rationale may facilitate institutional experiments and democratic innovation. Transition Literature and Public Administration Literature should collaborate on experiments that could alter political and administrative institutions and procedures, change decision-making processes, and define new roles (Sørensen, 2017). These experiments should help to develop new favorable institutional conditions from this rationale. To give a few examples, learning how to work with risk and uncertainty in projects (see Funtowicz and Ravetz, 1993; Wesselink and Hoppe, 2010) should be applied to the problem space civil servants experience. Operational transformative management should be implemented into the institutional structures while acknowledging that this may destabilize them directly (Grin, 2010) and will trigger inherent power dynamics (Avelino, 2017). Co-responsibility beyond ministerial responsibility is needed, which asks for new prescriptive directions from Public Administration Literature to help managers find a new equilibrium in exploration and exploitation (Selznick, 1997) in a network society (Boin et al., 2021). Such co-responsibility will invoke new questions on accountability. Finally, knowledge of how public organizations can create mechanisms to use exogenous shocks to detach themselves from unsustainable practices is needed.

On the agency level, I introduced a heuristic round-model, building on Lasswell's (1956) structural phases of the policy cycle, Easton's (1957) input and output model, and Kingdon's ideas of existing policy streams. Following Teisman (2000), I structured internal contestation within public organizations as rounds, with a precise starting and ending point. Each round has its own dynamic. This model showed how previous rounds' tactics influenced later rounds' outcomes. Moreover, it opened the black box of seemingly contradictory actions from a single public organization. The research method I used in Chapter Five, research-by-design (Bason, 2017; Roggema, 2017), could be a component for furthering this line of research. Transition Literature may benefit from understanding practitioners' wants and needs and their tacit knowledge. Scholars can learn how existing structures prevent the recipients from executing their recommendations.

The dynamics of civil servants working on transitions became manifest in the relations between the previously described analytical levels of discourse, institutions, and agency. What is considered legitimate translates into protocol and space to act; vice versa, combined emergent actions form routines that challenge dominant thinking. This dissertation contributes to an understanding of this interplay—the descriptions in Chapters Three, Four, and Five highlight how these levels are interdependent.

6. Reflection on my position

As stated in the introduction, my career colors my research interests. My inside-out position eased the unlocking of specific data, speaking to otherwise unavailable respondents, creating trust in conversations by connecting in intonation and idiom, and interpreting the conversations with scholarly distance and compassion through engagement. In that sense, scholars pursuing a purely academic career could not have done this research in the same way, but, like all context-

dependent research, it raises questions about its validity and reliability. I developed partial answers to the questions in a specific context, transparently and methodically, and open to ongoing dialogue (Flyvbjerg, 2001). The interpretation of contingent relationships between the context and the actions cannot be reduced to a simple set of rules.

During my research, I presented my findings on many fora at different ministries and their executive bodies; at a summer school of high-level civil servants, municipalities, and consultancy firms²⁷. I advised setting up institutions for working on sustainability transitions and explained the institutional pitfalls on all levels, from street-level bureaucrats to directorate generals. Without exception, people acknowledged the friction I explained and their difficult position. Most quickly realized how a new role perception for civil servants working on sustainability transitions would interfere with the dominant heuristic of being neutral and serving politics. Such resonance empowered me in thinking that this topic shows a strong undercurrent.

This undercurrent becomes increasingly manifest. Many civil servants are searching for how to play a constructive role in guiding transitions. Some dare to be more initiative-taking than others. Eight hundred municipal civil servants of the city of Amsterdam signed an urgent letter to their highest administrative management team to do more to prevent climate change. In a recent news article, Diercks (2023)²⁸ requested civil servants to become more activist. The heated discussions after the publication show that activism within the civil service comes with great dilemmas and a willingness to act. It questions where loyalty lies, either to protect the current Minister or to the Minister's office, or even broader, to society, its long-term interests or future generations.

The recommendations that contrast dominant discourses and institutions do not help the civil service enough beyond their restrictions and lack of legitimacy to act. Therefore, I tried to balance description and prescription in this conclusion as global society faces enormous crises. To get a nuanced view, I chose to do my research in a context close to a real-life situation, which is filled with wickedness, rich ambiguity, day-to-day complications, uncertainty, paradoxes, and multiple goals. Hopefully, this is relatable to both the social scientist and the practitioner. We need interaction between general abstractions and concrete practices, new and old institutions, stabilizing democratic values, and new sustainable systems. This balance requires both academics' and practitioners' consideration, judgment, and choice (Flyvbjerg, 2001).

7. Reflection on limitations

This research has several limitations, it is time- and space bound. Whether civil servants can progress on transition trajectories depends mainly on their Minister's political color and ideas and the constellation of parliament. The research was executed within one Dutch ministry, so follow-up research is needed to confirm similar patterns. Reactions to my presentations at different governmental levels indicate that the results are broadly recognized. However, systematic research to compare phenomena on these governmental levels is needed. I researched a single ministry within the national government, focusing mainly on developing a mobility policy. Other aspects of the policy cycle, such as execution and evaluation, were not included in the scope of this research. Agencies around the Ministry, responsible for knowledge development, inspection, and execution of policy, were only beheld from a distance, as were other layers of government, such as municipalities,

27 I held more than sixty presentations over the last two years of my Ph.D. at different Dutch ministries, agencies, and other governmental layers.

