

The organizational transformation of universities:

Using motivation theories to explain the micro–macro link

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Abstract

This chapter will explain the transformation of universities as organizations using the tradition of motivation theory, which postulates a connection between perceptions of organizational structures and regulation of action. The self-determination theory is used as a theoretical underpinning to bridge the micro–macro link between organizational structure and individual behaviour. Coleman’s bathtub model and Esser’s further development of this model can explain the interaction between the organizational structure at time t_1 , the resulting situation perception and the corresponding selected action, and the aggregation of the individual actions to the organizational structure at time t_2 . Two ideally distinguishable forms of these interactions are explained using the example of academic teaching. Much empirical evidence is cited from the literature to support this relationship. Thus, a model is presented that explains the organizational transformation of universities based on the aggregation of the actions of the members (i.e., the academic staff).

Keywords micro–macro link, motivation theories, transformation, teaching governance

1 INTRODUCTION

This chapter will analyse universities as organizations (Bess & Dee, 2012) and it focuses in particular on their organizational transformation. The basic assumption behind organizational transformation is that change agents bring about change. There can only ever be a change in an organization if the members of the organization deviate from routines or structures and then enforce changed behaviour within the organization. This can happen at the top of the organization by interpreting changes from the environment and translating them into new routines within the organization, or it can develop from deviant behaviour by individual members or groups of members who consider existing routines and structures to be dysfunctional. The main focus of this chapter is the relationship between members and organizations. How can members change the organization? And, how does the organization change the behaviour of members? More generally, the relationship between action and structure is analysed here, using universities as an example.

Organizations must fundamentally solve one central problem: the organization may pursue different goals than the individual members of the organization. Consequently, the organization must ensure that the goals of its members become congruent with the goals of the organization (Wilkesmann et

al., 2011). The organization succeeds in this whenever it can motivate its members in such a way that they pursue the goals of the organization. On the one hand, this can be done through monetary payments or other selective incentives (Eisenhardt, 1989); and on the other hand, it can be done through socialization into practices and goals of the organization (Freidson, 2001).

New Public Management used the first solution. There is, however, a lot of empirical evidence that selective incentives are not transforming university teaching to a new quality level (Wilkesmann & Schmid, 2012, Wilkesmann & Lauer, 2021). On the contrary, selective incentives produce unintended effects. To better understand this relationship, this chapter develops an explanatory model using motivation theories to explain the relationship between members and organizations and the transformation of organizations.

The main focus of this chapter is the micro–macro link, which explains the interactions between the organizational and individual levels. If organizational transformation is to be explained, then it must be explained how organizational members at time t1 perceive the organizational structures, but deviate in their actions from the routines imposed by the organizational structures and create new organizational structures in the aggregate actions of many organizational members at time t2. Consequently, motivation theories will be used to address the perception of the relationships between work and organizational structure, and the individual regulation of action and the aggregation of action. The next section of this chapter explains how motivation theory designs the link between organizational situation and members' actions.

2 MOTIVATION AS MODES OF INTERACTION BETWEEN MEMBER AND ORGANIZATION¹

Motivation theories represent the link between the organizational situation or structure and the actions of organizational members. These theories explain the impact of the organization on the actions of its members, and they also allow conclusions to be drawn about the possible influence of the members' actions on the organization. We call this the regulation of action. The term regulation of action is to be understood here as a dialectical interaction process between organizational situation and motivation. Deci and Ryan speak of regulatory styles:

These are regarded as outcomes of the ongoing dialectic between people's needs and their ambient social contexts that have either fulfilled or frustrated the needs, and they describe the way people orient toward the social environment and thus affect its potential for providing them further need satisfaction. (Deci & Ryan, 2000, p. 232)

They thus tie in with the Barnard–Simon theory of organizational equilibrium (Barnard, 1938), which was taken up in organization theory by March and Simon (1958). Theories of motivation are not reconstructed here as psychological theories in the narrower sense but as social-psychological aspects of an organizational sociology (Wilkesmann, 2019). Consequently, I will not give a chronological history of motivation theory here and refer the interested reader instead to (for example) Heckhausen and Heckhausen (2008). I will instead focus on those approaches that explain the connection between the organization or work situation and motivation. To use a well-known psychological taxonomy, these approaches come from the field of process theories rather than content theories (Bess & Dee, 2012, p. 284). The latter are concerned with the content, nature, and effect of motives. They classify different motives, such as the well-known approaches of Maslow and

Herzberg, among others, do (Madson & Wilson, 2012). Meanwhile, process theories explain how certain behaviour is produced (i.e., how motivation arises detached from the content), and can thus also focus more on the situation and the structural environment. In this sense, they can be understood as a link between the organizational situation and action. The organizational situation influences (cognitive) patterns of perception and attitude, which in turn can trigger action.

The sociological and motivational approaches have the following recursive questions in common: How does the structure limit and order possibilities of expectation and evaluation, and thus also mediate possibilities of action? And, how can possibilities for action or possibilities for expectation and evaluation change the structure? In the organizational sociological context that is assumed here, structure means organizational structure. Sociologically, motivation theories explain situation perception and its consequences for action in terms of Thomas' theorem: "If men define situations as real, they are real in their consequences" (Thomas & Thomas, 1928, p. 572).

Broadly defined, motivation is "a collective term for many different processes and effects whose common core consists in the fact that a living being selects its behaviour for the sake of the expected consequences, and controls it with regard to direction and energy expenditure" (Heckhausen 1980, p. 10; translated by the author). Motivation is thus to be understood as a goal-directed cognitive process to achieve a specific motivational goal (Krisor & Rowold, 2013). Motivation is composed of individual motives, and the motivational potential of incentives and/or the action situation. In this process, a latently existing willingness to behave, which is called motive, is activated by the situation or incentive (Heckhausen & Heckhausen, 2008). The motive is thereby assumed to be socialized or inherited. It is methodologically understood as a constant or as a placeholder that the same person will exhibit the same behaviour in similar situations. The situational perception that can activate the action is, in the context discussed here, the university with its conditions of work and interaction. Motivation is not only a category assigned to the individual but it also depends on the perception of situational factors.

