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## **The dynamics of standardization: Three perspectives on standards in organization studies**

Brunsson, Nils ; Rasche, Andreas ; Seidl, David

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# **The Dynamics of Standardisation: Three Perspectives on Standards in Organisation Studies**

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## **Abstract**

This article suggests that when the phenomenon of standards and standardisation is examined from the perspective of organisation studies three aspects stand out: the standardisation *of* organisations, standardisation *by* organisations, and standardisation *as* (a form of) organisation. Following a comprehensive overview of existing research in these three areas, we argue that the dynamic aspects of standardisation are underrepresented in the scholarly discourse. Furthermore, we identify the main types of tension associated with standardisation and the dynamics they generate in each of those three areas, and show that, while standards and standardisation are typically associated with stability and sameness, they are essentially a dynamic phenomenon. The article highlights the contributions of this special issue to the topic of standards as a dynamic phenomenon in organisation studies and makes suggestions for future research.

**Keywords:** standards, standardisation, regulation, standardisers, governance, dynamics of standards, soft law

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Tamm Hallström, Bill McKinley, Günther Ortmann, Kerstin Sahlin, Sigrid Quack, Andreas Georg Scherer, and Peter Walgenbach. Last but certainly not least, we thank Sophia Tzagaraki, Managing Editor of *Organization Studies*.

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## **Introduction**

Standards are ubiquitous in almost all aspects of modern life: they range from standards in information and communication technology that ensure the interoperability of diverse components (David & Greenstein, 1990) to standards for the quality of products or services (Beck & Walgenbach, 2005), and underlie areas ranging from the harmonisation of international accounting systems (Botzem & Quack, 2006) to the governance of the social and environmental performance of firms (Gilbert, Rasche, & Waddock, 2011). Despite the ubiquity, long history, and impact of standards on society, related scholarly work in organisation studies only started to emerge in the last fifteen years or so (see e.g., Brunsson & Jacobsson, 2000a; Büthe & Mattli, 2011b; Heras-Saizarbitoria & Boiral, 2012). In view of that, this paper aims to advance the debate on standards and standardisation in the context of organisation studies.

A brief look at the history of standards will illuminate its relevance to organisation studies. Around the turn of the 20th century, a great number of national standardisation organisations were founded, including organisations that are nowadays known as the British Standards Institution (BSI) and the American National Standards Institute (ANSI) (Russell, 2005). Their purpose was to create sets of rules for the design of industrial products so that firms could produce goods that were comparable in their key aspects. The standardisation of products and services increased considerably in the course of the 20th century and was intensified towards its end in newly deregulated industries such as telecommunications (Langlois, 2002). In the second half of that century, great emphasis was put on international standards. The International Organization for Standardization (ISO), which was founded in 1947, operates a large portfolio of standards and has been particularly successful in standardising processes of

quality management (ISO 9001), environmental systems (ISO 14001), risk management (ISO 31000), and recently also social responsibility (ISO 26000). These highly successful initiatives by ISO have had an impact on two key elements of organisations: organisational structures and administrative procedures. Also a number of civil society organisations have more recently appeared as standardisation organisations; examples include Fairtrade International (Casula Vifell & Thedvall, 2012), which sets standards for a wide array of products, and the Forest Stewardship Council (Boström, 2006), which sets standards for sustainable forestry all over the world.

The pertinence of standards to many aspects of business and non-business life, as well as the multidisciplinary nature of standardisation, makes them an essential and highly interesting object of analysis. Standardisation allows scholars to import into organisation studies insights from economics (Blind, 2004), sociology (Timmermans & Epstein, 2010), political science (Kerwer, 2005), (information) technology (Jakobs, 2006), history (Russell, 2005), and law (Karmel & Kelly, 2009). For instance, looking at how formalisation and quantification – two prominent topics in sociological analysis (Espeland & Stevens, 1998) – are part and parcel of certain adoption processes sheds light on how standards influence organisational practices. The discussion of standards in the disciplines listed above reveals the great variety of relevant empirical phenomena and theoretical frameworks, most of which have not been sufficiently exploited within organisation studies. This wide range of perspectives often leads to the impression that the phenomenon of standards is fuzzy and hard to grasp. As a result, the relevance of standardisation to organisation analysis is often overlooked.

