government.com? Multifunctional cabinet portfolio analysis of 201 national governments

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Purpose: This study examines how much value national governments worldwide place on political, economic, scientific, artistic, religious, legal, sportive, health-related, educational, and mass media-related issues. This knowledge is critical as governments and policies are typically expected to be congruent with the importance these issues have for society.

Design/methodology/approach: Drawing on theories of polyphonic and multifunctional organization, we recoded and analyzed a US Central Intelligence Agency (CIA) directory to test the cabinet portfolio of a total of 201 national governments for significant biases to the above issues.

Findings: The results suggest that governments worldwide massively over-allocate their attention to economic issues.

Originality/value: We conclude that this strong pro-economic governance-bias likely translates into dysfunctional governance and development at both the national and supra-national level.

Keywords: Governments; cabinet portfolios; polyphonic organization; functional differentiation; social systems.

1. Introduction

In office since March 2018, the 24rd Federal Cabinet of Germany consists of – at least – four ministries for economic issues[1], one ministry of health, and one for both education and research. Economic issues are certainly important. Even if we trust that the German government does not actually mean to say that economy is four times more important than health and eight times more than either education or research, however, there is little doubt that this bias to economic policy issues does say something about how the German government defines the role of the German state and observes the German society; and there is no doubt that the German gaze on economy is not necessarily typical of all governments in the rest of the World.

In this article, we investigate how important different policy issues are to different national governments at the level of the design of cabinet portfolios. Unlike earlier research on salience in a cabinet design context, our focus is not on the importance of individual ministers as expressed by the length of ministerial tenure (Berlinski, Dewan, and Dowding, 2007; Scharfenkamp, 2018), the subjective value different parties place on different portfolios (Laver, 1985), on policy impacts of cabinet size (Bandyopadhyay and Oak, 2008), or the distribution of cabinet positions among partners in coalition governments along the lines of preconceived ministry prestige rankings (Druckman and Roberts, 2008; Druckman and Warwick, 2005; Escobar-Lemmon and Taylor-Robinson, 2009). Rather, we are interested in policy issue salience as expressed by the number of ministries that address political, economic, scientific, educational, health and further policy issues, and we trust that the resulting policy issue salience profiles are informative both for individual governments and for international comparative research. In concrete terms, *our research question is how much value national governments worldwide place on political, economic, scientific, artistic, religious, legal, sportive, health-related, educational, and mass media-related issues.* This question is relevant because recent big data research (Roth, Clark, et al., 2017; Roth et al., 2018) has suggested that the importance of these issues may be subject to change throughout the decades and centuries and not in line with commonly held expectations about the over-average significance of economic issues.

In order to find out how important individual policy issues are for individual governments, we first suggest thinking of governments as organizations in general and polyphonic organizations in particular. We then build on groundwork that combined the concept of polyphonic organization with key concepts of social systems theory (Luhmann, 2012, 2013a) and recent developments in theories of social differentiation (Andersen, 2003; Andersen and Born, 2000, 2007; Esmark, 2009; Roth, Sales, et al. 2017; Will et al., 2018; Valentinov et al., 2018). Based on this extended concept of organizational polyphony, governments may be understood as multifunctional organizations, i.e., organizations that can refer to and feature distinctive biases to one or several of the probably ten function systems of society: economy, health, science, education, art, law, religion, sport, mass media, and, last not least, politics. We then proceed to present the design and results of a multifunctional analysis of the ministerial portfolio of a total of 201 national governments as at 07 February 2017. To this end, we draw on Niklas Luhmann's theory of social differentiation in general and of functional differentiation in particular so as to identify the function-systemic orientation(s) of the individual ministerial portfolios. As our results indicate that the majority of governments worldwide massively over-

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[1] We are counting the Federal Ministries of Economic Affairs and Energy; for Economic Cooperation and Development; of Food and Agriculture; and of Finance. Moreover, the Federal Ministry of Labour and Social Affairs and the Federal Ministry of Justice and Consumer Protection display a significant focus on economic issues.

allocate their attention to political and economic issues, we conclude that this strong bias likely translates into dysfunctional governance at both the national and supra-national level. This assumption is buttressed by the circumstance that a narrow policy focus on political and economic issues foils recent attempts to challenge and redefine dated concepts of progress and well-being and to develop more comprehensive, multi-dimensional indicator systems such as the *OECD Framework for Measuring Well-Being and Progress* or *the Happy Planet Index.* Against the background of these ambitions, a strong bias economy bias that comes at the expense of a sometimes perplexingly weak significance or even complete ignorance of other systems would be indeed highly problematic.

2. Theoretical background: Governments as multifunctional organizations

In organization theory, governments belong to the foundational examples of organizations (Selznick, 1948), and there is also little doubt that governments are political organizations. Although otherwise known for his often-counterintuitive approach to society in general and organizations in particular, Niklas Luhmann also held governments to be organizations of the political subsystem of society.

In this section, we shall first introduce and then challenge the idea that governments are organizations of the political system, before we go on to characterize governments as multifunctional organizations.