Individual regulation of action is thus not to be understood simply as a stimulus-response mechanism to external incentives, but instead is dependent on the perceived organizational and work situation. Does the employee perceive their situation as strictly hierarchical, with clear instructions for action and controls? Or, does the employee interpret and act in such a way that they can autonomously determine the means necessary to accomplish the task? The perception of the organizational and action situation is thus differentiated according to the observed degree of autonomy (i.e., to what extent the action is self-directed or externally determined). Academics often have great autonomy, as will be shown below, and have been socialized to desire high levels of autonomy in their work. This is decisive for the regulation of action and thus for individual motivation. The following section will discuss the self-determination theory as an approach that can explain the relationship between members and organizations that address this connection.

3 SELF-DETERMINATION THEORY

Self-determination theory (SDT; Ryan & Deci, 2000) is a well-suited theory because it establishes a connection between the perceived organizational situation and the type of motivation or action regulation. In SDT, a continuum is assumed that extends from external-determination to self-determination, depending on the person's perception of the organizational structure conditions in which they operate (Ryan & Deci, 2000, 2013). According to Ryan and Deci (2000), the perception of self-determination is already opened by a choice. A strong level of external-determination correlates with amotivation, a somewhat weaker level of external-determination correlates with extrinsic

motivation, up to a high level of self-determination, which is then accompanied by intrinsic motivation (Fig. 2).

For Ryan and Deci (2000), different gradations of non-self- or self-determination exist in-between, which correlate with different forms of extrinsic motivation. The different forms of extrinsic motivation are determined by different stages of socialization and internalization. First, extrinsic regulation corresponds with a still high level of hetero-determination and actions are performed only due to reward or punishment. The employee only performs the action for which they are paid or for which there is a selective incentive—no other courses of action are performed (Wilkesmann & Schmid, 2012). A professor shows extrinsic regulation when they still have to mark a lot of exams or homework that is still unfinished on the desk. They will mark the exams if they realize that they are paid for it or if they get an additional incentive, such as an extra research assistant position or extra pay due to the large number of exams. The professor may be differently motivated for other activities in the process. Only for this given and non-self-determined activity, they are exclusively extrinsically motivated.

Second, introjected regulation represents an internalization of these reward and punishment incentives, and the actor rewards or punishes themselves. Therefore, this represents a first stage of internalization and socialization. Even if no direct control by the dean or other control instances is possible at the moment, the action is carried out because otherwise self-punishment through a guilty conscience sets in. A professor gets a guilty conscience if teaching was not prepared, and therefore their performance in class was not as good as it could be (Wilkesmann & Lauer, 2020; Daumiller et al., 2020). There is no negative feedback from the outside, but the professor punishes themselves.

Third, identifying regulation describes a behaviour whose values and goals are an integral part of the self-concept. Here, social norms are internalized and followed. Especially in universities, academic behaviour is regulated by academic professions and their professional norms. An important function of academic education is precisely to socialize academics into these norms (Jaffe, 2017). For example, the researcher acts according to the code of good scientific practice and does not fake survey results, even if this would allow more spectacular results, which would lead to a successful peer review and thus to a high-impact journal publication. Another social norm in academia is that good scholarship includes good teaching. In addition, every professor has a responsibility to the next generation.

Fourth, integrated regulation is a form of action regulation that is consistent with the self-concept. It refers to an integration of goals and norms with which the individual is in complete agreement. After intrinsic motivation, this type of regulation has the highest self-determination. Research assistants, for example, may assess and perceive themselves as good researchers who are highly interested in the topic and who will therefore submit high-quality papers on time for a deadline. Or, professors may prepare well for teaching because they think that they are a good professor and teaching is just part of being a professor. Consequently, intrinsic motivation describes an action that is free of external incentives and constraints, and is only carried out because it brings fun, pleasure, or satisfaction (Wilkesmann & Schmid, 2014).

It is assumed that there are three internal psychological needs that form the basis for self-motivation and support the process of internalization (Ryan & Deci, 2000, 2020), as follows:

(1) Relatedness, which is the need to feel belonging and connectedness. This behaviour is exemplified, requested, or valued by significant others (Ryan & Deci, 2000, 2020). Relatedness is a social mechanism of perception that promotes self-esteem and encourages individual initiative (Wilkesmann & Schmid, 2014). Professors, for example, adopt the social norms of the group to which they feel part of (e.g., a group of professors from the same faculty). Social norms can only guide

action when they have been internalized, and thus trigger an internalized or intrinsic form of motivation.

(2) **Autonomy**, which is related to the intention to experience oneself as self-organized and to be able to act according to one's own will (Ryan & Deci, 2013). This need is also linked to the need for individual freedom and to feel responsible for one's own behaviour (Tang et al., 2020). Thus, work in academic teaching must allow for these freedoms if self-determined motivation is to occur (Wilkesmann & Schmid, 2014).

(3) **Competence**, which is related to the fact that people are more likely to exhibit behaviours that are valued by relevant social groups when they feel effective with regard to these activities (Ryan & Deci, 2000). Perception of competence is undermined if feedback is negative or challenges are not perceived as optimal (Ryan & Deci, 2013). An individual is only able to fully internalize external goals when they are recognized as competent. Professors are likely to be considered highly competent in their research area, and therefore are likely to have both the self-description and the external description of being competent addressed to them. For teaching, professors need skills in didactic methods and expert knowledge for the content (Cubelles & Riu, 2018).