We suggest that from the perspective of organisation studies three aspects of standards and standardisation stand out. First, the standardisation *of* organisations

relates to how standards are adopted, diffused, implemented, avoided, and altered in the course of their implementation. Second, standardisation *by* organisations concerns the fact that most standards are the product of formal organisations. Last but not least, standardisation can be viewed *as* a form of organisation. In the latter context, standards provide organisation outside of formal organisations and hence can be perceived as an important governance mechanism underlying many aspects of contemporary society. While research on these three perspectives has shed light on standards and standardisation, we argue that it has yet to explore thoroughly the essentially dynamic character of standardisation. Standards and standardisation are typically associated with stability and sameness; in this paper, however, we suggest that they are essentially dynamic phenomena, whose study with relation to each of the three aspects mentioned above gives rise to important research questions.

This paper proceeds as follows: in the next section we define standardisation, distinguish between different types of standards, and discuss their key elements. In the following section we review the literature on standards in organisation studies, distinguishing between works on the standardisation *of* organisations, standardisation *by* organisations, and standardisation *as* organisation. In the third section we argue that, to gain a better understanding of standardisation, it is necessary to study the dynamic aspects of the phenomenon. In the process, we highlight a number of significant tensions that are associated with standardisation and the dynamics they generate. In the conclusion we reflect on the role of standardisation research in organisation studies.

## **Standardising Standards: The Struggle Around Definition**

### **Defining Standards**

The term ‘standard’ may refer to many different things and each of the several definitions of standards that are available highlights different characteristics. This reflects the fact that standards apply to a wide variety of domains, ranging from paper size to interface technologies in telecommunication networks. Admittedly, the varied use of the term ‘standard’ may be confusing. In our view it is not useful to subsume all potential senses of that term under a single definition, as each sense corresponds to different aspects of practice and theory. Below we highlight three defining characteristics of standards that are essential from the perspective of organisation studies.

First, a standard can be defined as a *specific type of rule* (see e.g., Blind, 2004: 65). Characteristically, ISO defines a standard as a ‘document, established by consensus, and approved by a recognised body, that provides for common and repeated use, rules, guidelines, or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context’ (International Organization for Standardization, 2001: 9). Standards reflect explicitly formulated and explicitly decided rules and thus differ from more implicit social norms. The rule-based character of standards makes them important tools for regulating individual as well as collective behaviour and achieving social order (Kerwer, 2005; Seidl, 2007).

Second, standards are formally *voluntary* for potential adopters in that they are not stipulated by the hierarchical authority of states or other organisations. Standardisers either have no access to or do not want to use any such authority to enforce the adoption of a standard. The decision to comply or not is left to potential adopters. Thus, the regulative capacity of standards does not rest on the authority of a sovereign state but on their perceived legitimacy and relevance or, in some cases, on the pressure exerted by

third parties (Bernstein & Cashore, 2007; Bütthe & Mattli, 2011b). Although flouting a standard does not carry legal sanctions, some standards are so widespread that non-compliance can carry market-based sanctions. Apart from standardisers, third parties that have some power over adopters may force the latter to comply with specific standards. For instance, certain powerful corporations will only do business with suppliers that comply with ISO 9001 (Guler, Guillen, & Macpherson, 2002). Moreover, organisations that adopt specific standards may make their contents part of binding rules, making compliance within the organisation mandatory. Furthermore, some standards are so widely adopted that not complying with them on a voluntary basis can make it impossible to act as a seller or buyer on relevant markets (e.g., because sending credible market signals requires adoption; King, Lenox, & Terlaak, 2005). Other standards are tied to certification and monitoring mechanisms aimed at preventing the decoupling of commitment and implementation (Terlaak, 2007).

Third, the rules expressed by standards are meant for *common use* (Rasche, 2010b). As emphasised by Brunsson and Jacobsson (2000a: 2), ‘standardizers [...] provide rules for the many. [...] They offer standards – which could be described as pieces of general advice offered to a large number of potential adopters’. Although groups of organisations, such as industry consortia, occasionally set standards exclusively for their own activities, most standards are mainly intended for broader use, outside the standardisation organisations. In this sense, standards define normative rules. They prescribe what those who adopt these rules should do and hence enable and restrict behaviour (Ortmann, 2010).