Governments as organizations

Niklas Luhmann's organizations are communicative systems (Teubner, 1987; Brans and Rossbach, 1997; Hernes and Bakken, 2003; Luhmann, 2003, 2005; Hernes & Weik, 2007; Kuhn, 2008; Schoeneborn, 2011; van Assche et al., 2012, 2014; Blaschke et al., 2012; Collm and Schedler, 2014; Schoeneborn & Sandhu, 2014; Valentinov et al., 2018; Will et al., 2018). These "organizations consist of decisions" (Nassehi, 2005, p. 186) and not of humans, people, or actors. They do not even consist of decisions made by humans, people, or actors, because decisions are particular types of communication and therefore systematically transcend the motives or behaviours of participants in communication. Whereas the presence or absence of participants in communication is critical in defining the demarcation and continuance of interactions, decision communication is defined as communication that communicates its own contingency as all decision communication implies the communication of excluded alternatives. Decisions about interactions are therefore completely different from interactions about decisions, and strictly speaking there are no interactions in organizations as organizations consist of decisions and only decisions.

Organizations appear if we observe chains of decision communications rather than chains of individual behaviours. Without any need for reference to other forms of communication or much less to the role of individual participants, Luhmann argues that organizations as autopoietic systems of decision communication emerge because the more decisions are communicated the more alternatives are communicated, too, and the more alternatives are communicated, the less justified is a made decision for one out of an ever-growing multitude of alternatives. In this way, decision communication creates a self-amplifying drift to ever-more decision communication.

Once made, however, past decisions can also guide further decisions and thus function as decision premise. This guidance absorbs the insecurity that is often observed to result from the ultimately contingent nature of every decision. Open contingency is transformed into fixed contingency (Pors and Andersen, 2015). The longer the chain of decisions, the harder it is to observe the entire chain, and the bigger the need and challenge to filter out the particularly

instructive decisions or sequences of decisions. The linking of in principal always contingent decisions soon creates self-legitimated, self-sustained, and idiosyncratic structures made of decisions and only of decisions which we may refer to as organizations (Rodriguez et al., 2018). True to Luhmann (2003, 2005), organizations feature four basic forms of fixed contingency referred to as decision premises: personnel, communication channels, programs, and organizational culture. Whereas personnel decisions are membership-related decisions regarding the recruitment or re-/allocation of persons to positions, the design of organizational communication channels defines where positions are located in the organizational architecture of information flows. Decision programs are installed to check whether decisions are made properly. "Luhmann distinguishes two different types of programmes depending on whether they are oriented towards input or output. 'Goal programmes' are those which take a particular systemic response as invariant and accordingly select 'causes' that bring it about. Conditional programmes hold constant particular 'causes' which, whenever they occur, trigger a particular type of action" (Brans and Rossbach, 1997, p. 423; see also Verhoest et al., 2004). Last not least, organizational culture refers to those premises that remain inaccessible for decision such as foundational decisions or organizational routines.

Although particularly the latter two forms of decision premises are critical for our research on indented or unintended observational biases that governments have to decisions on particular policy issues and the corresponding function systems, a mere definition of governments as organization is not yet enough to characterize governments as specific organizations as compared to, e.g., firms, schools, or hospitals. We therefore need to also speak about the differences that make the difference between these different social systems.

Organization and social differentiation

Organizations such as firms, schools, or hospitals obviously have different functions for society. The differentiation of functions, however, is a relatively recent form of social differentiation (Dunsire, 1996; Andersen, 2005; Rennison, 2007; van Assche and Verschraegen, 2008; Esmark, 2009, 2018; Peña, 2015). Roth, Sales, et al. (2017) have recently suggested that Luhmann has implicitly combined two foundational sociological distinctions —similar versus dissimilar and equal versus unequal— in order to distinguish "initially three (Luhmann, 1977, p. 32ff) and later four basic forms of social differentiation (Luhmann, 2013a, p. 12f)". The result of this exercise is present in the subsequent table (see Table 1):

		Equal	
		+	−
Similar	+	Segmentation (Families, tribes, nations, etc.)	Centralization (Civilizations, empires, etc.)
	−	*Functional Differentiation (Economy, Science, Art, etc.)*	Stratification (Castes, estates, classes, etc.)

Table 1: Social Differentiation (Roth, Sales, et al., 2017, p. 197)

The authors then follow Luhmann in stating that segmentation, i.e., the distinction of similar and equal subsystems such as families or tribes, is probably the oldest form of social differentiation. They give examples of how segmentation works and go on to show that centralization or stratification overruled the principles of segmentation in the formation of Ancient Civilizations or Middle Age caste or feudal systems. In the transition to modern

society, these forms of social differentiation were again superposed by functional differentiation, which refers to the distinction of dissimilar yet equal subsystems. Thus, functional differentiation constitutes one out of four distinct forms of social differentiation. Moreover, functional differentiation is the most recent form of social differentiation, and therefore often considered to the form that is typically modern society (Brans and Rossbach, 1997; Andersen, 2005; Esmark, 2009, 2018; van Assche et al., 2014; Valentinov, 2015; Andersen & Pors, 2016; Will et al., 2018).

A typically modern trait is hence that a functionally differentiated society does not feature any form of built-in preference for one particular function system.

"Since all functions have to be fulfilled and are the necessary interdependent, society itself cannot give functional primacy to one of them; it has to use a second level of subsystem-building to institutionalize a primacy of specific functions for a special set of system/environment relations. Salient examples are the political function of providing for collectively binding decisions, the economic function of securing want satisfaction within enlarged time horizons, and the religious function of interpreting the incomprehensible." (Luhmann, 1977, p. 35)

Thus, it is precisely because modern society does not have a default preference for a particular function system that we can observe ever-changing trends in the salience of function systems in modern society (Roth et al., 2017; Roth et al., 2018) and hence in modern organization.

