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

Rik B. Braams^{a,c,*}, Joeri H. Wesseling^a, Albert J. Meijer^b, Marko P. Hekkert^a

^a Copernicus Institute of Sustainable Development, Utrecht University

^b School of Governance, Utrecht University

^c Dutch Ministry of Infrastructure and Water Management

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ABSTRACT

The literature on transitions recommends that both the government and the civil service should engage with profound societal problems requiring a fundamental socio-technical system change. We analyzed a corpus of 100 publications to cluster the transition tasks that the transitions literature attributes to government. 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 specific tasks, many of the transition tasks assigned to government do not align well with any of the PA traditions. Thus, the normative basis for legitimizing sociotechnical transitions provided by the PA traditions, is inadequate. This finding is consistent with the recently flagged 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 the government's transition tasks.

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 sociotechnical transitions (e.g., Diercks et al., 2019; Schot and Steinmueller, 2018; Geels et al., 2016) and thus a fundamental shift towards sustainability in the sociotechnical 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).

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* Corresponding author: Address: Princetonlaan 8a, 3584 CB Utrecht, The Netherlands.

E-mail address: r.b.braams@uu.nl (R.B. Braams).

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Within the government, the civil service plays an essential 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, suggest 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 shown 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 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 sociotechnical transitions and the implications of transition tasks for government legitimacy. Simultaneously, scant attention has been paid to interpreting these traditions from the perspective of sociotechnical 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 sociotechnical 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 sociotechnical transitions. The underlying rationale developed 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 that can provide the legitimation for the government’s role in the sociotechnical 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 and complexity theory 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 (MLP) places niches in the context of two higher levels of structuration – the sociotechnical 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 radical 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 policymakers 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 that 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’ (Bokhorst, 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

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

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 a long-term transformative change to overcome societal problems.

2.2.1. 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, 2009), which failed to deliver 'a predictable and right-based service' (Torfing and Triantafyllou, 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 most minor 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 Triantafyllou, 2016: 16).

2.2.2. 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 Triantafyllou, 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 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 typically lacks (Osborne and Gaebler, 1993). Decentralization and deregulation should also compensate for this lack of systematic change, according to the discretionary perspective (Torfing and Triantafyllou, 2016).

2.2.3. 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 challenging 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).

2.2.4. 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

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 that 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 (Sorensen, 2012).
Characterization of legitimate action	The procedures and processes should be constitutionally transparent, 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).

Stout (2013) and Torfing and Triantafyllou (2016). These studies provide holistic insight into the PA traditions by constructing these, using an extensive set of variables (Stout, 2013: 100; Torfing and Triantafyllou, 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 rationality.² These models were combined into the following three overarching categories for assessing the transition tasks from the perspective of PA traditions: (1) their primary problem-solution diagnosis, (2) civil servants' role perception, and (3) the characterization of legitimate action. Table 1 provides an overview.

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.

2.3. The gap between transition literature and public administration literature

The study of the role of government in sociotechnical 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; sociotechnical 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 focuses on policy on system change and transformation (Schot et al., 2017). This led to a reformulation of three of the eighty codes.

An open coding procedure in NVivo 12 was used by the first author when he was manually searching for government tasks (see Fig. 1 for a

² See Table 4 in the Appendix 1

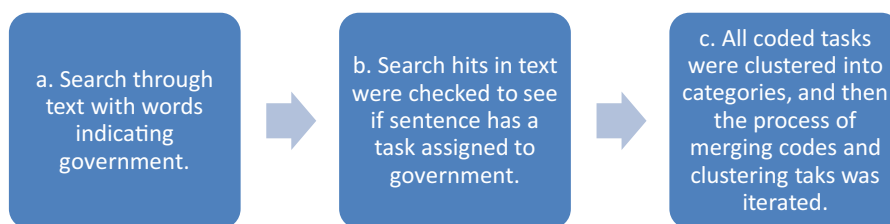


Fig. 1. Flowchart of the iterative coding process.

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 1380 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 Rohraher, 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 3](#) 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 readily 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 researchers.³

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

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 Triantafyllou (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 2). 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 coordination to multi-regime interaction, and (6) Tilt the landscape. Nevertheless, these intervention points are only found in the MLP literature and are not explicitly directed at government.

The first category was labeled *Give direction*. The failure to direct has been highlighted by Weber and Rohrer (2012) as a fundamental transformation failure that 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). The 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 essential role in opening up the process of transition for multiple stakeholders and collective action, encouraging others to participate (e.g., Fagerberg, 2018; Rotmans et al., 2001). Additionally, the government plays a vital 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 sociotechnical 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 specific 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 et al., 2008; Goddard and Farrelly, 2018; Kemp et al., 2007).