On the basis of these three key characteristics standards can be defined as follows:

*A standard can be defined as a rule for common and voluntary use, decided by one or several people or organisations.*

This definition is narrower than a definition that would include everything that is called standards in practice. It excludes what is sometimes called standards but are developed within an organisation for its own use only (Weber, 1964) as well as so-called de facto standards (Ortmann, 2010). Nevertheless, our definition encompasses rules for good management, which are often called ‘management recipes’ or ‘fashions’ (Holmblad Brunsson, 2008; Kieser, 1997). Such standards are produced by organisations other than standardisation organisations but may compete with the standards of the latter.

### **Types of Standards**

Standards have been categorised on the basis of several distinctions. One distinction has been made between *technical* and *non-technical* standards. Technical standards, also known as ‘compatibility’ or ‘interface’ standards (David & Greenstein, 1990), are defined as ‘codified specifications about components and their relational attributes’ (Garud & Kumaraswamy, 1993: 353). Such standards usually aim to ensure compatibility and interoperability among the components of a technological system (Tushman & Rosenkopf, 1992; Weitzel, Beimborn, & König, 2006). The literature on technical standards highlights various mechanisms through which such standards become dominant, such as the existence of switching costs (Greenstein, 1997) and the presence of network externalities (Katz & Shapiro, 1986). The underlying assumption is that the co-existence of multiple technical standards is counterproductive, so eventually a single standard prevails (for a critical discussion see Genschel, 1997). On the whole,

technical standards affect technological developments by reducing variety or diversity (e.g., of products) and thus limiting the choices available to consumers (Blind, 2004). By contrast, the literature on non-technical standards highlights the fragmented nature of standard-setting, which results in the co-existence of multiple standards (Reinecke, Manning, & von Hagen, 2012). Non-technical standards are encountered in a variety of different domains, such as quality control (Guler et al., 2002), social and environmental management (Gilbert & Rasche, 2008), financial and non-financial reporting (Etzion & Ferraro, 2010), and securities regulation (Karmel & Kelly, 2009).

Another distinction can be made between *process* and *outcome* standards. Some standards regulate processes within and between organisations (e.g., safety processes) without predetermining any specific outcomes. For example, ISO 9001 does not measure directly the quality of products or services, but specifies management processes that are supposed to ensure superior quality. The requirements of other standards stipulate that adopters have to deliver a specific outcome (Werner & Katz, 1976). These standards require the existence of clearly identifiable and measurable outcomes (Power, 1997). Developing such standards is sometimes seen as preferable to coping with the increasing complexity and dynamic nature of organisations and their environments, as they give sufficient scope to adopters to decide what measures are necessary for achieving the specified outcomes (Black, Hopper, & Band, 2007; Hess, 2007). Nevertheless, the effects of standardised processes are often uncertain, largely because the mere existence of a standardised process does not inevitably lead to the desired consequences. For that reason, process standards are increasingly linked to outcomes (Banta, 1992), which blurs the distinction between the two types.

The literature also distinguishes between *de jure* and *de facto* standards (Farrell & Saloner, 1988; Funk, 2002). De jure standards are the product of a deliberately steered process of decision-making. Committees are often regarded as the organisational entities responsible for deciding on *de jure* standards (e.g., as in the case of ISO standards). While Farrell and Saloner (1988) argue that standardisation that is committee-based rather than market-based is more likely to achieve coordination, largely because it avoids incompatibility, other studies have shown that the internal politics of committees, which are often closely linked to vested interests, can undercut the legitimacy of standards and slow down their development (Cargill & Bolin, 2007; Simcoe, 2007). By contrast, the concept of *de facto* standards refers to processes that aim at uniformity, in the sense that all or nearly all potential adopters eventually come to adopt the same solution and turn it into a model (or de facto standard) that it is difficult to deviate from. A much-discussed example is the QWERTY layout for typewriters (David, 1985). These processes are fundamentally different from the decision-making processes that produce (de jure) standards. While we acknowledge that de facto and de jure standards both may produce uniformity (Brunsson, 2000), here we focus on the origin of standards as decided rules, rather than various ways of producing uniformity, and therefore exclude de facto standards from our theoretical treatment. Admittedly, the distinction between de facto and de jure standards is not always clear-cut. A standard can become institutionalised and taken for granted to the degree that the initial decision is forgotten, so ‘newcomers’ perceive the standard rather as a model set by its adopters (a de facto standard) than as a decision once made by some standardisation organisation.