From a differentiation-theoretical perspective, the observation of a government as a political organization, a firm as an economic organization, or a school as an educational organization is the result of a combined observation of segmentation and functional differentiation. Organizations are segments of decision communication and as such both similar and equal to other organizations. In order to observe dissimilarity or inequality, we need to combine the observation of organizational segments with the observation of other forms of social differentiation. For example, we may find that some organizations are characterized by a hierarchical, stratified organizational structure, whereas the structure of other organizations rather resembles networks of more or less de-/centralized communication.

If we observe organization through the lens of functional differentiation, we find that the dominant idea is that organizations are tightly coupled to or predominately form within only one function system (Esmark, 2009, p. 368). Luhmann does not precisely exclude the option of organizations without clear function system reference, and yet he considers this option a rare case rather than the standard case of organization (Luhmann, 2005b, p. 280; see also Knudsen, 2017, p. 21). This idea has been substantially challenged with specific focus on public governance (Andersen, 2005; Rennison, 2007; Esmark, 2009), and more generally by works on polyphonic organizations (Andersen, 2003; Andersen and Born, 2007; Thygesen and Andersen, 2007; Knudsen, 2015, 2017; Knudsen and Vogd, 2015; La Cour and Højlund, 2017) that extended the original concept of organizational polyphony beyond the focus on the rediscovery of systematically silenced voices of members with certain cultural, racial, or gender-profiles (Hazen, 1993, 1994, 2006; Kronberger et al., 2006; Sullivan and McCarthy, 2008; Belova, 2010) to now also include the dimension of functional polyphony. True to Andersen (2003), all organizations may be divided in homophonic and polyphonic organizations. "A homophonic organization is one that has a primary codification, which regulates the relevance of codifications" (164); by contrast, "an organisation is polyphonic when it is connected to several function systems without a predefined primary function system" (167). In this context, Andersen observes a recent trend to more functional polyphony, and Andersen and Born (2007) have even identified a trend to functional heterophony, which refers to cases where all function systems are equally important for the respective organization. From this, and in the light of the observation that the perceived importance of function systems is subject to regular change even at the level of large-scale social systems (Roth, Clark, et al., 2017), Will et al. (2018) have recently concluded that all organizations are multifunctional, i.e.,

that all forms of organization "serve as 'transmission links' between the functional systems" (Rennison, 2007, p. 151) and therefore are, in principle, able to adapt their function system preferences to changing organizational requirements and environments. This option also includes the conversion of former non-profit organizations into for-profit organizations, or vice versa (Will et al., 2018).

In this article, we combine the ideas of organizational heterophony and multifunctionality to develop a research design that allows for a functional profiling of organizations in general and governments in particular.

Governments as multifunctional organizations

If we define governments as multifunctional organizations, we need to admit that strictly speaking Luhmann hardly spoke of governments as organizations. This might be due to the fact that the term government also plays a prominent role as one side of the code of the political function system, which is government/opposition. In fact, this wording is untypical as compared to the designation of the codes of other function systems such as true/untrue for science or immanent/transcendent for religion and has therefore been disputed and challenged even by Luhmann (2000, p. 88) himself, who brought an alternative code — superior/ inferior— into play.

This issue notwithstanding, Luhmann spoke of the "machinery of government" (Luhmann, 2013a, p. 68) in ways that suggest he nonetheless conceived of governments as organizations. Governments have departments (Luhmann, 2013b) and budgets (Luhmann, 2013a, p. 111) and often also debts (id., 235). Sometimes, Luhmann (2015, p. 28) also compares governmental organizations and administrative organizations, which is only consequential as governments obviously do make decisions (Luhmann, 2019, p. 401).

For us, the critical difference to Luhmann is that we do not contain governments exclusively within the political system. Governments strategically use money or laws (Brans and Rossbach, 1997, p. 430), and not least in view of said governmental budgets and debts, we wish to leave open the possibility that governments could follow non-political logics more often than political ones. As much as we can imagine a firm dominated by micro-politics or a hospital dominated by economic rationality, our approach therefore does not exclude the option that, for example, economic constraints and issues regularly prevail in what officially is a political decision-making process, and that we ~~consequently~~ may consequently wonder whether such an economy-biased decision-making process is still a political one, or whether an organization formally called government can also gradually turn into a corporation.

In this sense, our multifunctional perspective allows for a systematic scanning of governmental function system preferences that avoids the foregone conclusion that all governments principally are political organizations.

3. Operationalization: A multifunctional spyhole to 201 governments

In view of the large number of governments worldwide, as a first approximation to the above multifunctional scanning of governments, we decided to focus on national governments and to use the design of cabinet portfolios as a first proxy for the function system preferences or biases featured by individual governments.

We started from the assumption that governments are multifunctional organizations. In the light of the principle equivalence of the function systems (Knudsen, 2011, p. 128; Wetzel and van Gorp, 2014, p. 121; Peña, 2015, p. 58), the *null hypothesis* would therefore be "heterophony", i.e., H0 would be that governments consider all function systems to be of equal

value and therefore exhibit a uniform distribution of ministries per each of the function systems: politics, science, law, economy, religion, art, health, education, sport, and mass media. As we can expect governments to feature a certain politics-bias, however, we modified H0 insofar that we took it for normal that governments display an over-representation of ministries devoted to political issues.

Our *alternative hypothesis* H1, therefore, was that national governments display unequal distributions of ministries devoted to the ten function systems.

As we furthermore intended to check whether functional differentiation is an adequate framework for a comparative analysis of national governments, we also looked into the proportion of ministries with clear function system reference(s) as compared to ministries with ambiguous or absent function system references. Our *complementary alternative hypothesis* H2 therefore suggests that most cabinet member designations show a clear reference to one or more function systems. In light of the assumption that functional differentiation is a typical feature of modern societies, in line with prevailing prejudices, we therefore assumed that the number of cabinet member designations with clear function system reference(s) in countries belonging to the so-called developed world is higher than that in the case of governments of emerging or developing countries.

In order to test our hypotheses, we used data from the US Central Intelligence Agency (CIA) directory of *Chiefs of State and Cabinet Members of Foreign Governments* as per 02 February 2017 (available at https://www.cia.gov/library/publications/world-leaders-1/). This directory lists members of "as many governments of the world as is considered practical, some of them not officially recognized by the United States" and is, consequently, very comprehensive. To this data we added the corresponding information of the US government and from which we deleted information on non-cabinet members and institutions such as ambassadors or directors of central banks. We thus compiled a list of 4763 ministries containing *country names*, *designation of ministries* or equivalent subdivisions of the national government including presidents, vice-presidents, prime ministers and similar positions.

We then proceeded to code the designations of the chiefs of state and cabinet members in line with our multifunctional framework.

The coding was conducted as follows: A president or prime minister position was coded as *politics* as was a ministry of defense or civil service and administrative reform; ministries of finance, trade, commerce, economic development, or economy were coded as *economy*; ministries of education or sport as *education* or *sport*, etc. In this context, multiple coding was possible as, for example, in the case of a ministry for "National Education, Teaching, Research and Arts".

In order to manage coding ambiguity, we labelled ministries such as those of internal or foreign affairs as *politics2* as these ministries clearly have a strong political orientation and yet often also have non-political missions. We also coded the many ministries of resources such as oil or natural resources and even those of labor or agriculture as *economy2* so as to enable us to subtract these potentially ambiguous ministries in the context of the testing of H2. This coding exercise was a rather challenging one: a ministry of *industry* is relatively clearly related to the economy. The same holds true for a ministry of *mining industry* and probably also for a ministry of *forestry*, whereas the economy-focus of a ministry of *forests* might be less apparent, especially if forests are combined with *environment* or *ecology*. In a similar way, a ministry of

energy industry features a stronger economic connotation as compared to a ministry of *energy and water*, the latter of which apparently has a stronger infrastructure focus. But then again, how about a ministry of *water resources*, in which case the term resource carries the notion of a strategic management of potential scarcity, and thus a clear economic connotation? In this sense, we coded as *economy2* ministries that displayed a focus on the strategic management of basic needs or resources such as food, gas, or labor "to ensure future supply under conditions of scarcity" (Luhmann, 2013a, p. 96). Ministries with an even more straightforward economy-focus such as those of *economy, finance, trade, commerce,* or *industry* were coded as *economy*. This distinction corresponds largely to Luhmann's (2013a, p. 96) distinction between the performance (*economy2*) and the function (*economy*) of the economy, to which we add the third category of *economy3* for ministries explicitly and exclusively (or in combination with non-economic functions) devoted to natural resources, the environment, or ecological issues, and therefore concerned with second-order scarcity-observations against the background of the well-known limits to natural resources and economic growth. A code splitting-approach was also chosen in the case of ministries of culture, which were coded as *art2* because although ministries of culture definitely often have a strong art focus, the term culture is just as often used to include religious or educational as well as non-function system-related issues. In all these cases of code splitting, we avoided multi-allocation of codes from one code family: e.g., a ministry of *industry and mines* was coded once as economy (for *industry*) and twice as *economy* and *economy2*, or a ministry of *water resources and the environment* as *economy2* and not also as *economy3*. Ministries without any function system-reference were allocated to the residual category *residual*. Given the complexity of the matter, the coding was conducted in several rounds until emerging issues were addressed to the satisfaction of the co-authors.

After the coding process, all codes from individual ministries were summed up as a *country x function* matrix, in which all 201 different countries were represented as rows and the different governmental functions were represented as columns (i.e. *art/art2, economy/economy2/economy3, education, health, law, mass media, politics/politics2, religion, science, sport,* and *residual* for the residual categories). In addition, *economy_sum, politics_sum* and *art_sum* were calculated by summing the subcategories within these particular functions. If a minister had a multi-functional role, each role was added to the country-level summary matrix.

According to Kolmogorov-Smirnov and Shapiro-Wilk tests, all our governmental function variables clearly violated normal distribution assumptions. Therefore, a non-parametric Friedman test was carried out to compare whether countries are following equal or unequal distributions of resources between different government functions. Furthermore, absolute and relative mean, min, and max values for each function system were calculated as well as absolute median and standard deviation values.