From the five categories and their multitude of underlying tasks listed in Table 2, 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.

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

Table 2
Assigned tasks to government prescribed by Transition Literature.

Category of transition tasks	Number of articles assigning tasks to Government / Total number of references	Specific transition tasks
1: Give Direction	25 / 72	<ul style="list-style-type: none"> - Articulate the direction: <i>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),</i> - Construct policy strategies in order to direct: <i>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).</i> - Reconfigure the market: <i>Create and shape markets (11), Form markets through minimal consumption quotas (12), Give direction through establishing a favorable tax regime (13), Give legitimacy to a technological field (14), Help the market decide on strategic investments (15).</i> - Direct through enforced regulations: <i>Enforce laws and IP rights (16), Standardize and regulate (17).</i>
2: Support Governance	27 / 65	<ul style="list-style-type: none"> - Activate actors: <i>Acknowledge the third sector and consumers (18), Encourage parties to participate (19), Make room for a variety of voices, arguments and interpretations (20).</i> - Guiding organizational arrangements: <i>Create coalitions and make covenants (21), Facilitate the development of networks (22), Facilitate Public-Private Partnerships (23), Improve governance (24), Mediate in brokering (25), Be the niche manager (26).</i> - Goals achieving strategies: <i>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).</i>
3: Support the new	39 / 102	<ul style="list-style-type: none"> - Engage in entrepreneurial experiments: <i>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).</i> - Establish market formation: <i>Build beneficial infrastructure for innovations (38), Create, protect and facilitate niches (39), Give temporary exemption from regulations (40), Mitigate initial negative impact of innovation (41), Remove institutional barriers (42), Stimulate and initiate new pilots and developments (43), Support diffusion (44).</i> - Price-performance improvements and resource mobilization: <i>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).</i> - Help new developments develop and diffuse: <i>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).</i>
4: Destabilize the unsustainable	16 / 21	<ul style="list-style-type: none"> - Control policies and make significant changes in regime rules: <i>Introduce extra goals and measures to redirect adverse developments (58), Reform tax system to tax the unsustainable (59), Restrict use of unsustainable practices (60), Introduce policies that erode unsustainable regimes (61)</i> - Reduce support for dominant regime technologies: <i>Address market failures responsible for unsustainability (62), Provide evidence from experiments for regime shifts (63), Slow down or stop new unsustainable developments (64).</i>
5: Develop internal capabilities and Structures (to enable external tasks)	21 / 41	<ul style="list-style-type: none"> - Rethink own role in a transition: <i>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).</i> - Development of new competencies: <i>Become more entrepreneurial (70), Analyze innovation systems (71), Build dynamic organizational capabilities (72), Understand new technological developments (73).</i> - Monitor and evaluate: <i>Continuous monitoring and evaluation (74), Develop the capacity for learning (75), Learn to experiment and explore (76).</i> - Establish mechanisms for policy coordination: <i>Coordinate between public institutes (77), Create new institutional conditions (78), Embed processes in institutes (79), Set up responsible institutes (80).</i>

traditions (see Table 5 in the appendix for an overview).

4.2.1. Constitutional rationale

The core premise of the constitutional rationale is the focus of civil servants on implementing decisions made by their ministers. 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.

4.2.2. 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 problematic 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 undoubtedly 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.

4.2.3. 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 more significant 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 a 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

Fig. 2 and Table 5⁴ provide an overview of the compatibility of each specific transition task with the different PA traditions.

Fig. 2 highlights that the three PA traditions do not align well with the government's transition tasks. 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 helpful in 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*.