28 NRC. De ambtenaar die activist wordt: ja graag. In English: The civil servants who becomes activist, yes please.

the European Union, and large cities. Understanding these actors' relations with the focal ministry could deepen the role *Transformative Government* could play. Furthermore, I did not focus in-depth on the market and government relations or the relationship between bottom-up initiatives and the government. I chose to focus on understanding the micro dynamics within a ministry because this seemed lacking within the Transition Literature.

Researching only the Dutch Ministry of Infrastructure and Water Management resulted in another limitation. Although discussions on reducing carbon and nitrogen emissions were current at the time of study, there are ministries with higher transition pressure to reform the system. Crises around energy, agriculture, and housing are closer to the political arena. For instance, partly due to the intensive agriculture sector in the Netherlands, its nitrogen emissions exceed European directives and harm nature reserves. This nitrogen exceedance blocks the construction sector from solving the urgent housing shortage. It may be possible that the same institutions hindering transition tasks in the Ministry of Infrastructure and Water Management have already been reformed under societal and political pressure at the Ministry of Agriculture. Future research may diagnose the blockading institutional rules in a public organization that even more immediately and drastically needs to respond to a societal problem. I would expect fewer institutional blockades in the sectors with more public support for change.

The transition I related to in this research was the green mobility transition. Although the mobility transition towards sustainability also contains elements of inclusion, digitalization, connectivity, accessibility, demographics, and economic growth, the empirical data I collected is limited to the mobility domain. This specific transition cannot be the only representative of all the sustainability transitions and their specific dynamics. More research is needed on other sustainability transitions, such as the circular economy, climate adaptation, extensive agriculture, and clean energy. However, I would argue that my findings on Public Administrative discourses translated into hindering institutional rules and favorable conditions can give an indication of the dynamics of other societal transitions in public organizations, even the ones less focused on sustainability, such as digitalization, healthcare, and housing. Eventually, these dynamics show how public organizations deal with the interplay between change and stability.

8. Questions for further research

Research on a new interface between praxis and two bodies of literature requires a new agenda and research avenues. I list six promising lines of inquiry.

First, new prescriptive models need to be developed around phase-out policies. As transition literature developed mainly from innovation science (Köhler et al., 2019) and has its legacy in technological invention, it is less focused on phasing out (Kivimaa and Kern, 2016). New ideas on institutional change should be developed as phasing out is less contingent and inherently closer to a political arena (see Rinscheid et al. (2022) for a systematic review). Weber and Rohracher (2012) advise broadening the market failure argument to system failures and transition failures. This extended argument has the same urgency and necessity structure. Therefore, it will not work optimally with civil servants when used to guide and legitimize transition tasks within public organizations. The X-curve (Hebinck et al., 2022) is increasingly used as a heuristic within Dutch ministries (NewForesight, 2022) to narrate the story of transitions. The X-shape illustrates the pattern of build-up and phase-out. The Dutch School of Public Administration (NSOB) subdivided the X-curve into transition phases and analyzed which existing administrative roles are applicable per phase (Van der Steen, 2022). However, I found that phasing-out tasks are far less likely to be

executed due to restrictive delegitimizing Public Administration discourses, and I argue that an underlying rationale is needed from which a new administrative role can arise. Only then can the X-curve be a practical model for public organizations.

The need for proper instruction ushers in the second point; the *Transformative Government* rationale should give practical answers and directives to *how-type questions*. It should understand the micro dynamics and day-to-day activities and prescribe rationales, theories of change, heuristics, guidelines, models, best practices, and recommended institutional and policy interventions. It should include power dynamics in its analysis and methods to acknowledge the losers of the transition. Other 'how-questions' from the Fifth Chapter were: 1) How can ministries work with uncertainty, incompleteness, and risk in transitions? 2) How would transition management work within this context? 3) How would institutionalizing interdependent stewardship work? And 4) How can a ministry detach itself from the optimized impermanent system? These questions were considered critical by the focus groups 'to get the transition started,' meaning the internal, systematic, ministerial reaction to social-technical transitions. Action research seems helpful in understanding what is effective within a transformative government.

Thirdly, historical case studies on where the phasing-out policy was initiated and how it started are needed to understand civil servants' role in the process. How did civil servants work in relation to political developments? Were these cases politically initiated or elsewhere in society? At what point did civil servants appear on the stage, and what role perception did they have? Despite a lack of political support, are there examples of successful phasing out by civil servants? How did different societal transitions (nitrogen emissions, climate adaptation, carbon emissions, affordable housing, exclusive agriculture) interact at an intra-ministerial level (Alberts et al., 2020)? What were the role perceptions of civil servants, decision criteria to act, and their imagined futures, and how did these collaborate or collide? Answers to these questions can help design long-term administrative roadmaps.