4. Results: The business of governance worldwide

4.1 The absolute distribution of the number of ministries by the main government functions
In all our dataset included 201 countries which altogether had 4763 different ministers and, due the multi-coded ministries, 5255 different ministry functions. Table 2 presents absolute and relative mean, median, min and max values as well as absolute standard deviation values for the number of government ministries by the defined government functions.

| | Absolute | | | | | Relative %-share | | | |
Government function	Mean	Median	Std. Dev.	Min	Max	Mean	Median	Min	Max
Grand Total	**26.144**	**24**	**10.220**	**7**	**85**				
POL_SUM	**8.224**	**7**	**4.695**	**2**	**56**	**31.85**	**30.77**	**16.67**	**100.00**
Politics	6.507	6	4.538	1	54	24.73	23.08	6.67	83.33
Politics2	1.716	2	0.620	0	4	7.12	6.67	0.00	28.57
ECO_SUM	**7.597**	**7**	**3.327**	**0**	**21**	**28.79**	**29.51**	**0.00**	**45.83**
Economy	3.284	3	1.742	0	15	12.66	12.50	0.00	26.32
Economy2	3.766	4	2.156	0	12	13.94	13.89	0.00	28.57
Economy3	0.547	1	0.556	0	2	2.19	2.00	0.00	14.29
RES	3.025	2	2.483	0	19	10.76	10.26	0.00	28.79
Education	1.448	1	0.937	0	7	5.57	5.00	0.00	14.58
Law	1.184	1	0.749	0	5	4.66	4.35	0.00	18.52
Mass_Media	1.114	1	0.789	0	4	4.18	4.35	0.00	13.33
Health	1.030	1	0.330	0	4	4.34	4.17	0.00	14.29
ART_SUM	**0.826**	**1**	**0.441**	**0**	**2**	**3.37**	**3.57**	**0.00**	**14.29**
Art2	0.711	1	0.506	0	2	2.98	3.33	0.00	14.29
Art	0.114	0	0.319	0	1	0.39	0.00	0.00	5.26
Science	0.731	1	0.646	0	3	2.74	3.13	0.00	10.00
Sport	0.701	1	0.480	0	2	2.66	3.03	0.00	10.00
Religion	0.264	0	0.604	0	4	1.09	0.00	0.00	50.00

Table 2. Distribution of ministries by government main functions (N=201)

Based on our global analysis of median cabinet portfolio structures, a typical government comprises 24 ministries whose functional structure is divided as follows: The most dominant functions are politics *(pol_sum)* and economy *(eco_sum)*, each with 7 ministries. In terms of relative share, these two functions cover over 60 percent of all ministries worldwide. For most of the remaining government functions, the absolute median value is 1. The least popular government function is religion as the only function having zero absolute median value. The residual category of ministries without function system reference *(res)* has an absolute median value of 2 and a relative share of less than 11 percent. In brief terms, we may conclude that a typical portfolio comprises 7 politics-oriented ministries, 7 economy-oriented ministries including 3-4 resource-specific ministries *(economy2/E2)* and 1 ministry of environmental and ecological issues *(economy3/E3)*, no ministry for religious issues *(rel)*, and 1 ministry each for the remaining functions: education *(edu)*, law, mass media *(med)*, health *(hea)*, art (mainly in the form of *art2/A2*, i.e., ministries of culture), science *(sci)* and sport *(spo)* (see Figure 1).
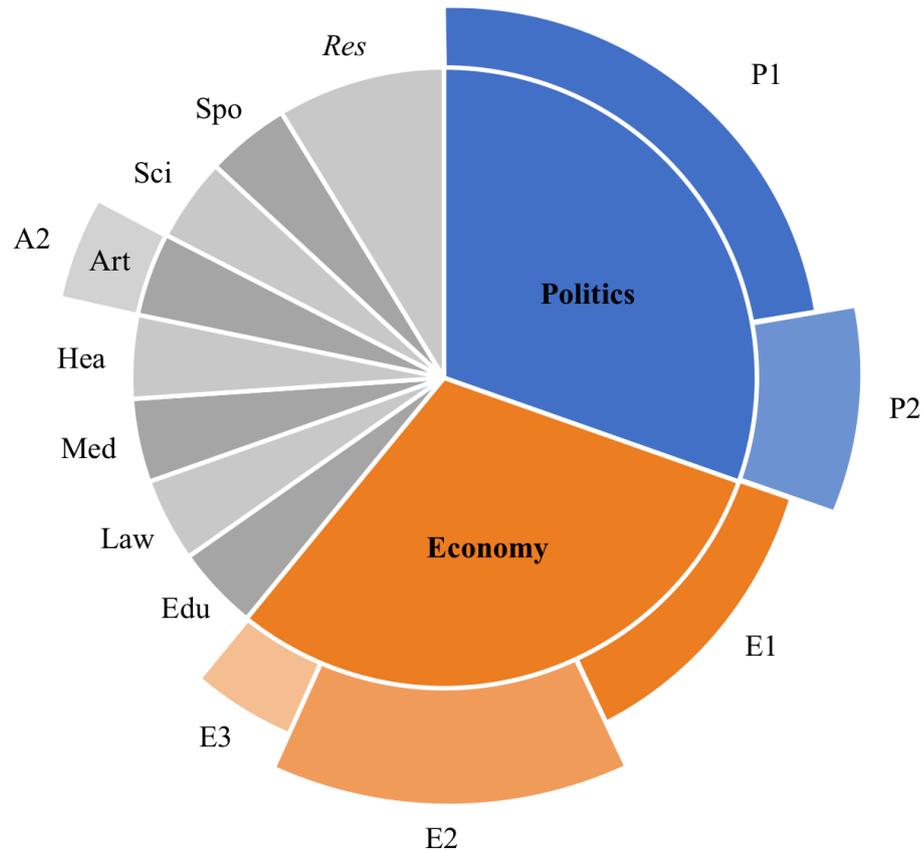
Figure 1. *Cabinet portfolio of a typical government based on the median numbers of ministries per function system within our sample of 201 governments worldwide*

In a typical government, the government functions are almost always based on single roles (i.e. according to our classification ministry had only one function system code). The median value for single role ministries was 23, which represents a 91.67 percent relative share median value. The median value for double role ministries was 2, which represents an 8.00 percent relative median value. Triple and quadruple ministry roles are rare, and for both of them absolute median value is zero. Relative share mean value comparison represents a 0.95 percent share for triple roles and 0.14 percent share for quadruple roles.

4.2 Hypothesis testing

A non-parametric Friedman test was carried out to compare which government function had equal or unequal amounts of ministers. In Figure 2, a network image is presented in which the links between the nodes (i.e. government functions) illustrate the equal amounts of ministers.
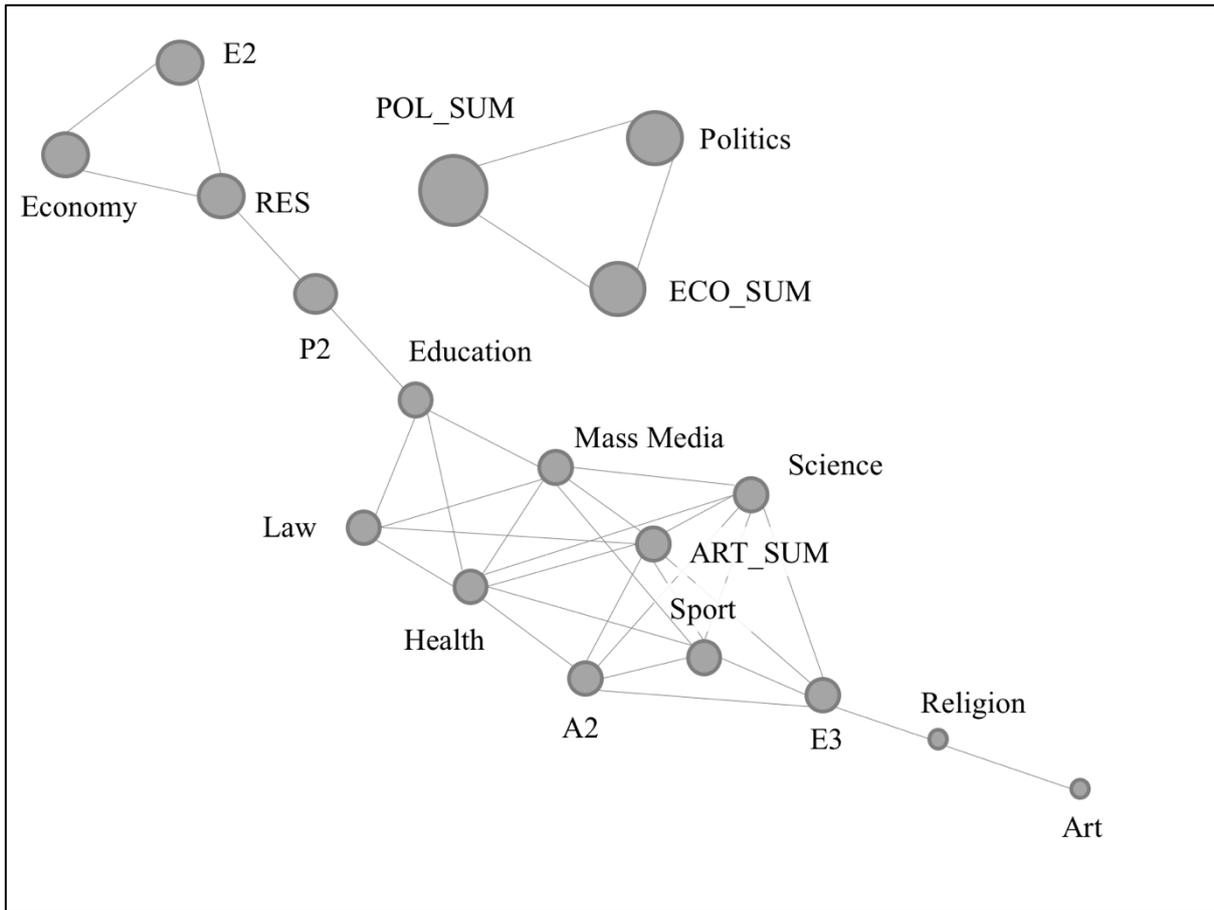
Figure 2. *Network image illustrating the government functions having equal amount of resources (N=201)*

It appears that the *politics_sum* function (30.77 % relative share median value) had equal amounts of ministers with *economy_sum* (29.51%) function. As a result, it is evident that the different government functions indeed are not equally valued, since political and economy functions are overwhelming all other government functions. However, there seems to be a balance between political and economy functions when these are reviewed as a sum function. Nevertheless, the subcategory-level analysis of the political and economy functions revealed a somewhat different strategy between these two main government functions.

In the case of the *politics_sum* function *politics2* (6.67%) subcategories which included internal or foreign affair ministries was significantly less dominant than the *politics* (23.08%) function. The *economy_sum* functions was constructed based on three different subcategories in which the economy (12.25%) and economy2 (13.89%) were considered as equally important while economy3 (2.00%) had only low presence. Residual (10.26%) category of ministries without (clear) function system reference was considered equally important with *economy*, *economy2*, and *politics2* sub-functions.