⁴ See Appendix

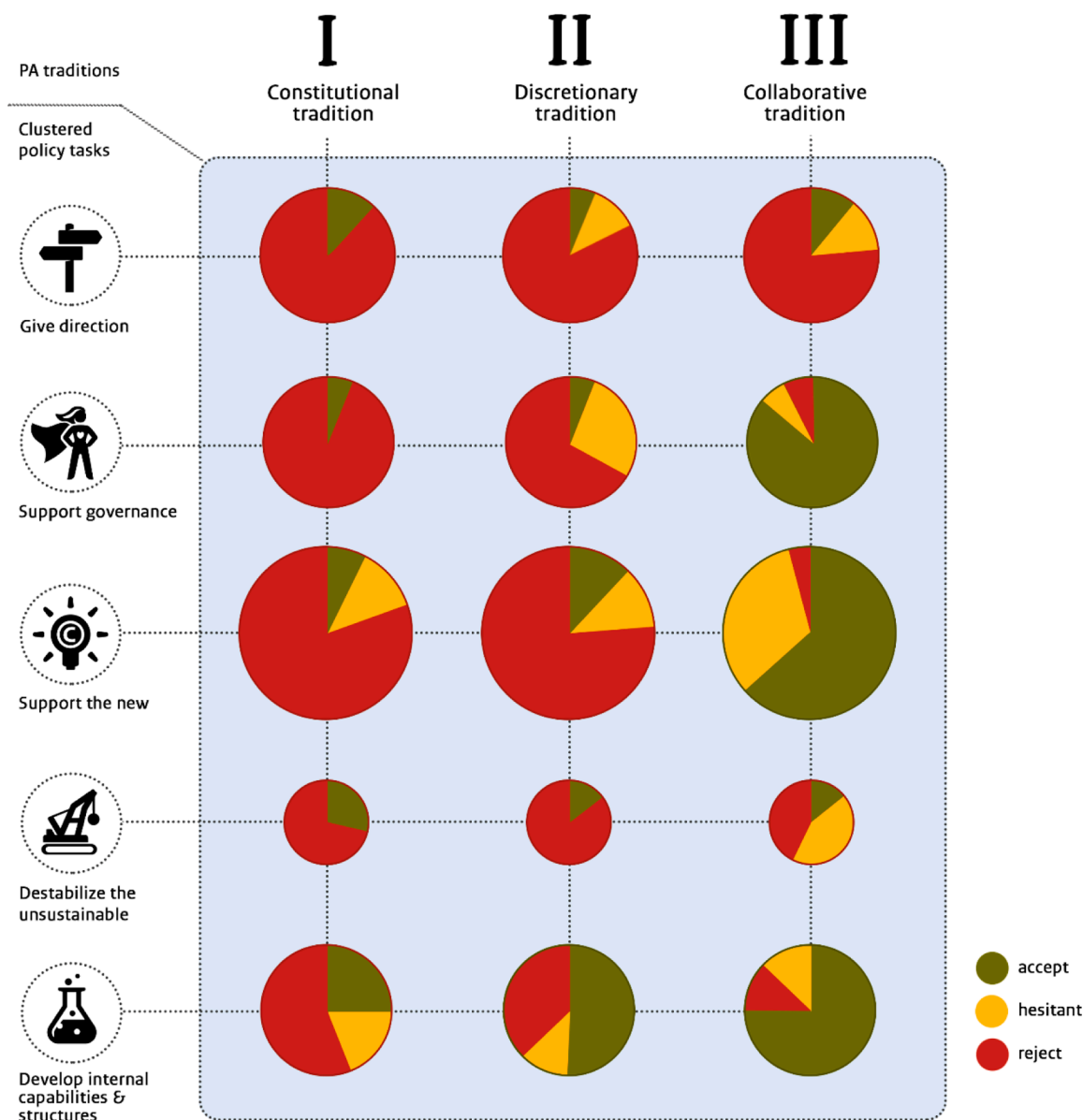


Fig. 2. Accepted/rejected ratio of transitions tasks in Public Administration traditions. The different diameters of the globes symbolize the differences in the number of tasks within the tradition. See the corresponding table in the Appendix.

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 a sociotechnical 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 a sociotechnical transformation. The legitimacy basis for the new tradition is the idea that the government is the guardian for particular 'weak' interests that are not sufficiently

Table 3

The problem-solution diagnosis, role perception of civil servants and legitimate action described for transformative government.

	Sociotechnical transition rationale
Problem-solution diagnosis	Transformative government would solve societal problems through sociotechnical 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 sociotechnical 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 in the negotiations.

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., 2007) 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 entire duration of the transition.

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.

The 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 though 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 a 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 little 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 judgment (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 actively debated with a broader audience without losing vigor and pace.

A third issue is a 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, the leading 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 entire 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 (Sorensen, 2017). This requires rethinking the complementarity and interdependence between politics and the civil service (Svara, 1999, 2001). 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 sociotechnical transitions literature and the PA literature align, in order to uncover possible tensions and prepare a synthesis to legitimize the government's role in sociotechnical 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 the 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 transition 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 gray 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 sociotechnical 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 sociotechnical transition towards a more sustainable society.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix

Table 4

Aggregated criteria from comparative models of [Stout \(2013\)](#) and [Torfing and Triantafyllou \(2016\)](#).

Aggregated criteria	Three traditions of public administration praxis (Stout, 2013)	Indicators comparing three governance paradigms (Torfing and Triantafyllou, 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.	

Table 5Transition 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	Constitutional tradition			Discretionary tradition			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
1. 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
2. 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
3. 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
4. Destabilize the unsustainable	59, 64		58, 60, 61, 62, 63	62		58, 59, 60, 61, 63, 64	63	59, 62, 64	58, 60, 61
5. 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

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