A fourth suggestion is to expand the theoretical basis for change in Public Administration Literature. The civil service tries to balance conflicting public values (Stout, 2013). However, changes are difficult when specific values have higher perceived legitimacy due to formal Public Administration discourses, especially when such legacy is institutionalized, internalized, and codified in organizations. From the perspective of a necessary and urgent societal mission, a dialectic change toward an intended end goal (synthesis) is blocked or inadequately executed when the current situation (the thesis) is safeguarded with incumbent values and interests and conventional scientific traditions against the intended change (of the antithesis). Integrating this idea of safeguards against changing the thesis within social science may help explain institutional inertia. A dialectical process may analytically and retrospectively be seen as the natural flow and order of things; in a mission-oriented society with necessary and urgent goals to reach, stabilization through safeguards must be made clear. The conservative's tendency to stay close to the status quo should be included in the analysis of public organizations, next to the progressive's push toward a mission. In a progressive sense, *Transformative Government* legitimizes work on transition as it balances out the legitimacy claims of the former discourses. Both stability and change interact on a level-playing field and can, from equal positions, find a new equilibrium. A perfectly executed ideal type of *Transformative Government* provides a counterweight to the dominant notion of safeguarding the thesis. It adds an extra layer to the Matryoshka (see Chapter One), putting guardianship for sustainability in the mix, enabling friction between the four discourses, and facilitating new trade-offs.

The fifth suggestion is on how to develop *Transformative Government* further. On the first path, *Transformative Government* could be a notion in the Transition Literature, such as Technological Innovation System analysis, constantly asking for attention to make policy recommendations more executable for civil servants. *Transformative Government* principles could make implications feasible for the civil service. Research-by-design may be an applicable method to understand how recommendations could be executed within the civil service. On the second path, *Transformative Government* could integrate Public Administration notions within Transition Literature. *Transformative Government* may be a new institutional logic (Fuenfschilling and Truffer, 2014) developed from transition ideas. Transition Literature could explore how this logic could be institutionalized within government to become part of the semi-coherent governmental regime (Geels, 2004). On the third path, *Transformative Government* could integrate Transition Literature notions within Public Administration Literature. Transition Literature could initiate a progressive discourse²⁹ within Public Administration, offering insights and methods to study system change, phase-out, and interests of incumbents. I would argue that the first path is accessible and wide, while the latter two are narrow. I think both narrow paths are needed to confront the inertia and help the civil service to do its job.

A final suggestion is a continuation of an ongoing inquiry into democratic legitimacy as the climate crisis becomes disruptive. Out of a state of emergency, with little societal room to maneuver, authoritarian decisions will seem increasingly feasible under the banner of sink or swim. Governments prepared with transformative ideas and plans may be able to counter the worst consequences of climate and biodiversity crises. Staying in the paradox of protecting codified democratic values and protecting against disruptive crises asks for transformative leaders who can sail between Scylla and Charybdis.

9. Transitions as a personal odyssey

The sea monsters did not prevent Odysseus from returning home and reuniting with Penelope. As civil servants, a transition odyssey questions the story we tell ourselves, which ship we deem stormproof, our choices during heavy weather, what monsters and cliffs to avoid, our companionship, and our destination. It questions what kind of homecoming we imagine, how we work together to deal with wandering and tribulations, which compass we use, who our Penelope is, and how we will be remembered. These essentially ethical questions need to be answered individually and collectively. Working for the collective, we, as civil servants, have a unique serving role in and responsibility to society, balancing the here and now with the there and then. Answering these questions requires much *phronesis*, which may be the very heart of being a civil servant. Uncomfortable as the tension between urgency and necessity with democratic values may be, no other societal actor is better positioned to keep the course. Noblesse oblige.

29 Or 'tradition' when following Stout, 2013.

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Appendices

1. Aggregated criteria from comparative models of Stout (2013) and Torfing and Triantafillou (2016)

Table 13: *Aggregated criteria from comparative models of Stout (2013) and Torfing and Triantafillou (2016).*

Aggregated criteria	Three traditions of public administration praxis (Stout, 2013).	Indicators comparing three governance paradigms (Torfing and Triantafillou, 2016).
Problem-solution diagnosis	Political ontology, Political authority and scope of action, Legitimacy problems, Organizational style.	Problem diagnosis, Solution, Basic view of public organizations and employees, Overall goal.
Role perception of civil servants	The criterion of proper behavior, Assumed governance context, Administrative role conception, Key role characteristics.	Role: politicians, managers, employees, firms and NGO's and citizens.
Characterization of legitimate action	Source of legitimacy, Administrative decision-making rationality.	

2. Transition tasks assessed with prepositions from Public Administration traditions

Table 14: Transition tasks assessed with prepositions from Public Administration traditions (see Table 1). The numbers link to the numbered transition tasks in Table 2.

Category of Transition tasks	The constitutional tradition			The discretionary tradition			The Collaborative tradition		
	Tasks accepted	Hesitance about the tasks	Tasks Rejected	Tasks accepted	Hesitance about the tasks	Tasks Rejected	Tasks accepted	Hesitance about the tasks	Tasks Rejected
Give Direction	8, 16		1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 17	16	7, 9	1, 2, 3, 4, 5, 6, 8, 10, 11, 12, 13, 14, 15, 17	8, 16	6, 7	1, 2, 3, 4, 5, 9, 10, 11, 12, 13, 14, 15, 17
Support Governance	24		18, 19, 20, 21, 22, 23, 25, 26, 27, 28, 29, 30, 31, 32	18	19, 20, 21, 24	22, 23, 25, 26, 27, 28, 29, 30, 31, 32	18, 19, 20, 21, 22, 24, 25, 26, 28, 29, 30, 31, 32	27	23
Support the New	36, 49	42, 45, 46	33, 34, 35, 37, 38, 39, 40, 41, 43, 44, 47, 48, 50, 51, 52, 53, 54, 55, 56, 57	33, 36, 49	38, 42, 46	34, 35, 37, 39, 40, 41, 43, 44, 45, 47, 48, 50, 51, 52, 53, 54, 55, 56, 57	33, 34, 35, 36, 39, 43, 45, 47, 48, 49, 50, 52, 53, 54, 55, 57	37, 38, 40, 41, 42, 46, 51, 56	44
Destabilize the Unsustainable	59, 64		58, 60, 61, 62, 63	62		58, 59, 60, 61, 63, 64	63	59, 62, 64	58, 60, 61
Develop internal Capabilities and Structures	68, 75, 77, 79	66, 71, 80	65, 67, 69, 70, 72, 73, 74, 76, 78	67, 68, 69, 70, 72, 74, 75, 76	73, 77	65, 66, 71, 78, 79, 80	65, 67, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78	66, 68	79, 80