Most of the remaining – less popular – government functions were considered equally important (i.e. there are few unequal functions, which can be detected in the Figure 1). Education (5.00%) was the only remaining function having equal amounts of ministers with *politics2* function (6.67%). At the other end of the scale, *art* was the least dominant function together with religion. For both of these, the relative share median value was zero.

As a result, we conclude that governments are over allocating political and economic ministries to their cabinet portfolios. On other hand, the supposedly secondary government functions are following somewhat equal resource distribution excluding a few exceptions such as religion.

5. Discussion: Society as national economy?

Our multifunctional cabinet portfolio analysis clearly suggests that the sample of 201 investigated national governments does not treat the actually incommensurable function systems —politics, economy, science, art, religion, law, sport, health, education, and mass media— as equally important.

The data further shows that these 201 governments do not only feature a strong bias to ministries with political missions, but also an almost equally strong bias to economy-focused ministries. Our *null hypothesis H0* is therefore rejected in both its original and modified forms. Whereas we assumed a certain politics bias to be a normal feature of governmental organizations, the significant economy bias is a result that not only corroborates our *alternative hypothesis H1*, but also requires further and more fine-grained, country-level research as to the reasons for a bias that is in sharp contrast to the increasing prominence of ambitions to develop less economy-focused indicator systems for cross-country and cross-governmental comparisons such as the *OECD Framework for Measuring Well-Being and Progress* or *the Happy Planet Index.*

In looking at the less prominent function systems, a particularly striking result is the surprisingly small value that governments seem to place on education and science. Although education is the second-best scoring non-political function system after the economy, its score is only 1/5 of that of the latter. This result is again in sharp contrast to the idea that education is of critical importance for human development and well-being as indicated not least by the prominence of educational factors in even more classical indicator systems such as the United Nations Development Programme's *Human Development Index*. Whereas our low results for education may to some extent be relativized by the assumption that part of the educational issues might be "covertly" covered by ministries such as those for internal affairs, this practice is definitely less common for scientific issues, which turns the strikingly low performance of science into an even stronger message particularly against the background of the great importance that science and research is said to have not least to economic competitiveness of national innovation systems (Fixari and Pallez, 2016).

Yet another issue may emerge from the observation that not only popular "partial theories" (Karkatsoulis, 2000), definitions, or labels of contemporary societies such that of a capitalist society, but also that of an "information society" or "information age" (e.g., Castells, 1998) might be at odds with the actually low importance governments attach to economic or mass media-related issues, respectively.

Last not least, one might observe a certain contradiction between the low performance of religion and the current hype of religion as a supposed major source of political conflict (#islamism). This contradiction could be resolved by the assumption that, especially in the case of particularly religious countries, religion is actually hiding within the political ministries if it were not for the fact that some of these particularly religious countries stand out as those with a strong and explicit governmental focus on religion (with sometimes up to 50% of all ministries displaying an explicit religion focus).

In revisiting Table 1, we also find that the data corroborates our complementary alternative *hypothesis H2*, which suggested that a majority of ministerial designations show a clear reference to at least one function system. In fact, only less than 11% of all ministry designations do not refer to any function system at all. In other words, more than 89% of all ministries do

show a clear function system reference. This finding suggests that, intentionally or not, functional differentiation does play a key role in cabinet portfolio design all over the world. In fact, even the countries with the highest shares of non-function systemic ministries (reaching up to 28.79%) still have a majority of function system-focused ministries.

Limitations and future research avenues

One key limitation of our approach lies in the fact that our research was focused on national governments. Our results therefore report only on the situation of national governments and not of the entire political system of the respective countries. Within federalist systems, certain functions such as educational responsibilities might be delegated to states or provinces rather than being allocated at the national level. One future research avenue therefore might be to check whether there is are significant differences between the profiles of countries with rather federalist and those with rather centralized governmental structures. The circumstance that our focus on national governments may be considered a serious limitation notwithstanding, we hold that our research design is adequate not least because in the vast majority of cases it is national rather than subnational governments that shape the face of global governance, i.e., the complex system of inter-governmental relations that are expected to address a large scope of complex, large-scale, and often urgent issues ranging from global peacekeeping or the fight against hunger to issues of global health or climate change. This still-emerging system of global governance is often observed to not work efficiently (see Coen and Pegram, 2015, p. 417). Whereas anti-globalization movements are basically skeptical about the possibilities and purposes of global governance per se (see e.g. Dingwerth and Pattberg, 2006, Lesage and Van de Graaf, 2015, Jones, 2018), other scholars believe that global governance just needs to and can be improved, e.g., by means of new smart tools and measures to deal with issues that impact communities throughout the world (Held and Hale, 2011, Hale, Held and Young, 2013). Our present and subsequent multifunctional analyses of current governance structures could therefore contribute to a better understanding of the probably unconscious and potentially problematic assumptions on which systems of national and global governance are built. In fact, a global governmental bias to economic issues might not only conflict with ecological limits to growth (Valentinov, 2014a 2014b; Roth, 2017, 2019), but also with governance expectations of larger parts of the world population in general and those who belong to so-called premodern or post-materialist cultures in particular.

Current governments and cabinets give direct and indirect mandates to global governance agencies. In this way, our analysis of 201 governments is a contribution for ongoing global governance discussion. As we report in this paper, we revived the idea of robust description of global government based on current median governance structures (Downs, 1957, Rice, 1985). In the light of our multifunctional approach, this robust median description of governance systems can now be based on new empirical data and thus helps to develop alternative models of global governance. In this way, our multifunctional approach to governance could also contribute to the old historical discussion of world government (Einstein, 1956, Kant 1991, Heather, 1996, Baratta, 2004, Marchetti, 2008, Scheuerman, 2008, Weiss, 2009, Habermas, 2010).

Another promising research avenue would consist in checks of whether different country groups such as the European Union, the Eurasian Economic Union, the Middle East, or the so-called developing or transition countries place different value on the different function systems. These checks could be linked to a broad scope of research questions. For example, one might ask whether governments of countries with high values in Hofstede dimensions like power distance or masculinity are more focused on power issues; whether the functional profile of government portfolios differs significantly between the Huntington civilizations; whether the

majority of residual category ministries are established in governments of so-called developed or developing countries; whether dictatorships differ significantly from democracies.

It could also be interesting to look at outlier countries with particularly strong biases to specific function systems or constellations of function systems. For example, it is interesting to note that the governments of two countries as different as Hungary and North Korea have one thing in common: whereas the two governments differ greatly in terms of cabinet size (Hungary: 11; North Korea: 84), in both cases the share of ministries with designations referring to other than political or economic functions is strikingly low (Hungary: 2; North Korea: 8). The two cabinet portfolios therefore reflect the lean and the opulent versions of a government that observes its society almost exclusively through the lens of political economy.

Finally, our focus on the design and distribution of government portfolios alone may not necessarily be considered a good reflection of governmental attention to the function systems and the corresponding policy issues. In fact, one may argue that it could be the case for many governments that most budget is ultimately allocated to health- and education-related issues, which would then contradict the idea that politics and economics are in fact receiving greater attention. Yet, as it was the purpose of this study to examine how much value national governments worldwide place on political, scientific, artistic, religious, legal, sportive, health-related, educational, mass media-related, and—last not least—economic issues. In the context of such a research question, however, we cannot use budgetary or other economic indicators to measure the relative importance of the just mentioned list of function systems, which includes economy. In fact, such an approach would already imply that we place higher value on economic than on any of the other (policy) issues. This would result in economy-biased and probably even tautological observations such as that most public money is spent on money-related—hence economic—issues. In this sense, the question what

6. Conclusions: Outlook to governance beyond political economy

One major result of the research reported in this article is that our sample of 201 governments apparently takes economic issues as 5-6 times more important than educational, legal, mass media-related, or health issues and 10 more important than sport or science. Religion and art are apparently completely unimportant to the governments of the world unless we suspect the latter system to hide under the cover of ministries for culture, in which case art would be again roughly as (un)important as sport or science. Particularly the low value governments place on science thereby contradicts political soap-box oratories as much as research that highlight at critical role of science for national competitiveness in a global innovation and knowledge society. Even deliberately political economy-oriented governments would therefore be well-advised to reconsider their valuation of science.

Against this background, the German situation featured in the introduction of this article does not appear that perplexing anymore and rather seems to be a typical example of a systematic and internationally prevalent governmental bias to economic issues. This bias remains strong even if we exclude ministries such as those for agriculture, oil, mining, or fishery from the group of economy-focused ministries, in which case economy would still appear to be 3 or 5 times more important to the governments of the world than the other systems.

Whether intended or not, this strong bias to the economy at the expense of a sometimes perplexingly weak significance or even complete ignorance of other systems is problematic. First, it mirrors the neglect of society in mainstream economic theories (Thompson and Valentinov, 2017) and indicates a sharp contrast between the high value that both national governments and intergovernmental organizations such as the UN (at least ostensibly) place

on those neglected non-political and non-economic function systems. In fact, the rise of these international organization might even be interpreted as a direct consequence of national governments ignoring most of the other function systems. Second, this striking economy-bias is indicative of a hidden international consensus that states must be organized as public enterprises, and countries governed as if they were national economies. Third, this hidden consensus might be in sharp contrast to the actual importance that non-political and non-economic issues have to larger parts of the world population (Roth, Clark, et al., 2017; Roth et al. 2018), and therefore point to the risk that governments as systematically as unnoticeably govern at cross purposes with actual policy challenges and citizen expectations.

The second major outcome of our research is that the vast majority of ministries worldwide are focused on a considerable number of function systems. In fact, only little more than 10% of all ministry denominations do not refer to one of the function systems at all. This result would raise confidence that governments worldwide do match the primary form of social differentiation of modern societies — if it were not again for the strong economy bias that suggests that functional differentiation is still non-strategically and probably even unknowingly applied in governmental contexts.

The third major implication is that our multifunctional snapshots of 201 governmental organizations is fruitful because it constitutes an instructive and unpreceded government profiling technique. As a matter of course, our multifunctional analysis will need to be placed in broader historical contexts and applied with higher resolution and hence to individual national governments or particular country groups. Even the distanced global snapshot view, however, is already informative insofar as it reveals that our sample of 201 national governments is very strongly focused on the economy, and we may ask ourselves how much this already significant overrepresentation of economic issues would still have to increase before we start to wonder as to whether a government actually still is a national government or yet a national corporation.

Whereas these results may paint a somewhat cheerless picture of the present state of world governance, our research as well as the both multinational and multifunctional framework in which it was conducted also opens up a space in which governments can image and try alternative forms of governmental self-organization, and thus implement modes of governance that create alternatives not least to capitalism and economic growth-related problems.

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