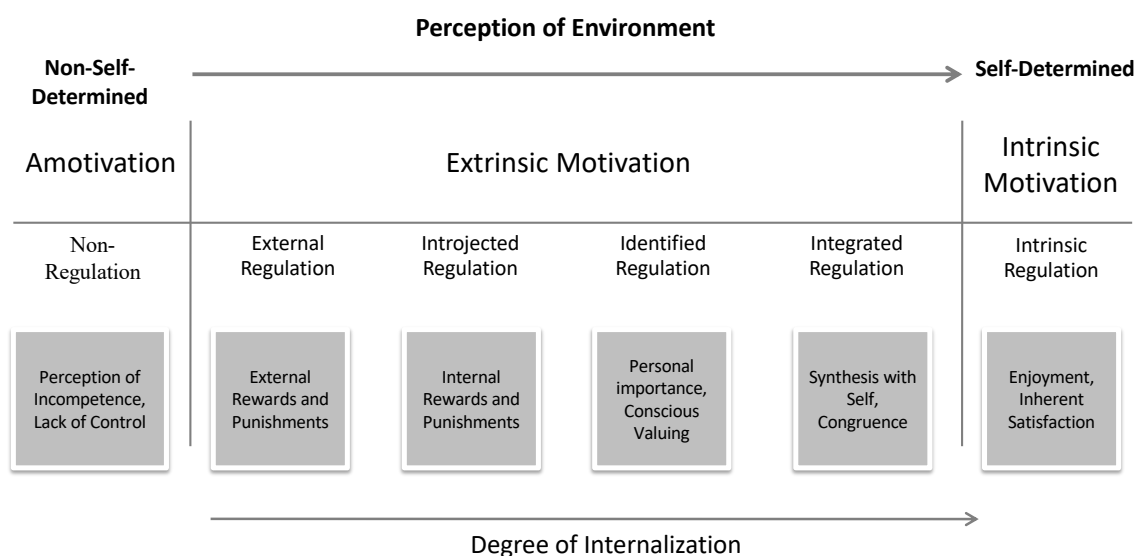


Fig 2: Self-determination theory, according to Ryan and Deci (2000, p. 72) (own illustration)

Each member of the organization is addressed and motivated on all three dimensions simultaneously, but to different degrees. The professor is generally highly intrinsically motivated when it comes to their own research and teaching. However, they are probably more driven by an extrinsic form of motivation to mark the exams. The more different actions that an activity comprises, the broader the spectrum of possible action regulations and thus types of motivation.

In this model, the action regulation type refers to the perceived self-determination, which can vary between individuals. Consequently, two members of a higher education institution can be motivated very differently by the same situation. However, it can be assumed that this difference only occurs within a certain range of variance (Ryan & Deci, 2006).

The next section will outline exactly how motivation theories help to explain the relationship between organizational structure and individual behaviour. This will also provide an explanatory

model of how to understand organizational transformation at universities. Overall, the approach that is presented here can be connected to the perception of the situation, and thus contribute to a comprehensive sociological explanatory model of action (Esser, 1993).

4 COLEMAN'S BATHTUB MODEL

A theory that seeks to explain the transformation of an organization must include a concept of the macro–micro link, which is the relationship between action and structure. Only if the theory can explain the relationships between both levels, can it explain a transformation in the strict sense of the term and not merely describe it.

According to Coleman (1990), any social science explanation should make a level change. Changes over time at the macro-level can only be explained by actions at the micro-level and must not remain at the macro-level. Coleman (1990, p. 8) develops his model in a critical discussion of Max Weber's *Protestant Ethic and the Spirit of Capitalism* (2002 [1904]). The German sociologist Esser (1993) has developed Coleman's model further. Esser's expanded model is described and explained here using the example of academic teaching at universities.

Coleman's "bathtub model" (1990; Esser, 1993) is a good example of such a level change. Visual representations of this model resemble a bathtub with lines that depict relationships from the macro-level to the micro-level, and from the micro-level back to the macro-level. In organizations, the scope for action of organizational members (micro-level) is shaped by the organizational structures and the prevailing norms, values, and role expectations within the organization (macro-level). For example, when seminars are held and their length is regulated by structures and norms (e.g., 90 minutes in the German higher education system, although the seminars do not start at the specified time but 15 minutes later), as are the manners between professors and students. Nevertheless, changes at the level of the structure (macro-level) can be explained by actions at the member level and their aggregation (micro-level). Through the members' actions, the structures, norms, and role expectations are reproduced or changed; namely, when there are deviations from the predetermined patterns. Finally, organizational structures and norms are experiences made by other members at earlier points in time.

4.1 Logic of the situation

The logic of the situation leads to the construction and reconstruction of the shared lifeworld ("Lebenswelt"). The logic of the situation describes the options for action that an actor has. The definition of a situation is not objectively given, but is given communicatively and is thus socially constructed. However, this construction does not take place in a 'vacuum' but is linked to certain parameters and framework conditions. The definition of the situation and its negotiation requires a joint process of interaction. This can also lie in the past and may have been carried out by former members of the organization. The current actors are then confronted with the situation definition made at that time, which may be more or less alien in the form of norms, role expectations, or more generally as social institutions. Nevertheless, every situation is socially constructed (Berger & Luckmann, 2004 [1966]).

This model will be illustrated with the following example of governance of teaching. This leads to the following research questions:

What teaching governance causes which teaching actions among professors? And, does this reproduce the original teaching governance or does this lead to innovations in teaching on the organizational structural level?