3. Articles analyzed for codes transition tasks for government (Chapter Two)

Transition Management

1. Van Der Brugge, R., Rotmans J. and Loorbach, D. (2005). The Transition in Dutch Water Management. *Regional Environmental Change* 5(4): 164–76.
2. Frantzeskaki, N., Hölscher, K., Wittmayer, J. M., Avelino, F., & Bach, M. (2018). *Transition management in and for cities: Introducing a new governance approach to address urban challenges. Co-creating sustainable urban futures: a primer on applying transition management in cities*, 1-40.
3. Goddard, G, and Farrelly M.A. (2018). Just Transition Management: Balancing Just Outcomes with Just Processes in Australian Renewable Energy Transitions. *Applied Energy*, 225: 110–23.
4. Hölscher, K., Wittmayer, J.M. and Loorbach, D. (2018). Transition versus Transformation: What's the Difference? *Environmental innovation and societal transitions*, 27: 1–3.
5. Kelly, C., Ellis, G. and Flannery, W. (2018). Conceptualising Change in Marine Governance: Learning from Transition Management. *Marine Policy* 95: 24–35.
6. Kemp, R., Loorbach, D. and Rotmans, J. (2007). Transition Management as a Model for Managing Processes of Co-Evolution towards Sustainable Development. *International Journal of Sustainable Development and World Ecology*, 14(1): 78–91.
7. Loorbach, D. (2007). *Transition management. New mode of governance for sustainable development*. Utrecht: International Books.
8. Loorbach, D. (2010). Transition Management for Sustainable Development: A Prescriptive, Complexity-Based Governance Framework. *Governance*, 23(1): 161-183.
9. Loorbach, D., & Rotmans, J. (2010). The practice of transition management: Examples and lessons from four distinct cases. *Futures*, 42(3): 237-246.
10. Meadowcroft, J. (2009). What about the politics? Sustainable development, transition management, and long term energy transitions. *Policy sciences*, 42: 323-340.
11. Noboa, E. and Upham, P. (2018). Energy Policy and Transdisciplinary Transition Management Arenas in Illiberal Democracies: A Conceptual Framework. *Energy Research and Social Science* 46: 114–24.
12. Ross, A. (2018). Speeding the Transition towards Integrated Groundwater and Surface Water Management in Australia. *Journal of Hydrology* 567: 1–10.
13. Rotmans, J., Kemp, R., & Van Asselt, M. (2001). More evolution than revolution: transition management in public policy. *Foresight*, 3(1): 15-31.
14. Rotmans, J. and Loorbach, D. (2009). Complexity and Transition Management. *Journal of Industrial Ecology*, 13(2): 184–96.
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4. Insights and arguments and their application for Transformative Government

Table 15: *Insights and arguments and their application for Transformative Government*

Chapter title	Insights per chapter	Corresponding applications and purpose for Transformative Government.
<p>Legitimizing Transformative Government - Aligning essential government tasks from transition literature with normative arguments about legitimacy from Public Administration traditions (Chapter Two)</p>	<ul style="list-style-type: none"> • Transition scholars prescribe many tasks (80) to government using different frameworks. • Public Administration discourses have trouble legitimizing specific tasks. • The normative turn made within Transition Literature is not mimicked within Public Administration, leading to different role perceptions within science. • Without scientific collaboration, there is the risk of either inertia (transition tasks are not executed due to lack of legitimacy) or technocracy (transition tasks are executed without democratic principles/purely on urgency and necessity). 	<ul style="list-style-type: none"> • Civil servants should be able to execute the aggregated transition tasks (5). • <i>Transformative Government</i> should work as a rationale that gives legitimacy to civil servants when working on system change. • <i>Transformative Government</i> needs to make assumptions manifest to facilitate collaboration. • <i>Transformative Government</i> should resist the either/or dilemma of sustainability-democracy or its extreme technocracy-inertia.
<p>Understanding why Civil Servants are Reluctant to carry out Transition Tasks (Chapter Three)</p>	<ul style="list-style-type: none"> • When asked, civil servants seem to confirm having trouble executing transition tasks. • There are (implicit) institutional rules within ministries hampering the execution. • Solutions can be found in seeing transition goals as public values, making specific phases of the transition technocratic, and recalibrating the role perception of civil servants. 	<ul style="list-style-type: none"> • <i>Transformative Government</i> should become a counterweight to the current Public Administration discourses. • <i>Transformative Government</i> should assess and diagnose how dominant institutions impact the execution of transition tasks. • Following such interpretations, <i>Transformative Government</i> should search for and pilot institutional changes.