## **Standards in Organisation Studies: Three Perspectives**

As mentioned earlier, we discern three ways in which standardisation and organisations are related. First, standards affect the structure and operation *of* formal organisations; second, standards are produced *by* formal organisations; third, standardisation can be seen *as* a form of organisation outside and among formal organisations.

### **Standardisation of Organisations**

Scholarly interest in how standards affect organisations rose during the 1980s and 1990s, in tandem with the rising interest in the so-called institutional environments of organisations. In the context of the latter tradition, standards can be seen as rules that are created in the ‘environment’ of the individual organisation that the organisation is expected to ‘adopt’, and so standards can be seen as ‘diffusing’ among organisations.

A first question is why standards are adopted at all by organisations, given that no legal sanctions are imposed on non-adopters. Institutional theorists have traditionally highlighted the role of coercive, normative, and mimetic isomorphic pressures in the adoption and diffusion of standards (DiMaggio & Powell, 1983). Coercive pressures can come from the state (e.g., when EU directives are expected to be translated into more detailed standards by member states), civil society organisations (e.g., when NGOs pressure firms to comply with social and environmental standards), or from other businesses (e.g., through the preferential treatment of standard adopters). Guler et al. (2002), for instance, have found that the presence of foreign multinationals in a country increases the number of ISO 9001 certified firms because multinationals prefer certified suppliers, while Delmas and Montiel (2008) demonstrated that higher levels of civil-society activism in a particular country increase the adoption rate of ISO 14001 by

chemical firms. The effect of normative pressures on the adoption of standards has been highlighted particularly in the context of professions that share a common knowledge base. In cases where the formal training requirements for a profession are specified by standards, for instance, professionalisation can act as a source of normative pressure (see Ping, 2007 for a discussion in the context of accounting). Finally, mimetic pressures can increase the adoption of standards because organisations often model themselves on other organisations. Westphal, Gulati, and Shortell (1997), for instance, have shown that of the companies that adopted TQM, many complied with already institutionalised expectations in order to achieve legitimacy.

Moving beyond institutional theory, some scholars have put forward functionalist arguments to support the idea that standards are adopted for economic reasons or to improve efficiency. Adopters, they suggest, often comply with a standard because it is linked with positive network externalities (e.g., consumer benefits related to a standardized product; Katz & Shapiro, 1986). Network externalities occur whenever the value of a product or service increases with the number of users; for instance, the usefulness of standards for computer operating systems increases with the number of users, because developers are induced to produce a broader range of compatible software. Other scholars have argued that the adoption of standards is positively associated with higher levels of operational performance. For instance, compliance with SA 8000, a standard for workplace conditions, has been found to increase worker motivation and decrease staff turnover (Stigzelius & Mark-Herbert, 2009), while the adoption of the quality management standard ISO 9001 has been related to less defects and reworks and higher performance levels (Nair & Prajogo, 2009). Both institutional and functionalist explanations for the adoption of standards are

integrated in Tolbert and Zucker's (1983) two-stage model, which suggests that early adopters are motivated by gains in efficiency, while late adopters tend to comply with an institutionalised practice in order to appear legitimate. According to this line of argumentation, the adoption of a standard is a function of its degree of institutionalisation.

The standardisation of organisations has also been discussed in the context of decoupling management decisions to comply with standards from actual organisational practices. Research has shown that decoupling occurs when environmental expectations conflict with internal managerial interests and available resources (Meyer & Rowan, 1977; Oliver, 1991). Decoupling seems particularly likely in cases where firms have a great need for legitimacy but limited internal implementation capacity. Standards in the field of corporate social responsibility (CSR) seem to be a case in point. Jamali (2010), for instance, found that managers consider such standards to offer a high degree of legitimacy to their organisations, but are concerned that their implementation might reduce efficiency. In a comparable study, Christmann and Taylor (2006) show that ISO 14001 is more likely to be symbolically implemented if external pressure from customers is high but monitoring practices are weak. Although research has identified a variety of potential reasons for decoupling (e.g., a standard's clarity; see Walgenbach, 2001), there is only a limited amount of relevant empirical evidence.

### **Standardisation *by* Organisations**

Another reason why standardisation is relevant to organisation studies is that most standards are produced by formal organisations. We have been using the term 'standardiser' (or 'standardisation organisation') to describe those entities that produce,

revise, and diffuse standards. Scholars have drawn on the vast knowledge on formal organisations in general in order to understand how standardisation organisations arise and operate, although there are, of course, certain features that are peculiar to this type of organisations (see e.g., Botzem & Quack, 2006; Sahlin-Andersson, 2000; Simcoe, 2012).

Traditional standardisation organisations have been designed as associations whose members represent firms, industry associations, civil society, or states (Farrell & Saloner, 1988). The members are mainly adopters but may include other organisations or individuals that have ideological or economic interests in the respective standards or possess special expertise. For instance, ISO standards are developed and revised by technical committees consisting of different expert working groups (Tamm Hallström, 2004). The members typically have equal rights to influence the development of a standard. Decisions are usually made through member voting or similar procedures. Nevertheless, there are also standardisers with a narrow member base (e.g., standard-setting by industry consortia, see Leiponen, 2008) or with no formal member base as it is often the case with management recipes (Holmblad Brunsson, 2008) and standard-setting in transnational corporate law (Quack, 2007).

Standardisation organisations face the challenge of endowing the rules they develop with legitimacy, especially since they do not possess any legal authority. Without legitimacy would-be adopters are unlikely to follow a standard. One way to achieve legitimacy is to try to include different stakeholders and encourage consensus among them while developing a standard (Boström, 2006; Fransen & Kolk, 2007). Of course, consensus is often difficult to achieve because members have different interests or opinions on what the 'right' standard should be. To resolve conflicts, standardisers

commonly refer to expert knowledge (Jacobsson, 2000; Jakobs, 2002). Experts may come from different domains (e.g., standard users, scientists, and consultants) and their insights usually become incorporated in the de-contextualised rules that make up the respective standard. Although there is no guarantee that this approach will resolve conflicts, experts are seen as rationalising agents who lend legitimacy and authority to the content of a standard (Simcoe, 2012).

Nevertheless, involving experts in the development of standards also entails a variety of risks and problems. Occasionally, experts may be included only for symbolic reasons. Also, while they may be formally consulted, their recommendations may have little or no influence on the decision-making process (Feldman & March, 1981). Often, the necessity of legitimising a standard is perceived as more important than designing the standard in line with expert opinion. The degree of inclusiveness and strategic choice of experts reflects another problem area, especially when the actor category is very broad and offers a wide choice of potential experts. The selection of experts can predetermine standard content, as it influences the provision and framing of information. Boström and Tamm Hallström (2010), for instance, discussed how differences in the material resources of NGOs (e.g., travel budgets) limit their participation in transnational processes of standard development and thus influence the content of the resulting standards. The development of standards is often a political and conflict-laden process in which some experts are not given sufficient voice (Gilbert & Rasche, 2007; Tamm Hallström, 2008, 2010). On the whole, frequent and lasting interactions among a group of experts tend to create trustful relationships and promote common values (Isaak, 2006). Nevertheless, while social capital enhances coordination

within the process of standard-setting, it can also undermine the role of expert knowledge if standards are shaped on the basis of personal favours and friendships.

### **Standardisation as Organisation**

On the societal level, standardisation can be seen as a way of organising society. Indeed, standards have become part and parcel of the organisation of contemporary society, not least on a global scale. Rules are fundamental instruments of organisation that can be applied not only within but also outside and among formal organisations. There were three reasons for the creation of national standards: the observed need for organisation not only within but also among firms, the acknowledgment that common rules are powerful instruments of organisation, and the realisation that some rules are of little political interest and can therefore be delegated from state authorities to the industry (Russell, 2005). With relation to organisation studies, this perspective is important because it presents standards as a particular form of organising, which has been referred to as ‘partial organisation’ (Ahrne & Brunsson, 2011). The concept of ‘partial organisation’ refers to the fact that standardisation contains one element of formal organisations, i.e. the use of rules – hence the term ‘organisation’ – but lacks other elements, such as the existence of hierarchical authority – hence the term ‘partial’. Research has emphasised the nature of standards as partial organisation in various ways.

As some scholars have pointed out, standards are an important means of organising markets. Often states encourage standard-setting in order to reduce information asymmetries between buyers and sellers (Akerlof, 1970). Moreover, standards enable firms to benchmark their products and services and to signal the achievement of certain basic requirements to customers. This can help a firm reduce

customer uncertainty and transaction costs, motivate repeated purchase behaviour, and expand its overall market size (Büthe & Mattli, 2011a). The proliferation of product standards in the context of sustainable forestry, floriculture, and textile production are cases in point (Gilbert et al., 2011). These standards have created reasonably credible market signals and allowed niche markets to expand. Standards contribute to the organisation of markets by promoting compatibility and harmonisation among the otherwise incongruous components of a system. In this case, standards align the interests of and enhance communication among a variety of markets actors (e.g., competitors). Studies on telecommunication standards, for instance, have shown that different actors align their positions over time to ensure the interoperability of components and thus create new technological solutions and markets (Genschel, 1997; Leiponen, 2008). In the case of international accounting, standards have been employed as a means of generating some degree of harmonisation, an important condition for the functioning of global financial markets (Botzem & Quack, 2006).

Standards are also instrumental in organising institutional change, as they are a powerful tool for challenging and altering institutionalised behaviour and identities. The standardisation that has arisen from social movements is a case in point. For instance, in the global coffee industry many stakeholders strove to stimulate the creation of several standards for the sustainable sourcing of coffee (Kolk, 2005). These standards challenged the existing sourcing practices of multinational corporations (MNCs) by emphasising the importance of social and environmental criteria. Standards supported the institutionalisation of these criteria by defining rules that became commonly accepted and were combined with related monitoring and certification systems. In this sense, standard-setters can be described as ‘institutional entrepreneurs’ (DiMaggio,

1988). Standards are well suited to supporting institutional change because they facilitate mimetic pressures for isomorphism. The de-contextualised nature of the rules that standards represent enables imitation and diffusion; imitators do not need to explore the details of an existing or emerging institutional order, but only to act in accordance with the requirements of a standard. What is important in this context is that standards often rely on commensuration – that is, on the translation of qualities that are hard to grasp and contextualised into de-contextualised codified quantities (Espeland & Stevens, 1998).

Standards are particularly important in the context of international regulation. Because most state legislation remains bound to a national territory, standards are often the only type of rule that can be applied internationally, especially where there are no common cultural elements to serve as a basis of regulating mechanisms (Ahrne & Brunsson, 2006; Djelic & Sahlin-Andersson, 2006). Standards have emerged particularly in those areas where inter-governmental regulation is weak or non-existent but there are significant global governance challenges. Examples include carbon emissions (Kolk, Levy, & Pinkse, 2008), human and labour rights (Clapham, 2006), telecommunication (Leiponen, 2008), corporate governance (Seidl, 2007), non-financial reporting (Etzion & Ferraro, 2010), and marine fishing rights (Gulbrandsen, 2012). Furthermore, the high demand for international standards is a response to the view that divergent national standards are often seen as counterproductive and as an obstacle to global economic integration (e.g., by acting as non-tariff barriers to trade). Standardisation accounts to a large extent for the global order that has been achieved in some areas, although the fact that subscribing to standards is voluntary often limits their implementation in selected countries or regions.

## **The Dynamics of Standards: New Research Directions Within the**

### **Three Perspectives**

While standards and standardisation are typically associated with notions of stability, lately researchers have taken a particular interest in the various dynamics involved in the processes of standardisation. Applying the three perspectives introduced above, we can distinguish between the dynamics pertaining to the adoption of standards by individual organisations (e.g., Boiral, 2007; Brunsson & Jacobsson, 2000b), the dynamics of the production, revision, promotion, and distribution of standards by standardisation organisations (e.g., Botzem & Quack, 2006; Egyedi & Blind, 2008; Tamm Hallström, 2004; Tamm Hallström & Boström, 2010), and the dynamics of societal regulation by means of standards (e.g., Quack, 2007; Seidl, 2007).

A key characteristic of standards is that they are neither norms nor tied to hierarchical authority (Brunsson & Jacobsson, 2000a). This peculiarity means that the dynamics of standardisation differ from those that relate to other types of rules. This gives rise to intriguing questions, some of which are discussed in this issue. In the following three sections we describe in more detail the particular dynamics associated with each of the three perspectives introduced above. In each section we point out the types of tension that are associated with standardisation and the dynamics they generate.

### **Dynamics Related to the Standardisation of Organisations**

Standards are by definition ‘rules for the many’. As such, they are necessarily abstract to some degree and general in scope, and cannot cater to the idiosyncrasies of the

organisations to which they apply (Thévenot, 2009; Timmermans & Epstein, 2010). The dynamics inherent in the adoption of standards result from the process through which those general rules become applied to specific organisations – or ‘translated’ into localised rules. Because this process may involve overcoming potential discrepancies, which in their turn may produce tension between the general nature of the standard and the specifics of the organisation to which it applies, the question that arises is whether a standard should be adapted to the local context or whether the local context should be changed to fit the standard. Such processes are characterised by what has been described as the dynamics of ‘adjustment’ and ‘translation’ (Czarniawska & Sevón, 1996; Zbaracki, 1998). As Brunsson and Jacobson point out (2000b: 128), this is a two-way ‘translation’ process, during which general standards become ‘translated’ into concrete practices and concrete practices are translated back into the general categories underlying the standard in order to demonstrate to observers such as politicians, customers, or auditors that the adopter follows the standard.

A second source of tension is that, while adopting a standard is voluntary, third parties may put pressure on adopters to ensure compliance. This kind of pressure arises particularly when a standard has become so institutionalised that its adoption is taken for granted (Etzion & Ferraro, 2010). Other sources of similar pressure include the need for an organisation to coordinate its practices with those of other organisations (Guler et al., 2002), or the perception by an organisation’s own employees or by external stakeholders that a standard designed by experts must be superior to an organisation’s own rules (Seidl, 2007). To the extent that organisations are dependent on such third parties, compliance to standards becomes practically necessary. When organisations show reluctance to apply a standard or its application proves complicated for any of the

reasons described above, the tension between the theoretically voluntary but practically binding adoption of a standard often produces dynamics of decoupling between talk and action. In such cases, instead of changing its practices, an organisation represents them so that they *appear* to be in line with a particular standard. Thus, although the description accords with the standard, those practices are continued as before. In other words, the adopter ‘standardizes its practice but does not practice the standard’ (Brunsson & Jacobsson, 2000b: 128) The dynamics of this kind of decoupling can take different forms and may have negative effects – for instance, on the morale of the organisation’s members (MacLean & Behnam, 2010). The form and degree of decoupling may change over time, however, and ultimately result in the ‘recoupling’ of the initially decoupled domains (Hallett, 2010; Tilcsik, 2010).

Two papers in this special issue are particularly concerned with the dynamics of the adoption of standards. Both describe the internal dynamics of decoupling between implementation and external presentation, taking the example of the ISO 9000 family of standards, which concern quality management practices. The first one is a paper by Boiral (2012), who examines the dynamics involved in the respective audit and certification process, during which an external auditor assesses and, if satisfied, certifies the implementation of the ISO 9000 rules. Boiral describes the dynamics of this process in terms of different stages in the audit and certification process, which he compares to the process of preparing for and passing university exams, pointing out that the students tend ‘to be more interested in acquiring a diploma than in the learning that it represents.’ (Brotheridge & Lee, 2005: 71) He shows that, similarly to exams, the audit and certification process is characterised by rote preparation, procrastination, short-term

focus and cheating, while the primary goal is to get the ISO certificate in order to be able to present it to external parties.

The second paper is a study by Sandholtz (2012) which examines the dynamics of the conflict between an organisation's own rules and those specified by ISO 9000. The author describes the adoption of a standard as a dynamic process that involves crossing two boundaries: (1) the boundary between the institutional field and the organisation and (2) the boundary between the organisation and the affected technical and functional subunit with its particular norms and subculture. At each crossing, the standard is transformed: first, from a standard into a directive and then into the norms and practices of the work group. Comparing the implementation of ISO 9000 at two different divisions of the same company, Sandholtz shows how in each case the process of 'translation' leads to different outcomes with regard to the degree to which the standard corresponds to actual work practices. As his study reveals, where a standard threatens the occupational norms and practices of those expected to implement them, a malignant form of decoupled compliance can be observed; by contrast, if a standard fits with the norms and practices of the occupational group that the standard primarily affects, a benign form of decoupling is more likely. Tight coupling, however, is likely to result where standards originate *within* the group and incorporate its norms and practices.

### **Dynamics Related to Standardisation by Organisations**

With relation to standardisation organisations, there are at least two types of tension that generate particular dynamics related to standardisation processes. The first type results from the conflict between the efficiency of the standard-setting process and

participation in the process. With the proliferation of competing standardisation organisations, besides expertise, participation has become one of the main means of establishing legitimacy in the eyes of potential adopters. However, greater participation often reduces the efficiency of the standard-setting process as it becomes more difficult to reach consensus (Tamm Hallström, 2008). Partly because of the need to strike a balance between efficiency and a high degree of participation, standardisation organisations vary in form and change their relationship with other organisations over time (Glimstedt, 2001). In order to produce standards quickly, such organisations would have to limit participation in the process of standard-setting to a few parties or parties with similar interests and ideas – in extreme cases, to a single expert. To increase the likelihood of a standard being accepted, however, there are three main reasons why it is often necessary to have broad participation from many parties that the standard concerns: first, this makes it easier to define the standard's content in a way that is acceptable to all, second, participation often involves commitment to adopt the standard, and third, broad participation strengthens the legitimacy of the standard in the eyes of external parties (Tamm Hallström & Boström, 2010). Over time, however, the relative importance of participation and efficiency might change and this could lead to changes in the composition of the participants (Botzem & Dobusch, 2012; van den Ende, van de Kaa, den Uijl, & de Vries, 2012).

A second, related type of tension springs from the potential conflict between the role of participants as experts and as representatives of interest groups. While the participants in standardisation organisations typically present themselves as experts who bring their expertise into the development and revision of standards (Jacobsson, 2000), often they also act as representatives of specific interest groups. As such, they may act

very differently from the way they would if they were experts only. The various interests that coexist within standard-setting bodies can lead to fierce battles between the representatives of different groups. The dynamics that arise from such clashes may ultimately produce standards that represent a faulty and fragile compromise between the different interest groups, rather than a solution that represents an expert judgement. Another potential complication is that some participants may fight standards that conflict with their interests by suggesting other standards. In such cases, the opponents of standards become standardisers themselves. A common example is that of organisations that are not willing to comply with standards set by others and thus form meta-organisations (e.g., business associations) together with organisations that have similar interests. These meta-organisations then produce their own standards for their members, in the hope that they will be acceptable both to their members and to others concerned. In contrast to earlier times, when only a few national organisations were responsible for the development of standards, now, because of the relatively low barriers to entering the field (Rasche, 2010a), there is a multitude of private and public-private standardisers, which often compete with each other. The dynamics of this competition occasionally may take the form of open conflict and ‘standard wars’ (Shapiro & Varian, 1999) or of mutual adjustments that allow for peaceful co-existence (Reinecke et al., 2012).

Three papers in this special issue focus on the dynamics of standard-setting organisations. The first one is a paper by Dokko, Nigam, and Rosenkopf (2012), which relates to the dilemma between expertise and interests that we described above. According to the negotiated order perspective developed by Strauss (1978), standardisation organisations are conceptualised as arenas for the negotiation of social

order. The authors argue that, in contrast to what is commonly assumed, negotiations of social order occur not only in times marked by dramatic changes made to standards, but also in times of relative stability. Moreover, the persistence of standards is itself a social accomplishment based on ongoing negotiations. Such negotiation processes are thus both a source of stability for, as well as of potential changes to existing standards.

The second paper is a study by van den Ende et al. (2012), which also relates to the tension between interests and expertise. Drawing on three case studies, the authors show that who participates in the process of standard-setting affects the standards that are produced, because participants try to shape standards so that they suit their interests. Thus, changes in the combination of participants (in terms of number and diversity) result in changes in the content of the respective standard. Moreover, the authors demonstrate that this effect, which has been previously documented (e.g., Cargill, 1997; Dokko & Rosenkopf, 2010; Leiponen, 2008), also works in the opposite direction: by making changes to the content of a standard, participants can persuade non-participating stakeholders to join the standardisation organisation and thus increase the chances that these stakeholders might later adopt the standard themselves. The authors describe this as a co-evolutionary dynamic between the content of a standard and the network of participating organisations, and identify the different forces that generate or restrict this dynamic.

The third paper, by Botzem and Dobusch (2012), also examines the dynamics of standardisation organisations that result from the two types of tension described above. Based on two case studies of standardisation organisations, they examine the relation between stakeholder participation in the standard-setting process and the potential effectiveness and efficiency of the resulting standards. Stakeholder participation

strengthens the perception of standards as legitimate, conferring what they describe as ‘input legitimacy’, while effectiveness and efficiency strengthen the perception of the regulatory effects of standards as legitimate, conferring what they describe as ