

## 2 Analytical Framework

Given the lack of a substantial, theoretical basis for studying the re-distribution of authority in European higher education, the empirical analysis was guided by an analytical framework rather than by a theory. The framework introduced in the remainder of this chapter draws on **Actor-Centred Institutionalism (ACI)**, which has been developed for policy analysis, but can be adopted for other study purposes (for an application, see for instance Laudel 1999). After a general introduction to the ACI framework, it is shown how this particular approach can be used to develop a template that allows for exploration of authority distributions in real-life decision-making processes, as well as policies in Dutch and English higher education institutions. The chapter concludes with a review of the various influential factors that shape the authority distributions in the research governance of universities.

### 2.1 Actor-Centred Institutionalism

ACI was developed by Renate Mayntz and Fritz Scharpf, from the *Max-Planck-Institut für Gesellschaftsforschung* in Cologne, with the aim of analysing policy and/or decision-making processes and governance in socio-political semi-public subsystems (examples include health, telecommunication, labour relations, research, and the education sector) (Mayntz and Scharpf 1995a; b; c). Whereas the remaining section presents the ACI framework in its entirety, only some of the analytical elements of the archetype approach are worked with. The selective application of actor-centred institutionalism does not constitute a problem, considering that neither Scharpf nor Mayntz consider ACI a theory, but see it rather as heuristics (Mayntz and Scharpf 1995a, p.39). In this function, it helps to structure pre-existing scientific information about the object or field of study and to formulate questions that are likely to have ample explanatory power (Scharpf 2000, p.64).

Mayntz and Scharpf identify two key elements for explaining social phenomena: **actors** and **institutions**. Institutions are defined as ‘systems of rules that structure the course of action that a set of actors may choose’ (Scharpf, 1997, p.38; see also North 1990). According to ACI, such systems of rules provide a framework for action, as they set out actions that actors are required, per-

mitted, or forbidden to take (Ostrom 1986, p.5). An essential aspect of institutional rule systems is that they constitute actors (Mayntz and Scharpf 1995a, p.48). An institutional framework structures the action of actors by means of providing rules of membership, legitimate courses of action, and available resources, as well as the goals and norms of actors. However, rule systems do not necessarily have to be **formal**, but can also be **informal**. In pursuing a particular course of action, actors do not necessarily stick to what is written in the law, but they might find a way to work around it. Examples of formal rules are contracts, legal procedures, and regulations; examples of informal rules are traditions, social conventions, and behavioural patterns (Van Bueren and ten Heuvelhof 2005).

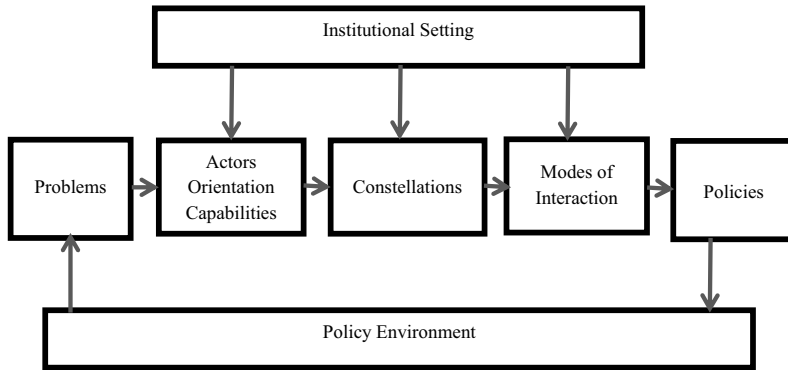
Institutions create ‘a context of action within which constellations of actors may interact with one another’ (Jackson 2009, p.9). Furthermore, they establish decision-making interdependencies among actors, because they define opportunities and constraints within which organisational members operate and pursue their interests. They may change the rules of engagement and hence the context in which power is determined, and may thereby influence the ability of groups to gain access to decision-making (Wiktorowicz 2003, p.618-619, cited in Boessen, 2008). At the same time, it is important to highlight that, according to Actor-Centred Institutionalism, institutions never fully determine actors’ identities, perceptions, or goals; they always leave at least some discretion to the actors to make decisions or take action, or, quoting Elster (1989, p.99), actors are not ‘the mindless plaything of social forces’.

Actor-centred institutionalism clearly contrasts with ‘classical’ structural institutionalism, which purports that, for institutions, with respect to their structural characteristics, (in)formal norms and rule systems play a key role in influencing the individuals and organisations of which they are a part (DiMaggio and Powell 1983). According to structural institutionalism, macro-structures determine the nature of the political process as well as the outcomes it leads to. Actors must contend themselves with merely ‘functional roles and a correspondent set of political beliefs in an overall structure that operates according to a logic of its own’ (Pennington and Bara 2009, p.26). ACI negates this ‘structural determinism’ by emphasising that a narrow focus on institutions is not sufficient for predicting or explaining particular outcomes. ACI therefore considers observable behaviour as a ‘proximate’ cause, while the institutional environment constitutes a ‘remote’ cause (Mayntz and Scharpf 1995a, pp.46-47).

In the archetype approach, institutions only matter insofar as they structure and guide the exercise of the authority of actors. Institutions hence constitute a particular type of **condition of action** that shapes the behaviour of actors up to the point that organisational outcomes are affected. Conditions of action are,

however, not solely influenced by institutional rule systems; they can also be epistemic<sup>15</sup> or economic, or deal with social factors such as goals, interests, or perceptions.

*Figure 1: Actor-Centred Institutionalism*



The author's illustration is based on Scharpf (1997, p.44).

ACI assumes that interactions between intentional actors are influenced by the institutional settings in which they occur. As a consequence, both the institutional setting and the policy environment are two building blocks of the analytical framework of ACI (see Figure 1). They constitute the 'action context' in which interaction takes place, bringing together a multiplicity of actors with various (and often conflicting) perceptions and action orientations. Starting with a policy problem, Scharpf defines the actors, their constellation, and the various modes of interaction between them. Their interaction results in new policies that, in turn, create an environment for new problems to occur. The interaction-oriented policy focus of ACI serves to make sense of past policy choices and helps to formulate recommendations for setting up adequate policies in the future (Scharpf 1997, pp.36-43). In what follows, attention is paid to the more specific categorisation of actors, as well as the two analytical dimensions of actor constellations and modes of interaction.

<sup>15</sup> Gläser and Laudel (2004, p.14) argue that epistemic conditions of action are 'produced by technology (materials, means, practices) of creating new knowledge'.

### *Actor Types and Characteristics*

Actors can be defined as players or agents in the formulation, definition, and realisation of organisational goals. They behave intentionally and have cognitive and deliberative capabilities. Scharpf (1997) distinguishes between various types of actors. Firstly, he discerns individual and composite actors. Only individuals can have action orientations – a willingness to act. Considering, however, that individual actors often act on behalf of larger organisational entities, Scharpf (1997, p.52) introduced the type ‘composite actors’: a group of individuals ‘having a capacity for intentional action at a level above the individuals involved’.<sup>16</sup> Composite actors act intentionally ‘to the joint effect of coordinated action expected by the participating individuals’ (Scharpf 1997, p.54). Those involved intend on developing a joint product or achieving a common purpose. With reference to Scharpf (1997, p.39), Van Lieshout (2008, p.3) argues that ‘[i]n particular an analysis of sectoral governance and self-organization in state-related fields will often have to focus on the interactions between composite actors rather than [...] on individuals acting on their own account’. However, the collaboration or intensity of interaction among those involved may vary. Therefore, Scharpf divided composite actors into two sub-types, namely corporate and collective actors (for an overview on the various actor categories, see Figure 2).

- **Corporate actors** are ‘top-down’ organisations under the control of hierarchical leadership representing owners or beneficiaries (Scharpf 1997, pp.56-57). This facilitates the analysis because, in many cases, self-interest alone would not be a useful predictor of role-related action (Scharpf 1997, p.61). Although it is true that only individuals can pursue intentional action, cor-

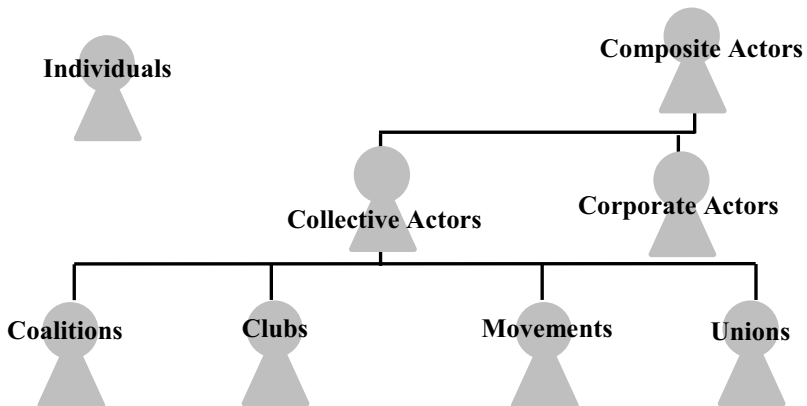
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16 Scharpf (1997, p. 53) also speaks of aggregate categories for describing the actions of individuals who share salient characteristics. A group of individuals may tend to behave in a similar fashion and thus have an aggregate effect. It is important to highlight, however, that their acting is neither centrally planned nor organised. Scharpf (1997, pp.53-54) refers to quasi groups or classes to describe the similar choices of large numbers of individuals who are acting from their own action perspective. The aggregate effect is the result of individual choices rather than a common strategy. In the words of Max Weber, the situation outlined by Scharpf does not qualify as social action, because it is lacking an element of purposeful orientation towards others. To Weber (1978, p.4), ‘action is “social” insofar as its subjective meaning takes account of the behaviour of others and is thereby oriented in its course’. This line of thought is probably best illustrated by the following example: Suppose that there is a heavy rain shower, and the people entering the street put up their umbrellas. Since everybody is behaving in the same way, this might be counted as a purposeful act that is motivated by the commonly shared desire not to get wet. However, their actions, instead of being identical, do not qualify as social action, because, in lifting up an umbrella, no one takes the decision of the other into account (Kronmann 1983, p.27).

porate actors are capable of coordinating the actions of their members through collectively-binding decisions for which they can be held accountable. In decision-making processes, corporate actors have assigned resources ‘which they use in the interest and perspective of larger units rather than for themselves’ (Scharpf 1997, p.12). As a consequence, an organisation can be treated as a/n (corporate) actor.

- **Collective actors** coordinate individual actions in order to have a joint effect (Scharpf 1997; Ostrom 2005). Next, Scharpf (1997, p.54) distinguishes between four types of collective actors, namely coalitions, clubs, movements, and unions, while he bases his distinction on two dimensions. The first dimension is the degree to which critical action resources are controlled by individual members or have been ‘collectivised’ at the level of the collective actor. The second dimension considers whether the preferences that guide collective action are defined collectively or depend on the preferences of collective actors.

*Figure 2: Types of actors.*



The author's illustration is based on Scharpf (2000, pp.95-107).

Analytically, it makes sense to distinguish between various types of actors, but, as Scharpf (1997, p.58) indicates, empirically, there are no sharp dividing lines between them. With respect to the empirical analysis, it is mainly the distinction between individual, corporate, and collective actors that matters (see also Schimank 2004). These distinctions are important, because they can have an impact on actor characteristics, such as the actor's rationale for agency. Individ-

ual actors rest at the core of social agency, but, considering that individual action tends to have only limited effects, individuals are mostly of interest to this study if they are representatives of corporate and collective actors. Following Scharpf (1997, p.52) once more, the definition of an aggregate of people (a composite actor) depends on the purpose of the analysis. Actors will be defined in more detail below.

Two important factors for understanding actor characteristics are **action orientations** and **action capabilities**, which are also referred to as ‘action resources’. **Action orientations** refer to the existence of a perceived problem, the (un)desirability of the status quo, the efficacy and desirability of perceived causes of action, and the outcomes associated with these (Scharpf 1997, p.43). The (un)desirability of a given state of affairs can be a strong motivation for actors to mobilise their resources and to seek active engagement in decision-making. To influence a course of action or even take control over it, actors must be equipped with what Scharpf has called ‘action capabilities’, or ‘action resources’. These can be physical endowments, financial or material resources, personal qualities such as a specific leadership style, or privileged access to information (Scharpf 1997).

### *Actor Constellations and Modes of Interaction*

The acting of actors in a given policy- or decision-making context is not solely shaped by their institutional environment, their preferences, perceptions, and action resources, but also particularly through the acting of other actors. The result of social interaction in a policy- or decision-making process is therefore powerfully influenced by the **actor constellation** (Mayntz and Scharpf 1995a, p.60). Actors dispose of the social potential of influence when attempting to translate their action orientations into practice. It is only through intention interferences and reciprocal influence that actors end up in actor constellations, which give rise to (new) social structures. Schimank (2000, p.174) argues that actor constellations consist of nothing else but realising and coping with intention interferences. Many constellations manifest themselves in distributional patterns of resources, knowledge, or power; that is, they have a structural effect.

The actor constellation describes a static picture of the policy or decision situation (Scharpf 1997, p.46). To allow for a more systematic description of the relationships between actors, Scharpf identifies four different modes of interaction within a ‘game’: unilateral action, negotiated agreements, majority vote, and hierarchical direction (Scharpf 1997, pp.46-47). According to Scharpf (1997, p.48), this particular mapping allows for representing ‘the ways in which the

actors involved diverge or converge in their preferences over the range of feasible outcomes':

- In the first mode (unilateral action), actors select from among political alternatives without coordinating their course of action with others.
- In the second mode (negotiated agreement), actors unanimously agree on a common course of action.
- In the third mode (majority voting), the majority of actors adopts a decision that is also binding for those who have voted against it.
- In the fourth mode (hierarchical direction), a single actor makes a decision that is collectively binding for others.

Scharpf's analytical approach to distinguishing between actor constellations and modes of interaction was inspired by game theory. The term 'actor constellation' constitutes 'the verbal equivalent that could be contained in a two-by-two matrix in a one-dimensional game with two players' (Witte 2006, p.73). In a more complex game, neither graphical depiction nor formal game-theoretic analysis is possible. As Witte (2006, p.73) explains, Scharpf does, however, extend the 'tool kit' to illustrate more complex interaction modes and furthermore indicates how this affects the outcome of the games.<sup>17</sup>

## 2.2 Building the Archetype Template

Above, it is argued that the archetype approach draws only on some elements of the Actor-Centred Institutional Framework. These analytical categories are:

- **policy-/decision-making processes,**
- **actors/ actor constellations,**
- the different types of **action capabilities/resources** that actors draw on to bring about a desirable decision-making outcome, and
- the **conditions of action**, around which decision-making takes place.

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<sup>17</sup> Scharpf's game-theoretic adaption of actor-centred institutionalism, in which he describes various types of modes of interaction, does not play any role in the archetype framework. In order to translate an actor constellation in an adequate matrix with plausible pay-outs for actors, a lot of information is necessary about their self-perception, their understanding of the action situation, and their (inter)action orientations. With respect to the case studies, this information was only partially available. Moreover, it should be noted that Scharpf's game-theoretic approach has been criticised, one argument being that it relies on the assumption of egotistic-rationalist actors who may consciously decide whether or not to cooperate (see for instance Rauber 1999, p.27).

The institutional setting as one particular condition of action determines actors and actor constellations, structures actors' disposal of resources, influences their orientations, and shapes the important aspects of situations that confront actors (Mayntz and Scharpf 1995a, p.49, quoted in van Lieshout, 2008). The proximate cause (observable behaviour on the part of actors) is shaped by the remote cause (institutions) in various ways, but institutions do not define the outcome, as other sources of influence (such as epistemic conditions of action) are at play as well. If these ideas are applied to the empirical analysis, the following questions must be addressed:

*Conditions of Action and Policy-/Decision-Making Processes*

- What are the relevant policy-/decision-making processes in which actors interact?
- What are the social, institutional, economic, and epistemic conditions of action around which decision-/policy-making takes place?
- How do these conditions of action affect decision-making?

*Actors and Actor Constellations:*

- Who forms the part of the actor constellation with regard to the investigated decision/policy process?
- How is the authority distributed across the actor constellation?

*Action Capabilities/Resources:*

- What are the different types of action capabilities/resources that actors have at their disposal and that they draw on to bring about a decision-outcome that is desirable from their point of view?

*Conditions of Action:*

- What are the conditions of action around which decision-making takes place?

*The Action Context: Three Policy-/Decision-Making Processes*

Within universities, many decisions need to be made, and the number of decision-making processes seem 'countless'. In a single university, these decision-making processes are different from each other in terms of actors involved and



the authority they have. As it is not feasible to study all the different decision-making processes, a selection is required, presuming, however, that the choice is guided by well-grounded reasons. In light of the research question that this thesis seeks to answer, ideally, those processes in which the re-distribution of authority is the *least* likely to take place should be selected. The assumption is that, if the distribution of authority among actors has changed in areas that are known for 'conservatism' (in the sense that change is unlikely), then it is more plausible that the nature of the academic organisation has transformed. In addition, I would argue that it makes sense to concentrate on decision areas that are related to the core functions of the university.

If the way in which decision-making, with respect to the core functions of a contemporary university, is fundamentally different than it used to be, it seems reasonable to speak of a transformation (in terms of the archetypes discussed in Chapter 1.2.1). Both teaching and research qualify to meet these criteria, considering that they are the *raison d'être* of a university. An essential question to be addressed in this context was whether to select decision-making processes from the areas of teaching *and* research or to focus on research *or* teaching. In the introduction, it is argued that both count as 'unclear technologies' (Musselin 2007), so is it feasible to prefer one over the other?

According to Gläser (2011, p.11), the re-distribution of authority is (even) less likely to happen in the area of research than it is for that of teaching: university teaching deals with passing on knowledge that members of an academic discipline have access to and share among themselves (see also Chubin 1976). However, only advanced courses require specialist knowledge and methods that form part of a scientific field rather than that of a whole discipline, and this can be understood only by members who belong to the same specialty. Pedagogical knowledge as a pre-requisite for successful teaching can be shared across at least some disciplines. Only at the more advanced teaching levels does the explanation of complex scientific problems require a profound understanding of the content of these problems. As a consequence, Gläser (2011, p.11) concludes that '[t]he more basic the teaching, the more widely shared the knowledge required, and the better the conditions for organisational professional control'.

This statement suggests that the re-distribution of authority is less difficult for the area of teaching (particularly when 'basic' teaching knowledge is required) than it is for research. Research is more susceptible to the control dilemma, because the uncertainty of the knowledge production process does not allow for standardisation and requires a high level of delegation of decision-making competences to those who have the expertise to make informed decisions about research content, namely academics. The special nature of the research process constitutes a particular type of condition of action that shapes the governance of

science. Not only do researchers interpret the knowledge of their community and derive problems and suitable approaches from that knowledge, but they also assign themselves resulting tasks (Gläser 2012b, p.5). This particularly accounts for so-called ‘risky’ or ‘blue-sky’ research, for which ‘[s]uccess in the form of potential but unforeseen applications may not be realised until years later’ (McGeary and Smith 1996).

Following Gläser’s line of argumentation, the policy-/decision-making processes to be empirically studied should be selected from the area of research rather than of teaching. Furthermore, it was determined that further selection should concentrate on those areas in which core technology research can be steered (in)directly. Therefore, I chose to focus on policy-/decision-making processes that deal with three aspects that are essential with respect to academic research: *what is going to be researched, how is the research assessed, and how is it funded?* In other words, my empirical focus is on: **research-content decisions, research-evaluation decisions, and resource-allocation decisions.** All three action-contexts denote ‘authority domains’ that have traditionally belonged to academics.<sup>18</sup> They are hence considered particularly useful when it comes to determining whether or not re-distribution of authority has taken place.

*Research-content decisions* are decisions about which research themes shall be addressed within a university. They have significant consequences for the scientific fields represented in a university and the topics addressed within these fields. Research-content decisions take place at different scales: at the macro-level, new areas can be added to the research portfolio and existing areas may be removed from it so that some areas of research become prioritised over others. For example, the appointment of a professor or the establishment of an entire research group in a new area must be considered as a portfolio decision that has major consequences for the research being offered by an organisation.

Traditionally, these decisions have been made locally and in an ad-hoc fashion, and have resulted from the choices and preferences of ‘individual professors with respect to their theoretical and methodological interests’ (Meier and Schimank 2010, p.214). Over the last three decades, however, a combination of acute budgetary constraints, competing demands for public funding, and ongoing changes in public attitudes towards what constitutes valuable knowledge has highlighted the political and strategic value of research-portfolio decisions. As such, research-portfolio decisions comprise an important legal competency

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18 See, for instance, De Boer (2003), who describes the efforts of government and university managers to steer academic research over a period of four decades in the Netherlands and who concludes in Chapter 5 that they were successful only to a limited extent. Control over academic research by someone other than the academic community is hard to achieve.

for university leadership to steer research content, which, before the introduction of New Public Management reforms, had been firmly in the hands of academics. The conditional selection and monitoring of research themes based on their potential contribution to (inter)national strategic objectives constitutes a trend in higher education policies that has been observed in a number of studies (Nowotny, Scott et al. 2003; Leisyte 2007; Leisyte and Dee 2012; Pietilä 2013; Reale and Seeber 2013; Laudel and Weyer 2014).

The selection of individual research topics and themes is an example of decisions on research content at the micro-level. The fitness of scientific contributions is accomplished by the researchers themselves, who stick their production processes into a common frame of reference. The institutions of the scientific community influence university decision-making regarding research goals in a number of ways, for instance, by providing policy advice to state and/or funding agencies, setting new standards, and contributing to the production of knowledge with exceptional research contributions (Mulkay 1976; Laudel 2005).

Both *evaluation* and *resource allocation* are instruments that serve to enhance the performance of a system or of an individual through controls and incentives (see e.g. Howlett 2004). According to Whitley (2007), research evaluation systems are ‘organised sets of procedures of assessing the merits of research undertaken in publicly funded organisations that are implemented on a regular basis, by state or state delegated agencies’. Research evaluation processes allocate reputation to researchers and thus constitute a powerful action capability, through which preferences and expectations regarding scientific output are articulated. Managerial decision-makers use research evaluation mechanisms to communicate expectations regarding what type of research (output) is desirable, how much of it should be produced, and how it should be rewarded.

Evaluation usually does not constitute an independent instrument, but serves to inform resource-allocation decisions (Van Vught 1997; Layzell 1998; Reale and Seeber 2013). Joengbloed (2008, p. 5; see also Williams 1984, p.102) depicts funding as part of the set of tools that governments (as well as other actors) use to pursue a certain goal or invoke a certain pattern of behaviour. According to Gläser and Whitley (2014, p.2), both the allocation of resources and of reputations are increasingly channelled through formal organisations so that the definition of strategic research goals and changes in technical practices depend more and more on organisational processes. They therefore conclude that ‘access to, and influence over, formal organisations become crucial for gaining authority over the selection of research goals and the use that is made of research results, as it is the central role of advisors to funding agencies in the allocation of scarce resources to projects’.

Over the last decades, the criteria of allocation have constantly been subject to reforms and policy changes executed by governments all over the world, with the aim of stimulating productivity, cost-awareness, innovativeness, and responsiveness to socio-economic challenges (Jongbloed and van der Knoop 1999, p.142). However, the allocation of resources must not necessarily deal with the allocation of funds, but can also refer to the distribution of other types of resources, such as technical equipment, infrastructure, or staff. Resource-allocation decisions can also imply a re-allocation of resources among a given set of organisational units; that is, some units gain resources at the expense of others because they are given a higher priority in the organisation's strategy. The way that resources become allocated to or within an organisation has significant implications of authority. While playing the game of conformity to the state in order to maximise the return of public resources, those actors who operate from within an organisation must take into account the implications of the allocation system for the internal repartition of resources (Covaleski and Dirmsmith 1988).

### *Actors and Actor Constellations*

According to Scharpf (1997, p.44), it is unlikely that a single actor is able to determine policy or decision outcomes through the use of his or her action capabilities.<sup>19</sup> What counts instead is the actor constellation within the plurality of actors involved in decision interaction. In this study, the major selection criterion for the actors who were to form part of the actor constellation was their (in)direct participation in the research governance of the university.<sup>20</sup> Since the different action contexts that are investigated do not 'stop at the border of the organisation', both **internal** and **external** actors have to be considered. This distinction

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19 As a more general comment on the ACI framework, it should be noted that, analytically, it is difficult to distinguish between action capabilities and conditions of action. A condition of action in a given decision situation always constitutes an action capability for at least one of the actors involved. If, for instance, decisions about research require the expert knowledge of researchers, they constitute a particular type of condition of action around which decision-making takes place. At the same time, the epistemic conditions of research represent an action capability for those who are asked for their decision input. If the locus of knowledge production is the scientific community, this automatically impairs the capability of managerial decision-makers to control what is being researched and to what kind of output this might lead. With respect to the research question, this could mean that a transition between archetypes cannot take place, as decision-making authority regarding the specification of research goals has to be delegated to academics. Collegial decision-making practices persist, as the lack of expert knowledge prevents managerial decision-makers from making full-blown use of their legal decision-making rights and going over the heads of the organisational elite.

20 Recalling that the commercialisation of research is not of any particular interest to this study, industry is not included as an actor in the archetype template.

acknowledges that actors are embedded in two distinct but interconnected spheres, namely inside and outside of the organisation. *Internal actors* are those who exercise authority on research matters within the higher education institution. Three composite actors fall into this category, namely **top management**, **mid-level management**, and **academics**. As a rule of thumb, a distinction is made between those actors who make decisions with respect to their own research activities, and those who make choices about the research of others. The latter situation applies to top- and mid-level managers, whereas academics make decisions about their own research.

**Top management** focuses on those issues that concern the university as a whole, whereas mid-level management concentrates on those activities that regard the faculty and department level. Actors forming part of this particular category are rectors, vice-chancellors, councils, senates, central boards, and the like. Deans, faculty (or school) boards, and heads of department are examples of **mid-level management**. The third group of internal actors, **academics**, consists of all active-research staff members employed by the institution who are not primarily concerned with managing the research activities of larger organisational entities such as faculties or departments. These can be researchers of some rank and file who have acquired notable reputations within their scientific community, as well as those who aspire to reach a higher academic rank. Whitley (2010) introduced the term ‘organisational elite’ to denote those academics who have a decisive role to play with respect to the academic matters of the institution. These matters concern, for instance, recruitment and promotion processes, or determining the intellectual priorities of organisational units.

*External actors* may either directly define the organisational goals that they expect higher education institutions to pay attention to, or they shape the socio-economic or legal conditions around which the latter operate. The most obvious actor that comes to mind in this respect is the **state**, which provides the legal basis for conducting teaching and research. In many European countries, the state also continues to be the main funder of higher education, thereby guaranteeing itself an important ‘channel of authority’ to determine around which circumstances and for what purposes this money is to be spent. Finally, the state can still remain involved in the management of academic affairs by making the university subject to ex-post reporting requirements and audit or evaluation systems.

Next to the state, **scientific elites** appear on the list of external actors. Scientific elites are comprised of those scientists who possess and utilise outstanding formal or informal decision-making competences on research matters. It can be argued that there are three ‘authority channels’ through which scientific elites operate. The first one is publications (e.g. sitting on the editorial boards of leading publishing houses and deciding whose research gets published), the second is

project proposals (i.e. deciding whose research gets funded), and the third is the recruitment processes of organisational elites (Laudel 2011). To these three arenas, one may add a fourth, namely the conduct of the review processes of organisational units. Evaluation processes rely on the expertise of scientific elites in order to produce a formal, published statement on the quality of a research programme or institution, which, in turn, can have significant financial consequences, depending on the outcome of this process.

Last but not least, **(inter)national funding agencies** may influence research objectives through the allocation of resources (e.g. project grants and programmes). In other words, funding agencies may make project funding conditional on the type of research that they are most keen to support. In terms of their membership, it is important to mention that (inter)national funding agencies recruit their panel members from among representatives of the scientific elite. This also explains why, in the area of resource allocation, no ‘actor distinction’ is made between scientific elites and (inter)national funding agencies.