<p>Civil Servant Tactics for Realizing Transition Tasks. Understanding the Microdynamics of Transformative Government (Chapter Four)</p>	<ul style="list-style-type: none"> • Change agents working on transitions and investing their organizational capital are (or can be) opposed by their colleagues. • Existing Public Administration discourses legitimize this opposition. These opposing rationalities are manifested in internal struggles. • A heuristic round-model can capture the tactics performed by change agents. • Possible solutions can be found in anticipatory capacity, reflexivity in the system, codifying unorthodox information, and the concept of regime niches. 	<ul style="list-style-type: none"> • <i>Transformative Government</i> should develop ideas for supporting change agents within a disapproving environment. • <i>Transformative Government</i> should open the black box of government for other actors to understand seemingly contradictory courses of action. • <i>Transformative Government</i> should be sensitive to understanding internal struggle as a series of contestations. • <i>Transformative Government</i> should explore the fertile common ground between Public Administration, Political Science, Organizational Science, Behavior Psychology, and Transition Literature.
<p>How to create the institutional conditions for a government working on sustainability transitions? (Chapter Five)</p>	<ul style="list-style-type: none"> • Civil servants have fruitful insights when overseeing their domain when they momentarily disregard what is politically feasible and what should be done. • 'Hedgehog work' (acting cautiously) is built into the system. • Operational transition management is critical to implementing in public organizations. • Co-responsibility between public organizations is an urgent issue to be addressed. • A phasing-out rationale creates mental space to detach from the current system. 	<ul style="list-style-type: none"> • <i>Transformative Government</i> should be further developed together with practitioners' knowledge and insights. • <i>Transformative Government</i> should help ministries strengthen their capacity to work with uncertainty, incompleteness, and risk in transitions. • <i>Transformative Government</i> should focus on implementing transition management within this context. • <i>Transformative Government</i> should study how institutionalizing interdependent stewardship could work. • <i>Transformative Government</i> should advise how a ministry can detach itself from the optimized impermanent system.

5. Co-author statement



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Co-author statement for Utrecht School of Governance dissertations

Author roles and contributions

Contributor Roles Taxonomy (CRediT) (source: <https://www.elsevier.com/authors/policies-and-guidelines/credit-author-statement>; see the source for an explanation of concepts). The following declaration of co-authorship applies to all chapters in this dissertation.

	Rik Braams	Joeri Wesseling	Albert Meijer	Marko Hekkert
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Research design	X (lead)	X	X	X
Privacy and ethics approval	X (lead)	X	X	X
Data collection	X			
Data analysis	X			
Data curation	X			
Writing - original draft	X (lead)	X	X	X
Writing - review & editing	X (lead)	X	X	X

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Summary

Many articles on transition highlight the urgent need for radical change, citing e.g. the Paris Climate Agreement, the Green Deal, IPCC reports, and the EU's focus on societal missions and grand societal challenges (Janssen et al., 2022; Wanzenböck et al., 2020). Economists, philosophers, spiritual leaders, and mobility experts have also emphasized this urgency. Their broad-based existential unwillingness to accept the consequences of the climate crisis in all its facets demonstrates a search for a new sustainable equilibrium achieved only by system change. The overarching goal of this thesis is therefore to find a legitimate rationale and favorable institutional structures for the civil service, to support governments in facilitating guiding sustainability transitions.

To achieve this goal, this thesis examines the tasks assigned to governments by transition scholars through the lens of Public Administration (Chapter Two), institutional acceptance of these tasks (Chapter Three) and tactical patterns of entrepreneurial civil servants executing these tasks (Chapter Four). Additionally, practitioners' ideas for new institutional configurations to execute transition plans are explored (Chapter Five). I conclude that a new Public Administration tradition is needed to facilitate civil servants to execute transition tasks. With this aim, this dissertation introduces the concept of *Transformative Government* to legitimize transformative change for civil servants.

Chapter Two shows that the literature on transitions suggests governments and its civil service should engage with profound societal issues, requiring fundamental socio-technical system change. I analyzed a corpus of 100 scientific publications to cluster the transition tasks for government found in different transition frameworks. These tasks were compared to the normative arguments of Public Administration traditions which legitimize actions of civil servants. My analysis indicates that, although some traditions present a normative basis for specific tasks, many transition tasks assigned to governments do not align with any of the Public Administration traditions. Thus, I present the contours of *Transformative Government* as a new Public Administration tradition to legitimize the government's transition tasks.

Chapter Three examines the normative arguments civil servants use when considering executing transition tasks. These normative arguments are considered as implicit rules that determine legitimacy, and the arguments highlight the difficulty of executing transition tasks within the civil service. The chapter introduces seven institutionalized rules that explain this difficulty, revealing the difficulty for civil servants to adhere to Public Administration traditions while executing transition tasks.

In Chapter Four, the research aims to provide a theoretical and empirical understanding of the entrepreneurial role of civil servants willing to execute transition tasks. However, these civil servants are often met with resistance from colleagues who favor established Public Administration traditions, leading to the question of how they deal with the opposition while executing transition tasks successfully. The chapter introduces a heuristic rounds-model that displays the relationship between contestation and responses to address this issue. This model highlights the ongoing strategic work required to maneuver around opposition and emphasizes the potential for failure of tactics due to their temporal nature. The case study of "Mobility as a Service" in the Netherlands was used to demonstrate the utility of the heuristic model, analyzing the conflict between rationalities and the continual tactical adjustment of change agents.

The existing literature on societal transitions often provides policy recommendations assuming civil servants are able to follow these recommendations and will implement policies that accelerate transitions. Chapter Five, however, argues that a governmental transformation is necessary to enable civil servants to carry out these recommended tasks, as current institutional structures often act as barriers to change. To better understand this issue, I conducted four design groups with civil servants working on transitions within a Dutch ministry. Through observing their discussions on alternative scenarios that could overcome deeply-rooted institutional obstacles, I identified twelve preliminary institutional conditions that may help them to work on proposed transition tasks using a transformative rationale. These insights led us to formulate new research questions addressing key challenges, such as how to work with uncertainty, implement operational management, exercise interdependent stewardship, and detach from the current system to guide the sustainability transition.

This research aims to identify a legitimizable transition rationale for governments, incorporating both Transition Literature and Public Administration concepts. The current Public Administration traditions, that legitimize or delegitimize the actions of civil servants, are incompatible with system change. This thesis proposes a new rationale, called *Transformative Government*, which connects sustainability transitions to accepted legitimacy claims from Public Administration. In practice, this means that the *Transformative Government* understands, accepts, and implements transition tasks based on a new normative framework. This rationale provides a new Public Administration tradition that prescribes and legitimizes actions needed for transition. It synthesizes notions of system change, administrative processes, legitimacy, and democracy to enable a legitimized pursuit of transition tasks.

For this rationale to become a Public Administration tradition in the near future, it needs to be grounded in Public Administrative philosophy and theory. This thesis outlines some contours of this tradition following the comparative criteria set out by Stout (2013). A new tradition is needed when all existing traditions hinder systematic change to the point that inertia follows. The *Transformative Government* provides a new perspective to governments experiencing a systematic lock-in, producing an impossibility of working on systematic, sustainable change.

Samenvatting

Veel artikelen over maatschappelijke transitie benadrukken de urgentie van radicale veranderingen door te verwijzen naar bijvoorbeeld het Klimaatakkoord van Parijs, het Nederlandse Klimaatakkoord, IPCC-rapporten en de focus van de EU op maatschappelijke missies en grote maatschappelijke uitdagingen (Janssen et al., 2022; Wanzenböck et al., 2020). Deze urgentie wordt ook uitgedragen door talloze economen, filosofen, spirituele leiders en wetenschappers en journalisten uit de mobiliteitssector. Hun existentiële onwil om de consequenties van de klimaatcrisis te accepteren laat zien dat er behoefte is aan een nieuw evenwicht waarvoor systeemverandering noodzakelijk is. Het hoofddoel van deze dissertatie is daarom om een legitieme transitierationale en daarmee gepaard gaande institutionele structuren te vinden, zodat overheden transitietaken kunnen uitvoeren.

Om deze vraag te beantwoorden analyseert deze dissertatie de taken die door transitie-onderzoekers aan de overheid zijn toegewezen vanuit het perspectief van bestuurskunde (Hoofdstuk 2), de institutionele acceptatie van deze taken (Hoofdstuk 3) en de tactische patronen van ondernemende ambtenaren die proberen transitietaken uit te voeren (Hoofdstuk 4). Bovendien worden ideeën van rijksambtenaren voor nieuwe institutionele configuraties om transitieplannen uit te voeren onderzocht (Hoofdstuk 5). Ik concludeer dat er een nieuwe overkoepelende traditie van Publieke Administratie nodig is om ambtenaren te helpen bij het uitvoeren van transitietaken. Deze dissertatie introduceert hiervoor het concept “Transformatieve Overheid”, waarmee het werken aan transformatieve verandering voor ambtenaren kan worden gelegitimeerd.

In Hoofdstuk 2 laat ik zien dat de literatuur over maatschappelijke transitie suggereert dat de ambtenarij zich moeten bezighouden met de fundamentele maatschappelijke problemen die een diepgaande socio-technische systeemverandering vereisen. Vervolgens is er een corpus van 100 publicaties geanalyseerd om de transitietaken voor de overheid te clusteren die in verschillende transitieraamwerken zijn gevonden. Deze taken zijn vervolgens vergeleken met de normatieve argumenten van de bestuurskunde tradities die de overheidsactie legitimeren. De resultaten van deze analyse wijzen erop dat, hoewel sommige tradities een normatieve basis bieden voor specifieke taken, veel van de aan de overheid toegewezen transitietaken niet voldoende gelegitimeerd kunnen worden met een van de bestuurskunde tradities. Daarom introduceer ik de Transformatieve Overheid als een nieuwe bestuurskunde traditie die legitimatie biedt voor de transitietaken van de overheid.

In Hoofdstuk 3 onderzoek ik de normatieve argumenten van ambtenaren wanneer ze de uitvoerbaarheid van transitietaken overwegen. Ik beschouw deze normatieve argumenten als impliciete regels die legitimiteit bepalen. De argumenten die door ambtenaren worden gebruikt, bevestigen de eerder gevonden belemmeringen om als ambtenaar transitietaken uit te voeren. Ik heb zeven geïnstitutionaliseerde regels geïdentificeerd die deze belemmeringen verklaren. Deze laten zien de bestuurskundige tradities ontoereikeind zijn voor ambtenaren bij het uitvoeren van transitietaken.