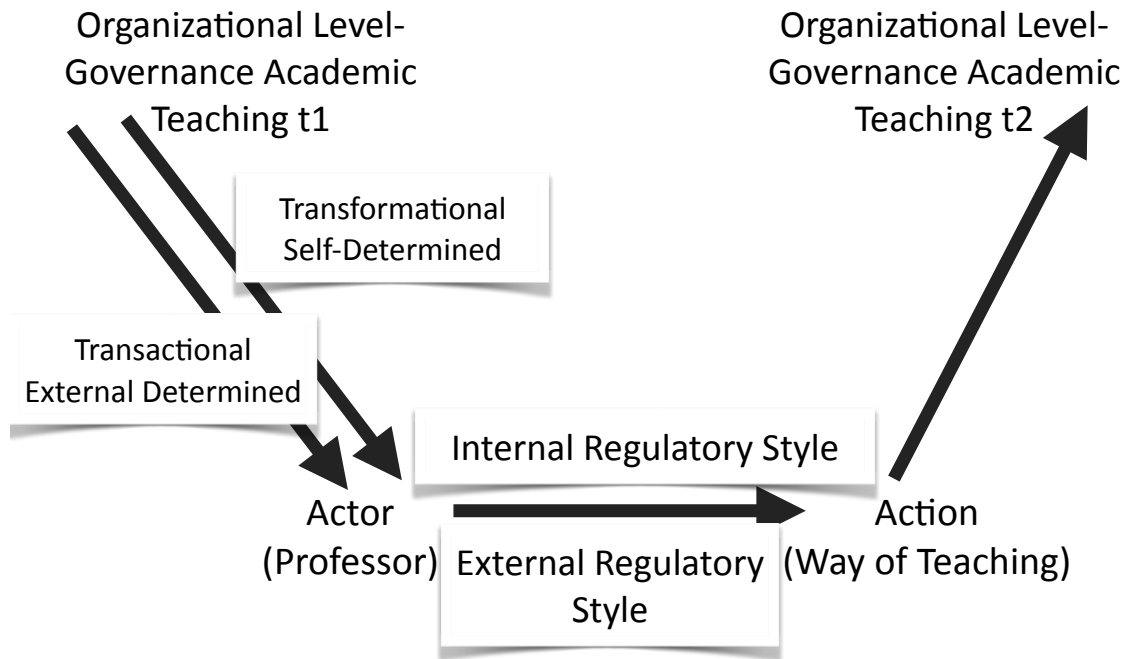


Fig. 3: Explanatory model of academic teaching (own illustration)

Figure 3 illustrates the micro macro link using the example of teaching. How actors perceive organizational governance is determined by the logic of the situation. Two forms of governance are differentiated for this example: transactional or transformational governance (Wilkesmann 2013, 2016). Both terms are adapted from the full range leadership model (Bass & Avolio, 1993) and they are used to investigate the general structure that enables certain behaviours within an organization. Both forms of governance lead to different types of organizational transformation, which is explained in more detail below.

Transactional governance describes or reflects a set of tools to change university organization towards priorities set by top-level managers. Organizational transformation means in this case more control over the behaviour of the professors, more emphasis on efficiency in teaching, and more emphasis on rewards or punishment that shifts professors' behaviour in the direction of the given goals by the top-management. Transactional governance supports a top-down transformation. The university giving extra monetary incentives for achieving special teaching goals is a good example of a transactional governance of teaching within the framework of New Public Management (NPM). In this example, transactional governance is determined by the selective incentives of NPM and it is mostly based on "agreements, codes, controls, directions, and standard operating procedures" (Wilkesmann, 2016, p. 36), where members of the organization expect compensation or benefit for any behaviour. The following incentives are established in the German higher education system: pay-for-performance, performance related budgets, management by objectives, and teaching awards (Wilkesmann & Schmid 2012). These incentives suggest that good teaching should be encouraged with appropriate performance incentives: anyone who develops a new course of study will receive a bonus payment, while those who supervise many Master's or PhD candidates will receive an additional staff position. However, these selective incentives can only be awarded if the actions of the professors are closely observed and measured, otherwise there is no basis for a rule-defined award of incentives. This can and probably will be perceived by the professors as a restriction of their autonomy (Wilkesmann & Schmid, 2012). The logic of the situation is then perceived as not self-determined. The low level of self-determination for members and the associated external regulation of action can only be enforced because of the form of membership that prevails here (Luhmann,

1999, p. 35). There are clear membership rules in the employment contract that very precisely specify when a person is and is not an organizational member. As a rule, the employment contract serves this purpose, which also defines the rights and obligations of the member. Pressure and low autonomy under the regime of transactional governance leads to extrinsically motivated professors.

In contrast, *transformational governance* describes a type of organizational transformation that reflects or produces grassroots innovation, bottom-up initiatives that build on collaboration between professors, and practices that reflect the priorities of professors and the learning needs of students. Under transformational governance, the form and content of teaching is subject to professional self-understanding. This transformational governance formulates a shared teaching vision (Wilkesmann, 2016): “Commitments are long term. Mutual interests are shared [...] Leaders and followers go beyond their self-interests or expected rewards for the good of the team and the good of the organization” (Bass & Riggio, 2006, pp. 103-104). Transformational governance leads to a self-determined perception of the teaching situation. As we see below, organizational transformation arises here through the voluntary initiative of professors who develop new ideas for their teaching and spread them throughout their department or the entire university by convincing colleagues or simply infecting them with their enthusiasm as role models. However, this requires the freedom and leeway to be able to develop new ideas and the opportunity to act as a role model.

4.2 Logic of selection

Both the logic of the situation and the logic of selection are theoretically justified here by using SDT (Ryan & Deci, 2000) as an adapted social-psychological theory of action that can explain the cognitive perception of the environment. Thus, the perception of a certain situation results in a specific action selection. Esser describes this under the logic of selection (1993, pp. 94-96), although he limits this to only one theory of action; namely, a rational choice theory. However, action in organizations is often characterized more by routines and less by conscious decisions. Meanwhile, teaching engagement can also proceed according to the type of rational choice. Namely, if a bonus of 500 euros is paid for good teaching or an additional staff position is awarded for supervising more than 20 (Master’s or PhD) theses per year, then it may be rational to follow this reward in one’s choice of action. Therefore, the perception of transactional governance of teaching leads to an extrinsic motivation, which results in a logic of selection in the sense of rational choice theory: only the action that is rewarded is performed. None of the other alternative actions are pursued.

In contrast, the perception of transformational governance results in internalized or intrinsic motivation. A practiced habitus, such as typical professorial behaviour, is exercised without reflection. If a high level of engagement in teaching is part of the self-image of good academic activity, then this self-image is socialized and is presumably not rationally available but is instead an internalized routine of action (Wilkesmann, 2016). Here, the professors perform those actions whose social norms they feel are obliged, or the actions may simply be fun. Under transformational governance, if a professor is highly intrinsically motivated to teach, then they do not count up the time spent with students simply because it is fun for them. Another example of transformational governance in teaching is high autonomy in planning and design of the courses. This perception of the logic of situation leads to internalized or intrinsically regulatory styles at the level of logic of selection. The professors have the freedom to develop new didactic concepts, which will probably change the teaching at their department.

4.3 Logic of aggregation

So far, the path from the organizational structure to the action level of the organizational members has been considered, but the most important and last step of organizational transformation is still missing: The step from the selection level of the actors back to the level of the organizational

structure. Esser (1993) calls this last step the logic of aggregation. However, this step is theoretically and empirically difficult to determine. This is equally true for the example of academic teaching given earlier. Teaching is the result of collective action; that is, no one person alone carries the burden of teaching, but many lecturers together produce the collective good of a study program. Furthermore, lecturers and students are equally involved in the teaching–learning situation; after all, teaching is all about student learning. Thus, the output of teaching can only be determined according to aggregation rules of collective action. In contrast to the other two logics, there are hardly any rules for the transition from the level of action to the level of structure. Taking teaching as an example: How is the collective action of teaching coordinated and organized together?

For transactional governance producing a non-self-determined situation, we could hypothesize that an external regulation of action leads to free-rider behaviour among the actors. The free-rider teacher can make life easy for themselves by reducing their costs and setting as few exams as possible. Each lecturer can control this by giving as poor grades as possible. Rational students will then move on to those professors from whom they expect better grades. Thus, the person who assigns particularly poor grades reduces their own workload and moves it on to their colleagues. This would then produce and reproduce a regime of external control. It is thus easy to control and manage the number of one's own students because the students also want to reduce costs (i.e., aim for the best grades with the least workload). In this example, transactional governance will be reproduced because the logic of aggregation distributes the selection mechanism over the department. If some professors take the free-rider position by giving poor grades, then others must conform to the same selection logic or they will be exploited. Under a transactional governance of teaching, a professor has no incentive to act against the existing organization structure because this would not be rewarded but would instead be punished. Bottom-up transformation will hardly occur. All in all, the member's influence on organizational transformation is low. However, a top-down transformation can easily occur under transactional governance because senior management (e.g., the rectorate) can oblige professors to change their behaviour. Therefore, they create new incentive schemas and move the behaviour of professors in a certain direction. Under a logic of selection that prefers an extrinsically motivated selective incentive behaviour, the professors will follow the new direction. To sum up, transactional governance leads to a top-down organizational transformation.

Under transformational governance, professors perceive a self-determined situation. They then have the freedom to develop new forms of teaching and didactic teaching concepts. A very important example for the logic of aggregation under transformational governance is convincing colleagues. Convincing can be achieved through four different ways.

1. Empirical evidence that new didactics or new teaching formats such as intensive seminars or practical seminars lead to better learning outcomes for students. Professors are researchers and can therefore be convinced by empirical evidence.
2. Good arguments, e.g. all professors could be convinced if they have less work to do with teaching in the long run and therefore engage in new forms of teaching such as the flipped classroom.
3. Consequently, best practice examples from role models of how teaching can be changed are important. Schmid and Lauer termed this an “institutional teaching entrepreneur” (Schmid & Lauer, 2016). The entrepreneurs infect colleagues with their enthusiasm as role models, when they talk about, for example, sophisticated new digital tools they're using for their teaching and show them off.
4. However, this does not mean that power or social prestige do not play a role. Professors with high prestige can be more persuasive because their arguments have more power.

These four forms of convincing may lead to a different bottom-up teaching didactic in the department. Bottom-up transformation of the organization could only occur, if members perceive

the logic of situation as a self-determined situation because it allows professors to exchange different perspectives and afterwards integrate these perspectives into one solution. This organizational development process has been described elsewhere as an “innovation game” (Wilkesmann, 1999; Wilkesmann & Wilkesmann, 2011). If a newly developed concept is taken up as best practice in a department by other professors, then this can lead to a new didactic teaching concept in the department or in the whole university in the logic of aggregation. In this case, the previous structures are not reproduced but instead a transformation takes place (Lauer & Wilkesmann, 2017; Wilkesmann, 2016). An internal regulation of action gives professors the freedom to develop new ideas and convince other colleagues by good arguments to change and transform the organizational structure or the incentive scheme. If a group of professors acts under the regulatory style of identified regulation, then they are (for example) all committed to the social norm of “delivering the best teaching they can.” If the still existing teaching does not fit to that norm, then this group of professors is motivated to change the teaching didactics.

Additionally, the self-determined transformational governance could be supported by transactional governance, such as if the development of new didactic teaching concepts is supported by project funds (Pflüger & Mojescik, 2021). There is also empirical evidence to show that didactic support from centres for teaching and learning increases self-governed changes (Lauer & Wilkesmann, 2019). Lauer and Wilkesmann (2019) provide empirical evidence that didactic training, individual coaching (e.g. work shadowing or supervision), peer coaching, and organized peer communication (e.g. professional learning groups) for professors’ teaching increases the perception of the teaching environment as self-designable for professors. Reference should also be made here to the framework of Lattuca and Pollard (2016), who link faculty engagement and decision-making, which also stresses the key role of the institutional environment on concerted teaching behaviour.

A criterion is needed to decide whether an organizational transformation has taken place or not (Dee & Leisyte, 2017). We define whether a higher education institution has successfully undergone a transformation process with structural changes at the organizational level. Accordingly, the logic of aggregation only leads to transformation at the organizational level when organizational structures or organizational incentive systems change. There is a lot of empirical evidence to support this relationship, which will be reported in the following section.

5 EMPIRICAL EVIDENCE FROM SDT AND FROM RESEARCH OF ACADEMIC TEACHING

Research findings in this area will be presented based on research on SDT and research on teaching governance in universities.

5.1 Empirical evidence from SDT research in education

There is a lot of empirical evidence for the connection between the logic of situation and the logic of selection. Yasué et al. (2019) describe the relationship between university instructors who behave in a self-determined pedagogical environment and their own behaviour as autonomy-supportive for the students. However, the self-determined teaching environment is destroyed by large class sizes, high teaching loads, publication pressures, and a culture that undervalues effective undergraduate teaching.

In an overview article, Ryan and Deci (2020) stress that all research results support the correlation between perceived autonomy and intrinsic motivation. Teachers who are constrained by controlling work situations, institutional pressures, or negative leadership style pass this pressure on to their students. In this non-self-determined situational perception, both teachers and then subsequently

students are only extrinsically motivated or even amotivated. Extrinsically motivated professors may give low autonomy to their students. This in turn means that students are extrinsically motivated which leads to surface learning and low achievement of learning outcomes (Pelletier et al., 2002). In this way, autonomy or pressure is passed on from the higher level to the next lower level in the organization.

Meanwhile, autonomy leads to higher intrinsic motivation in the lower levels of the hierarchy. For example, Pelletier et al. (2002) give empirical evidence for the relationship between the more supportive behaviour of autonomy and less controlling behaviour of teachers, and the high level of intrinsic motivation of students. In this context, transformational governance can change the relationship between professors and students—these professors give a high degree of autonomy to their students, who are then intrinsically motivated. Therefore, the student's learning can be characterized by deep-learning and a high achievement of learning outcomes (Pelletier et al., 2002). Similarly, Roth et al. (2007) studied Israeli (school) teachers and found that those who felt more controlled in their own professional activities were less autonomy-supportive toward their students. Bieg et al. (2011) also show that autonomy support has a considerable impact on the student's intrinsic motivation. Leroy et al. (2007) summarize their research as follows: “[an] autonomy-supportive teacher will seek to identify students' inner motivational resources by creating classroom conditions favourable to meeting students' needs in a way that promotes internalization processes and enhances intrinsic motivation” (p. 530). Additionally, Behzadnia et al. (2018) give empirical evidence for the fact that the student's perceptions of their teacher's control were negatively related to the student's well-being, negatively related to knowledge development, and positively related to ill-being.

Behzadnia et al. (2018) give empirical evidence to show that the teacher's autonomy support is important for their student's type of motivation, knowledge, and performance. Furthermore, Litalien and Guay (2015) analyse the relationship between perceived competence, doctoral studies persistence (i.e., completion and dropout intentions), and autonomous or controlled regulations and advisor support. Their results show that support from the supervisor and faculty has a negative effect on dropout intentions through internalized motivational processes. Additionally, Wang et al. (2016) prove the effect of autonomy-supportive teaching style on the student's perceived autonomy and deep-learning strategies. In their empirical study, Trenshaw et al. (2016) analyse a second-year engineering course (Computer Engineering I) which was redesigned to give students more autonomy to increase intrinsic motivation. However, Trenshaw et al. (2016) found that relatedness in large engineering courses is more important to student perceptions than autonomy. Especially in larger groups, the social peer group is very important for the perception of the environment.

Many studies that show the effects of study motivation on student learning behaviour and learning outcomes. Bailey and Phillips (2015) found in a survey of 184 first-year university students that extrinsic motivation showed few relationships to outcome and performance variables, while amotivation showed consistently poor performance. Conversely, Orsini et al. (2019) show that the student's self-determined motivation has a positive effect on deep study strategies and is negatively associated with surface study strategies.

5.2 Empirical evidence from research of academic teaching

The logic of aggregation under transactional or transformational governance is analysed in the examples by Lauer and Wilkesmann (2017). Using the example of two case studies, one from a German university of applied sciences and one from a German research university, they show that the implementation of mandatory teaching formats in every curriculum to meet the needs of an increasingly diverse student body needs both transactional and transformational governance. A new

mandatory curriculum for all professors can only be implemented top-down, while the professors also need to be involved and convinced. Without their commitment, no implementation can succeed: “If universities mainly used transactional governance to implement such changes top-down—that is, without a transformational vision—, then academic resistance (Anderson, 2008) will most likely occur” (Lauer & Wilkesmann, 2017, p. 276). They find that transformational governance is needed to develop new ideas and shared visions, while transactional governance is needed to implement the new structures in the whole organization.

Wilkesmann and Lauer (2020) give empirical evidence to show that most professors in the German higher education system do not perceive the logic of the situation for teaching as a transactional, non-self-determined governance but as a transformational, self-determined situation. Therefore, most professors are not extrinsically motivated for teaching. Additionally, comparing the results of both surveys in 2009 and 2017 where the same teaching motivation inventory was used, they found that most answers stay stable with the only exception of introjected teaching motivation. Agreement with these items increased (Wilkesmann & Lauer, 2020, p. 445). Professors in 2017 felt more uncomfortable or had more of a bad conscience if they neglected their teaching duties than in 2009. This can be interpreted as a cultural change in the teaching behaviour of German professors.

6 CONCLUSION

For organizational transformation to be explained and not just described, a change of level must take place. However, changes at the organizational level can only be explained by changes at the individual level of action. Consequently, relationships between the two levels must be identified. The relationship between the organizational level and the individual action level has been characterized here with the logic of situation. The individual action level of the members has been labelled with the logic of selection and the feedback relationship between the individual level of the members and the organizational level has been introduced as the logic of aggregation. Using SDT, a theoretical underpinning of these three logics has been developed that can explain why members behave differently under different organizational governance, and why this leads either to the reproduction of organizational structures and routines or to change. This provides a theoretically underpinned explanatory model for the organizational transformation of universities. Moreover, many empirical results from higher education research show how fruitful this explanatory model is.

Transformation of universities can be different. In the introduction, higher education transformation is defined as follows:

- “Second order (deep, pervasive) changes in the culture, structure, strategy, and behaviour of a higher education system or a higher education institution.
- The changes may be planned; That is, designed by system actors or university managers.
- Or the changes may be emergent; that is, the result of unplanned drift, grassroots innovation, or deterministic external forces” (introduction of this book, p.6).

What does this mean for the explanatory model? The first bullet point defines the empirical operationalization of transformation. We can only call it transformation if we can observe a change in organization structures, cultures, or incentive systems. The organizational structures at time t_2 have to be different from the structures at time t_1 . In all other cases, the organizational structure is reproduced by the actions of its members. The second bullet point describes the top-down changes under the transactional governance and the external regulation of action. The third bullet point includes the bottom-up changes under the transformational governance and internalized regulation of action. Additionally, we have to take into account that collective action under internalized or

intrinsic action regulation can have unplanned outcomes because everything is in progress and not fixed by a strategic goal.

Further research is needed to investigate empirical relationships in the logic of aggregation. In particular, more research is needed to prove the postulated connection between an extrinsic regulation of action, the free-rider behaviour of the actors, and the reproduction of a transactional governance. Moreover, can an intrinsic or internalized regulation of action lead to a communicative collective action that produces new organizational structures? To what extent is transactional governance necessarily required for the organizational implementation of new organizational structures? Empirical evidence on this is provided, for example, by Lauer and Wilkesmann (2017) and Wilkesmann and Wilkesmann (2011). However, further research on the logic of aggregation is needed.

7 REFERENCES

- Anderson, G. (2008). Mapping academic resistance in the managerial university. *Organization*, 15(2), 251-270.
- Bailey, T. H., & Phillips, L. J. (2016). The influence of motivation and adaptation on students' subjective well-being, meaning in life and academic performance. *Higher Education Research & Development*, 35(2), 201-216.
- Barnard, C. (1938). *The functions of the executive*. Harvard University Press, Cambridge.
- Bass, B.M., & Avolio, B.J. (1993). Transformational leadership and organizational culture. *Public Administration Quarterly*, 17, 112-121.
- Bass, B.M., & Riggio, R.E. (2006). *Transformational leadership* (2nd edn), Psychology Press, New York.
- Behzadnia, B., Adachi, P. J., Deci, E. L., & Mohammadzadeh, H. (2018). Associations between students' perceptions of physical education teachers' interpersonal styles and students' wellness, knowledge, performance, and intentions to persist at physical activity: A self-determination theory approach. *Psychology of Sport and Exercise*, 39, 10-19.
- Berger, P.L., & Luckmann, T. (2004 [1966]). *The social construction of reality: A treatise in the sociology of knowledge*. Penguin, London.
- Bess, J.L., & Dee, J.R. (2012). *Understanding college and university organization*. Vol I & Vol. II. Sterling, Virginia, Stylus.
- Bieg, S., Backes, S., & Mittag, W. (2011). The role of intrinsic motivation for teaching, teachers' care and autonomy support in students' self-determined motivation. *Journal for Educational Research Online*, 3(1), 122-140.
- Coleman, J.S. (1990). *Foundations of social theory*. Belknap Press of Harvard University Press, Cambridge, Mass.
- Cubeles, A., & Riu, D. (2018). The effective integration of ICTs in universities: the role of knowledge and academic experience of professors. *Technology, Pedagogy and Education*, 27(3), 339-349.
- Daumiller, M., Stupnisky, R., & Janke, S. (2020). Motivation of higher education faculty: Theoretical approaches, empirical evidence, and future directions. *International Journal of Educational Research*, 99, 101502. doi.org/10.1016/j.ijer.2019.101502

Deci, E.L., & Ryan M.R. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11 (4), 227-268.

Dee, J.R., & Leišytė, L. (2016). Organizational learning in higher education institutions: theories, frameworks, and a potential research agenda. In Paulsen, M.B. (Ed.), *Higher education: Handbook of theory and research* (pp. 275-348). Springer International Publishing, Switzerland.

Eisenhardt, K.M. (1989). Agency theory: An assessment and review. *Academy of Management Review*, 14, 57-74.

Esser, H. (1993). *Soziologie: Allgemeine Grundlagen [Sociology: General foundations]*. Campus, Frankfurt am Main.

Freidson, E. (2001). *Professionalism, the third logic*. Polity Press, Cambridge.

Heckhausen, H. (1989). *Motivation und Handlung [Motivation and action]*. Springer, Berlin.

Heckhausen, J., & Heckhausen, H. (eds). (2008). *Motivation and action*. Cambridge University Press, New York (Third Edition).

Jaffe, A. (2017). Differentiated eliteness: Socialization for academic leadership. *Social Semiotics*, 27(3), 370-381.

Krisor, S.M., & Rowold, J. (2013). Motivation. In Rowold, J. (ed.), *Human Resource Management* (pp. 123-134). Springer, Berlin, Heidelberg.

Lattuca, L.R. & Pollard, J.R. (2016). Towards a conceptualization of faculty decision-making about curricular and instructional change. In Leisyte L., & Wilkesmann, U. (Eds.), *Organizing academic work in higher education: Teaching, learning and identities* (pp. 89-108). Routledge, London.

Lauer S., & Wilkesmann, U. (2017). The governance of organizational learning: Empirical evidence from best-practice universities in Germany. *The Learning Organization*, 24, 266-277.

Lauer, S., & Wilkesmann, U. (2019). How the institutional environment affects collegial exchange about teaching at German research universities: findings from a nationwide survey. *Tertiary Education and Management*, 25(2), 131-144.

Leroy, N., Bressoux, P., Sarrazin, P., & Trouilloud, D. (2007). Impact of teachers' implicit theories and perceived pressures on the establishment of an autonomy supportive climate. *European Journal of Psychology of Education*, 22(4), 529-545.

Litalien, D., & Guay, F. (2015). Dropout intentions in PhD studies: A comprehensive model based on interpersonal relationships and motivational resources. *Contemporary Educational Psychology*, 41, 218-231.

Luhmann, N. (1999). *Funktionen und Folgen formaler Organisationen [Functions and consequences of formal organization]*. Berlin: Duncker & Humblot.

Madson, S. R., & Wilson, I.K. (2012). Humanistic theory of learning: Maslow. In Seel, N.M. (ed.) *Encyclopedia of the Sciences of Learning* (pp. 1471 – 1474). Springer, New York.

March, J. G., & Simon, H.A. (1958). *Organizations*. John Wiley, New York.

Orsini, C. A., Binnie, V. I., & Jerez, O. M. (2019). Motivation as a predictor of dental students' affective and behavioral outcomes: Does the quality of motivation matter? *Journal of Dental Education*, 83(5), 521-529.

- Pelletier, L.G., Seguin-Lévesqui, C., & Legault, L. (2002). Pressure from above and pressure from below as determinants of teachers' motivation and teaching behavior. *Journal of Educational Psychology, 94*, 186-196.
- Pflüger J. & Mojescik, K. (2021). Governance of academic teaching: why universities introduce funding programs for teaching and why academic teachers participate. *Teaching in Higher Education*, Online-first.
- Roth, G. , Assor, A., Kanat-Maymon, Y., & Kaplan, H. (2007). Autonomous motivation for teaching: How self-determined teaching may lead to self-determined learning. *Journal of Educational Psychology 99*: 761–74.
- Ryan, R. M., & Deci, E. L. (2013). Toward a social psychology of assimilation: self-determination theory in cognitive development and education. In B. W. Sokol, F. M. E. Grouzet & U. Müller (Eds.), *Self-regulation and autonomy: Social and developmental dimensions of human conduct* (pp. 191-207). Cambridge University Press.
- Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. *Contemporary Educational Psychology, 61*, 101860. doi:10.1016/j.cedpsych.2020.101860
- Ryan, R. M., & Deci, E.L. (2000). Self-Determination Theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*(1), 68-78.
- Ryan, R. M., & Deci, E.L. (2006). Self-Regulation and the problem of human autonomy: Does psychology need choice, self-determination, and will? *Journal for Personality, 74*(6), 1557-1585.
- Schmid, C.J., & Lauer, S. (2016). Institutional (teaching) entrepreneurs wanted! Considerations on the professoriate's agentic potency to enhance academic teaching in Germany. In Leisyte L., & Wilkesmann, U. (Eds.), *Organizing academic work in higher education: Teaching, learning and identities* (pp. 109-131). Routledge, London.
- Tang, M., Wang, D., & Guerrien, A. (2020). A systematic review and meta-analysis on basic psychological need satisfaction, motivation, and well-being in later life: Contributions of self-determination theory. *PsyCh Journal, 9*(1), 5-33.
- Thomas, W. I., & Thomas, D.S. (1928). The methodology of behavior study. In Thomas, W.I., & Thomas, D.S. (eds.). *The child in America: Behavior problems and programs* (pp. 553-676). New York: Knopf, Alfred A.
- Trenshaw, K. F., Revelo, R. A., Earl, K. A., & Herman, G. L. (2016). Using self-determination theory principles to promote engineering students' intrinsic motivation to learn. *International Journal of Engineering Education, 32*(3), 1194-1207.
- Wang, J. C. K., Ng, B. L., Liu, W. C., & Ryan, R. M. (2016). Can being autonomy-supportive in teaching improve students' self-regulation and performance? In *Building autonomous learners* (pp. 227-243). Springer, Singapore.
- Weber, M. (2002 [1904]). *The Protestant ethic and the "spirit" of capitalism and other writings*. Penguin, London.
- Wilkesmann, M., & Wilkesmann, U. (2011). A framework for knowledge transfer as interaction between experts and novices supported by technology. *VINE Journal of Information and Knowledge Management Systems, 41* (2), 96 - 112.

- Wilkesmann, U. (1999). *Lernen in Organisationen: Die Inszenierung von kollektiven Lernprozessen* [Learning in organizations: The implementation of collective learning processes]. Campus, Frankfurt am Main.
- Wilkesmann, U. (2013). Effects of transactional and transformational governance on academic teaching: Empirical evidence from two types of higher education institutions. *Tertiary Education and Management*, 19 (4), 281-300.
- Wilkesmann, U. (2016). Teaching matters, too: Different ways of governing a disregarded institution. In Leisyte L., & Wilkesmann, U. (Eds.), *Organizing academic work in higher education: Teaching, learning and identities* (pp. 33-54). Routledge, London.
- Wilkesmann, U. (2019). Motivation und Mitgliedschaft. Das Verhältnis von Organisation und Mitglied (Motivation and Membership. The Relationship between Organization and Member.). In Apelt, M. et al. (eds.): *Handbuch Organisationssoziologie (Handbook Organizational Sociology)*. Springer, Wiesbaden. doi.org/10.1007/978-3-658-15953-5_22-1
- Wilkesmann, U., & Lauer, S. (2020). The influence of teaching motivation and New Public Management on academic teaching. *Studies in Higher Education*, 45(2), 434-451.
- Wilkesmann, U., & Schmid, C.J. (2012). The impacts of new governance on teaching at German universities. Findings from a national survey. *Higher Education*, 63(1), 33-52.
- Wilkesmann, U., & Schmid, C.J. (2014). Intrinsic and internalized modes of teaching motivation. *Evidence-based HRM: A Global Forum for Empirical Scholarship*, 2(1), 6-27.
- Wilkesmann, U., Blutner, D., & Müller, C. (2011). German football: Organizing for the European top. In Gammelsaeter, H., & Senaux, B. (eds.) *The organisation and governance of top football across Europe* (pp. 138-153). Routledge, New York, London.
- Yasué, M., Jenó, L. M., & Langdon, J. L. (2019). Are Autonomously Motivated University Instructors More Autonomy-Supportive Teachers? *International Journal for the Scholarship of Teaching and Learning*, 13(2), 5.

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¹ This sub-chapter is a further development of Wilkesmann (2019).