### *Action Capabilities/Resources*

Above, action capabilities/resources were referred to as those resources that actors draw on to influence or even determine a specific decision-making outcome. The forthcoming analysis distinguishes between three different types of action capabilities, namely resource-based, position-based, and expertise-based:

- With respect to the first type, the **allocation of (physical, financial, or material) resources** is used as a means to pursue a certain end. This can be, for instance, the dedication of funds to a research project that one wishes to undertake. As is shown later on, one such incentive used by governments is the definition of ‘research priorities’ for allocating separate sources of funding, thereby promoting research in specific scientific fields. Examples include stipulating cooperation between the sciences and industry, or setting specific growth targets for public research output and graduate numbers (OECD Innovation Policy Platform 2011).
- The second type of action capabilities are those **formal decision-making rights** that stem from institutional rules allocating competencies and granting or limiting rights of participation, of veto, or of autonomous decision-making within certain aspects of decision-making (henceforth called ‘positional authority’ or ‘authority via formal position’). This particular action capability usually results from the formal position that an individual or group of actors has within an organisation (see for instance Presthus 1960,

p.88) and is also referred to as ‘formal authority’. Legitimation of action by formal position can also stem from the ownership of an asset, which provides the owner the right to make decisions concerning the use of that asset (Grossman and Hart 1986).

Formal decision-making competences are particularly valued action resources in the governance of organisations. George Tsebelis (2011) coined the term ‘veto player’ to denote those political actors whose consent is required to adopt a new policy. Stated differently, if veto players negate their approval, the status quo is there to stay. Drawing on previous work in formal modelling and social choice, Tsebelis developed a veto-player theory to assess political systems in terms of their ability to engage in policy change (Warntjen 2011). Tsebelis distinguishes between two types of veto players: institutional and partisan. The former is created by a constitution, the latter by the political game. Adding a veto player can imply that the field of options that can beat the status quo is diminished or is left the same (this occurs when a veto player is absorbed).

The concept of veto players can easily be applied to a higher education context. As is referred to in the introduction, NPM reforms are associated with a gain in the formal decision-making powers of the university leadership on the one hand, and a decrease in collegial ways of decision-making on the other. If academic decision-making bodies (e.g. a senate) lose their veto power, they may no longer block decisions that are not in their interest.

- The third type of action capabilities is the **expertise or knowledge** that an actor has in a particular subject matter (henceforth called ‘knowledge- or expertise-based authority’). As is argued in greater detail later on, expert knowledge provides an actor with a resource that is important in decision-making, because, without such knowledge, informed decisions cannot be made. Actors without any formal decision-making rights in a given subject matter may thus still shape the decision-making outcome to some extent if their advice is taken by those who make the final decision.

### *Conditions of Action*

Conditions of action are a ‘garbage can’ category, as it assembles situative factors that cannot be neatly integrated into analytical models. On the other hand, there is a strong argument for including these situative factors, given that they contribute to a better understanding of those factors that hinder or facilitate a transition between archetypes. The forthcoming analysis distinguishes between **institutional, epistemic, and social and economic conditions of action**.

- As is argued above, **institutional setting** constitutes one particular condition of action that determines actors and actor constellations, shapes their action orientations, and provides them with different types of action resources, such as money or decision-making rights in certain matters.
- In accordance with Gläser and Laudel (2004, p.14), **epistemic conditions of action** are ‘produced by technology (materials, means, practices) of creating new knowledge’. Research has been described as a creative process that is characterised by a high level of uncertainty concerning the type of solution and resources needed (see e.g. Musselin 2007; Whitley 2008). The inherent variability and novelty renders any attempt to standardise the research production process a sheer impossibility, as the costs of production are not known beforehand (Nedeva et al. 2012, p.340). The epistemic properties of the research process must hence be considered as a specific condition of action around which decision-making takes place.
- **Social conditions of action** deal with the goals, beliefs, and attitudes of actors. For example, the leadership of a given university may decide to organise its entire research portfolio into research focus areas, because that leadership believes that this will significantly improve the funding prospects of the institution’s research groups.
- **Economic conditions of action** result from the context in which higher education institutions operate. For instance, the funding arrangements that a publicly-financed HEI maintains with the state must be considered a socio-economic condition of action. Publicly-owned HEIs that receive substantial portions of their income from the state are particularly vulnerable to a downward trend in this particular income stream, since they would have to replace the losses with funding from other sources.

### 2.2.1 *The Archetype Template*

Both actors and action contexts can be combined to create a template (henceforth called ‘the archetype template’), which makes authority distributions in the actor constellation across different types of policy-/decision-making processes visible. The template (see Table 2) consists of two major building blocks, namely the actor constellation and a policy-/decision-making dimension that defines the action context in which authority becomes exercised:



Table 2: The Archetype Template

	Internal Actors			External Actors		
Actor Constellation ►  Policy-/Decision-Making Processes ▼	Top Management	Mid-Level Management	Academics	State	Scientific Elites	(Inter) national Funding Agencies
Research-Content Decisions						
Research-Evaluation Decisions						
Resource-Allocation Decisions						

The empty cells in Table 2 allow for rating the degree of authority (high, medium, or low) that an actor exercises in each area. Such a template has the obvious advantage of facilitating organisational comparison across different organisations. Stated differently, the authority distributions that characterise one particular university can be compared with those of another university. The template can furthermore be used for exploring possible shifts in authority distributions over time if the empirical information is gathered at different points in time.

The concept of authority distributions presupposes that the authority in the actor constellation is not distributed in an equal way; that is, some actors have more authority than others when it comes to determining a course of action or shaping the outcome of a decision-making process. The question of whether the somebody’s authority is considered to be high, medium, or low therefore depends on how ‘successful’ an actor is in shaping the decision-making outcome of a decision-making process.

- **A low degree of authority** generally implies that the actor only marginally influences the decision-making outcome. There can be many reasons for

this: a decision or policy can be overlooked, the implementation of a decision can become stuck at a certain stage, or it does not yield the desired results. It is also plausible that the person (or group of people) in question does not have the action capabilities to influence the course of action or simply does not use them.

- **A medium degree of authority** implies that an actor needs to compromise his or her goals, as a decision or a rule system reaches only part of the expected effect. This can, for instance, be the result of resource constraints, insufficient knowledge about a subject matter, or limited access to those circles in which decisions are made (i.e. lack of authority by formal decree).
- **A high degree of authority** indicates that an actor in the actor constellation has a considerable impact on the decision-making outcome. In practical terms, this can mean that an actor controls working methods, determines the conditions of knowledge production, or shapes decision-making practices within an organisation.

It should be noted that the boundaries of the assessments ‘low’, ‘medium’, and ‘high’ are soft and mainly serve as guidelines for qualitatively interpreting the case study findings. By means of thorough and detailed reporting of the cases, it is nevertheless believed that fair judgements can be made. Considering that the exercise of authority is always context-bound, the allocation of authority-scores in the empirical chapters occurs mainly on the basis of observations of an actor’s role in a particular action context. It implies addressing questions such as ‘who set a particular issue on the internal decision-making/policy agenda?’, ‘who determined the criteria of a rule system according to which decision-making takes place?’, ‘who was formally and *de facto* authorised to make choices?’, and ‘what were the effects of these choices?’ As such, it is important to note that decisions or rule systems can be circumvented or ignored by those at whom they were targeted, which, in turn, is cause for putting the authority of the decision-maker into perspective. It is also plausible that an actor does not play any role in a specific process (marked with ‘X’), or that empirical information is too scarce to formulate reliable conclusions about the authority of an actor in a given decision-making context (marked with ‘?’).

An alternative and seemingly more ‘objective’ way of allocating authority scores would be to couple the allocation with the use of an actor’s formal decision-making rights in a given decision-making situation. The analysis would then begin with an appraisal of the formal decision-making rights that an actor has with respect to the item to be decided upon. Whether his or her authority would

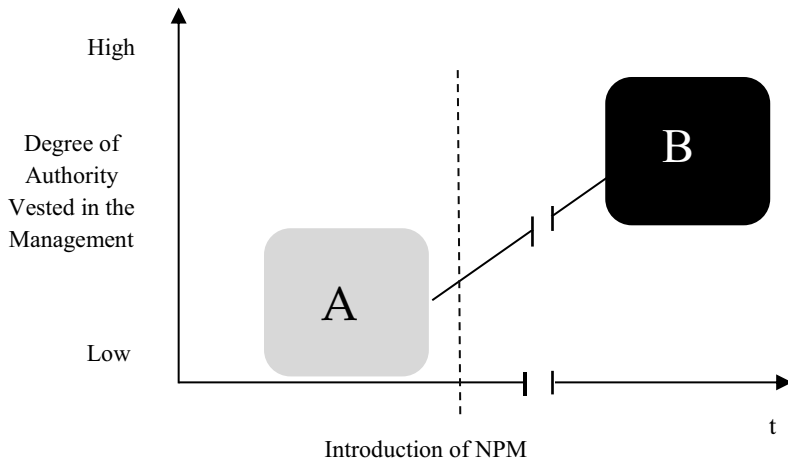
be classified as low, medium, or high would then depend on how the actor makes use of his or her formal decision-making rights. For instance, if someone has a veto right in a certain subject matter and makes use of it, his or her authority would be rated as high. This decision-making scenario parallels what Scharpf has described as ‘hierarchical direction’; that is, a single actor makes a decision that is binding for others.

Restricting the analysis of authority distributions to the analysis of formal decision-making situations does, however, have two serious shortcomings. First of all, the analysis can only be carried out if the researcher has either witnessed the decision-making situation him- or herself or at least has access to the information necessary to reconstruct it (e.g. minutes, interviews with eye witnesses, etc.). However, as is argued in more detail in Section 3.2 (‘Limitations of the Study’), the more controversial the item is that is being decided upon, the less likely it becomes that this information is shared with ‘outsiders’ (here: the interviewer). Secondly, the mere focus on formal decision-making processes leaves out those informal situations that abound in a higher education context. Many decisions are not necessarily made in an official setting, but can also stem from ‘corridor deals’; that is, no official decision-making process has taken place.

### **2.3 Factors that Hinder or Facilitate Archetype Change**

This thesis postulates that, if the organisational transformation of the university can be explained as a transition between archetypes, then this must become evident from different patterns of authority distributions in the research governance of a higher education institution. NPM-inspired governance changes in the national higher education system constitute the independent variable that is believed to set the process of archetype change into motion (see also Figure 3). It must be emphasized that the study is not interested in reconstructing the path of archetype transition; its focus remains on the organisational outcome of the transition process (i.e. whether or not a transition between archetypes has taken place). The post-transition archetype (labelled ‘B’ in Figure 3) is associated with a fundamentally different authority pattern than the pre-transition archetype (labelled ‘A’). In Figure 3, the difference between archetypes A and B manifests itself in the degree of authority exercised by university managers. As the introduction of New Public Management is, amongst other things, associated with the strengthening of the formal decision-making competences of university managers such as rectors or deans, it should enable this particular group of actors to exert more authority over the determination of research goals. This explains why archetype B is located much higher in the graph than archetype A.

*Figure 3: Interarchetype Change*



The purpose of this section is to recapitulate – and to spell out more explicitly – the various sources of influence that shape the authority distributions in the research governance of universities. These sources of influence can be integrated into a hypothetical model (Gläser and Laudel 2009, pp.85-86) that visualises the causal links producing the phenomenon that the researcher endeavours to understand.

The model (see Figure 4), which was built to guide the empirical investigation and to facilitate the interpretation of results, draws its insights from both the ACI framework as well as from the higher education and organisational sociology literature referred to in the first chapter. The six variables that shape the dependent variable (here, authority distributions in research governance) can be grouped into three broad categories, namely (1) institution-related aspects, (2) technology-related aspects, and (3) actor-related aspects. The operationalisation of this model is not the subject of this chapter, but is addressed in Section 3.4.

### *1. Institution-Related Aspects*

As was previously argued, institutions constitute a particular type of condition of action that determines actors and actor constellations, shapes their action orientations, and provides them with different types of action resources. Three variables belong to this category:

**(1a) The governance arrangements** of the higher education sector are considered to be one of the key variables that shape the authority distributions of (and respectively within) universities. The national legislative framework defines the operational leeway that higher education institutions have when taking care of their internal affairs and the conditions around which they may do so. If university managers are legally prohibited from establishing new degree programs or degree programs close to those that already exist, hiring their own staff, and/or allocating resources as they see fit, it is very unlikely that they exert authority over the definition of organisational goals. The ability of higher education institutions to take care of their internal affairs without intervention from the state or other actors is hence a necessary precondition for establishing a new archetype in the university that is characterised by a much higher degree of managerial authority. Governance arrangements as an institutional condition of action may thus facilitate or hinder archetype transition.

**(1b) Organisational features** such as the organisation's age, size, and financial status may obstruct or facilitate the exercise of managerial authority in the area of research governance. For instance, if a university experiences serious financial turmoil, it may not be able to make investments in those areas that it wishes to grow, or it may even be required to cut-down on its programme portfolio.

**(1c) Informed decision-making** about research goals requires a considerable amount of expert knowledge, which makes **scientific communities** key in determining what is researched and to what kind of output this would lead. Scientific communities act as collective producers of knowledge that emerges from specific research topics and themes, methodologies, funding programmes, and non-scientific advisory roles (Schützenmeister 2010, p.14). They operate as researchers responding to and interpreting their respective community's shared body of knowledge (Gläser 2006). Often, the match between the members' contributions to the shared body of knowledge turns out to be incomplete; as the members can be spread all over the world, they do not necessarily coordinate their actions among themselves (Gläser 2006). While this can sometimes lead to attempts being bound to fail or becoming redundant, Gläser (2012b, p.6) consid-

ers decentralised autonomous decision-making to be the most effective mode of finding solutions to a problem. Scientific communities pose clear limits to the way that ‘outsiders’ can interfere with the research process, because only members of the same community have the required background knowledge to identify research problems and approaches. They must hence be considered a specific condition for the action under which decision-making about research goals takes place.

## 2. *Technology-Related Aspects*

In the first chapter, the word ‘technology’ is introduced to denote the work that an organisation carries out (Scott 1998, p.21, see also Thompson 1967). Technology-related aspects shape the action capabilities that actors have at their disposal for exercising authority on matters of research governance. Two variables form part of this particular category:

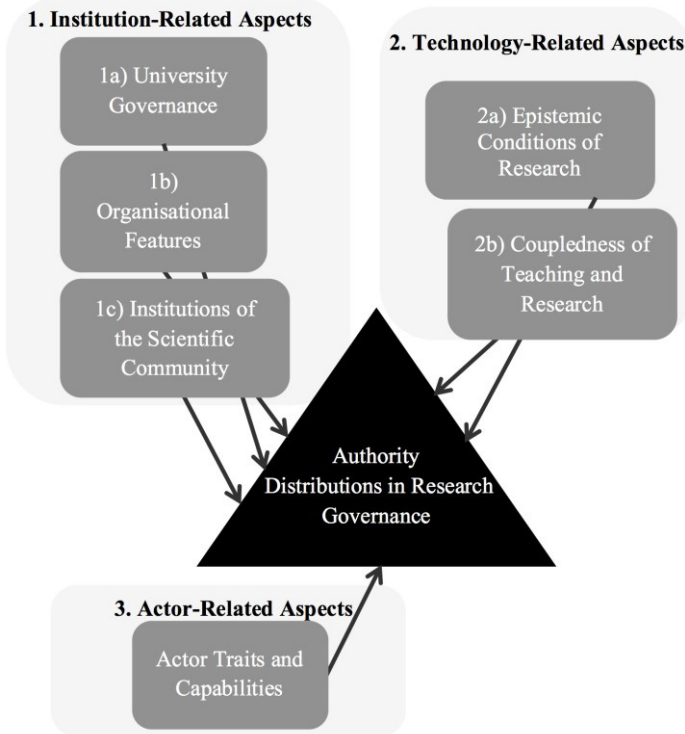
**(2a) Authority distributions are affected by the epistemic properties of the core technology research.** Given the high level of expert knowledge required, Gläser (2012b) quotes Bruno Latour (1988), who describes the researcher as the ‘obligatory point of passage’, as far as decisions about research content are concerned. Task-uncertainty as a special feature of the research process (Whitley, 1984) implies that, even if managers are quite influential, they ‘cannot refer to a role model to demand autonomy or more responsibilities’ (Schützenmeister 2010, p.7). The epistemic properties of the research process constitute a particular condition of action that limits the capabilities of university managers to direct or even steer the generation of knowledge.

**(2b) The coupledness of teaching and research** is another condition of action that shapes authority distributions in higher education. The cutting of lines of research usually has consequences, because the teaching availability and expertise are no longer available. Likewise, any management-driven decision to shut down a teaching programme can have a negative impact on the research portfolio, since one rationale for the recruitment of staff is their contribution to teaching (this particularly applies to teaching-intensive subject areas such as the social sciences and humanities). The coupledness of teaching and research is hence expected to constrain the ability of decision-makers to steer the direction of research goals.

### 3. Actor-Related Aspects

The final category considers **actors** who play a key role in the formulation, definition, and realisation of organisational goals. In characterising these actors, particular attention must be paid to their action capabilities, such as those formal decision-making rights that stem from the institutional rules allocating competencies and granting or limiting rights of participation in certain aspects of decision-making. These formal rights frequently constitute a prerequisite for an actor to become actively engaged in a decision-making process. Sometimes, certain action capabilities can also compensate for ‘weak’ decision-making rights. For instance, researchers may furthermore strengthen their bargaining scope vis-à-vis university managers if they are successful at attracting external funds. As these funds are usually provided for research on certain topics, university management may not confiscate these funds to use them for other purposes.

Figure 4: The Variable Model



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