In Hoofdstuk 4 richt ik me op ambtenaren die openstaan voor transitie en bereid zijn om de bijbehorende taken uit te voeren. Vaak ondervinden zij echter weerstand van collega's die vasthouden aan de bestaande bestuurskundige tradities. Dit roept de vraag op hoe deze ambtenaren omgaan met deze tegenstand en toch succesvol kunnen zijn in het uitvoeren van transitietaken. Hiervoor introduceer ik een heuristisch model, dat de relatie tussen strijd en reacties inzichtelijk maakt. Dit model benadrukt dat er voortdurend strategisch werk nodig is om weerstand te

omzeilen, en benadrukt dat tactieken tijdelijk van aard zijn en kunnen falen. De bruikbaarheid van dit model is aangetoond aan de hand van onze case study van “Mobility as a Service” in Nederland, waarin ik de conflicten tussen tegenstrijdige rationales heb geanalyseerd en de voortdurende tactische aanpassing van ondernemende ambtenaren beschrijven.

De bestaande literatuur over maatschappelijke transitie geeft vaak beleidsaanbevelingen met de veronderstelling dat ambtenaren deze aanbevelingen kunnen opvolgen en beleidsmaatregelen kunnen implementeren die transitie versnellen. Hoofdstuk 5 stelt echter dat een overheids-transformatie nodig is om ambtenaren in staat te stellen deze aanbevolen taken uit te voeren, omdat de huidige institutionele structuren vaak een belemmering vormen voor verandering. Om dit probleem beter te begrijpen, heb ik vier ontwerpgroepen gefaciliteerd waaraan ambtenaren deelnamen die aan transitie werken binnen een Nederlands ministerie. Door hun discussies over alternatieve instrumenten die diepgewortelde institutionele obstakels kunnen overwinnen te observeren, heb ik twaalf voorlopige institutionele voorwaarden geïdentificeerd. Deze kunnen hen helpen om aanbevolen transitietaken uit te voeren volgens een transitierationale. Deze inzichten hebben tevens geleid tot nieuwe onderzoeksvragen over belangrijke uitdagingen, zoals hoe om te gaan met 1) onzekerheid, 2) implementeren van operationeel management, 3) wederzijdse ervaren verantwoordelijkheid voor het systeem en 4) loskomen van het huidige systeem om de duurzame transitie te begeleiden.

Dit onderzoek heeft zich gericht op het identificeren van een transitierationale die door ambtenaren als legitiem wordt beschouwd en waarin zowel transitie-literatuur als bestuurskundige concepten zijn opgenomen. Deze nieuwe rationale is nodig omdat de huidige bestuurskundige tradities gedeeltelijk delegitimiseren wat er van ambtenaren wordt verwacht bij het uitvoeren van transitietaken, en daarom incompatibel zijn met systeemverandering. Ik introduceer daarom de rationale “Transformatieve Overheid”, die duurzaamheidstransities verbindt met geaccepteerde legitimeitsclaims uit de bestuurskunde. In de praktijk is een Transformatieve Overheid een overheid die begrijpt, accepteert en uitvoert wat er van haar wordt verwacht bij transitietaken, op basis van een nieuw normatief kader. Deze rationale schrijft voor wat er moet gebeuren; het combineert concepten van systeemverandering met een begrip van administratieve processen, legitimeit en democratie om een gelegitimeerde aanpak van transitietaken mogelijk te maken.

Om de rationale van de Transformatieve Overheid in de toekomst te laten uitgroeien tot een volwaardige bestuurskundige traditie, moet deze stevig verankerd zijn in de filosofie en theorie van de bestuurskunde. In de discussie schets ik enkele contouren van deze traditie, met behulp van de vergelijkingscriteria die door Stout (2013) zijn geformuleerd. Ik stel dat een nieuwe traditie noodzakelijk is wanneer bestaande obstakels systematische verandering in de weg staan en inertie veroorzaken. De Transformatieve Overheid geeft handelingsperspectief voor overheden in een situatie van systematische lock-in, die het momenteel onmogelijk maakt om duurzame, systematische veranderingen te bewerkstelligen.

Word of thanks

Hoewel het nu zo is gelopen, had het op zoveel andere manieren kunnen gaan. Zonder hulp, aanmoediging, afleiding en geboden kansen van allerlei kanten was dit proefschrift nooit tot stand gekomen. Aangezien praktisch dit hele proefschrift over rekenschap afleggen gaat, zou het van hoogmoed getuigen om hier geen toelichting op te geven.

Tijdens de IenW leergang innovatie in 2018, gegeven door het Copernicus Instituut, kwam het oude verlangen om promotieonderzoek te doen weer naar boven. Dit werd versterkt doordat ik allerlei mogelijke toepassingen van het onderwezen TIS model zag voor het innovatie ecosysteem van het ministerie. Nadat ik dat idee had doorgevoerd binnen de unit innovatie en daar trots terugkoppeling over gaf aan Marko bij de volgende sessie van de leergang, gaf hij aan dat dat best creatief was, maar niet waarvoor het bedoeld was (nu ik daarover nadenk was dat een voorafschaduwing). Dat was het begin van het continue gesprek over hoe ideeën over transitie wel toepasbaar gemaakt konden worden voor een overheid.

Marko, als mijn promotor gaf je me de kans om te beginnen met mijn onderzoek. Jouw naam zorgde direct voor enthousiasme bij IenW. Ik heb veel bewondering voor hoe je stuurde door me vertrouwen te geven in mijn ideeën én de juiste momenten koos om me aan te sporen wanneer iets echt beter moest. Het is nog niet klaar met de Transformatieve Overheid en ik hoop dat we daar gezamenlijk nog een slinger aan kunnen geven.

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Drie vrienden hebben ook vanuit een professionele setting bijgedragen aan de these. Bon, m'n maatje vanuit de unit innovatie, je komt eigenlijk in elk hoofdstuk voor. Marijn, na een overeenkomstige traineeroute met wilde plannen om de overheid te transformeren, geef je me nu telkens weer het gevoel van vertrouwen dat het goed komt. Bert, de these gaat over de dialectische beweging tussen verandering en stabiliteit. Die zoektocht hebben we beiden ervaren in ons eigen leven, en je kon me altijd helpen de antithesis in beeld te krijgen. Verder hebben alle potjes schaaak me met mijn voeten op de grond gehouden en daarmee ontspruitende hybris preventief en continu gesnoeid. Elk hoofdstuk is ook een gesprek met jullie drieën.

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'Mmm, the meaning is fine; I wonder if it can be rephrased more elegantly'. Ben, our conversations often went via this format: <<you sighing>> and saying: 'you know what, I am wondering' <<and sighing again>> and then some brilliant intervention. Without your help, my writing would not have been good enough. I am ever so grateful. Rosalien, je tekeningen hebben iets bijzonders, ze scherpen het nieuwe aan en confronteren het oude. Een van de leukste spin-offs van het promotietraject is dat de sloopkogel en de supervrouw zijn toegevoegd aan de Rijksiconografiebank! Daarnaast ben ik uitgebreid en uitmuntend geholpen door Hans, Dimphéna, Jeanine, Jens, Maarten, Charlotte, André, Peter, Stefan, Elly en Pieter-Paul.

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Martijn en Trudie) en nu ook BJJ (o.a. Daan, Sajil, Bart, Paul en Maarten) waren erg belangrijk de afgelopen jaren. *OSU*. De *do* breidt zich nu uit met DB; Annelies, ontzettend bedankt voor de steun en de lessen.

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‘De schoonheid die je in mij ziet, is een reflectie van jou’ – Rumi (gedicht ‘jou’ vertaalt door Kader Abdulah in *Wat je zoekt, zoekt jou*, 2023: 289).

Rik

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About the author

Rik Braams (1989) obtained his bachelor's and master's (cum laude) degrees in Political Science at the University of Amsterdam, with a specialization in Public Policy and Administration. After university, he started with a traineeship at the Dutch government. He currently works as a civil servant in the innovation department at the Dutch Ministry of Infrastructure and Water Management. His work mainly focuses on how the Ministry can integrate transition goals into its policy. From 2019 to 2023, he was partly posted at the Copernicus Institute for Sustainable Development at the University of Utrecht to research the role of ministries within transitions. Rik's research interests include and combine public innovation, Public Administration, and Transition Literature.

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Dyslectic charge

Over the past decade, there has been a significant shift in the way dyslexia is perceived. New research from an evolutionary perspective now suggests that dyslexia is not a learning disorder, but rather a configuration specialized in explorative cognitive processes, such as discovery, invention, and creativity. This specialization requires complementary strategies and interdependence to balance out trade-offs with exploitation. Dyslexia can thus be seen as a possible strength when supported in collaboration (Taylor and Vestergaard, 2022).

For too long, the central question of what these brains are built to do has been ignored, despite suggestions that people with dyslexia have superior talents related to arts, architecture, and engineering. This failure to ask the right question affected 5 to 20 percent of the population. The problems dyslexic people face with writing and reading have created heavy burdens for them in a language-dominated world.

Being wired for exploration can be seen as being adapted to search, variation, flexibility, experimentation, discovery, and innovation. To have more tolerance to extensive, divergent ways of thinking suitable for diffuse and breadth gist. In contrast, exploitation is aimed at an intensive, convergent, and focused way of thinking, excellent for depth and accurate tasks (Taylor and Vestergaard, 2022).

I put this section in my thesis, perhaps seemingly out-of-place and, perhaps, therefore, inconsequential, but in the hope of a reevaluation of this way of thinking in social science research. I am not aware of statistics on how many dyslectic Ph.D.-student there are, but giving it an educated guess, not 5 to 20 percent. A hypothesis could be that they did not make all the language-loaded hindrances one has to take to be considered for a Ph.D. position. Social science is, therefore, missing out on valuable insights people with dyslexia have to offer who have a spiky profile towards exploration. This profile can be supported by collaboration and tools (for me, patience and appreciation of my qualities by the team and my colleagues, consistent supervisory support to improve structured writing, Grammarly, NaturalReader 16, and English-writer support were lifesavers). When this happens, explorative thinking of people with dyslexia could significantly contribute now that the world is in dire need of alternatives.

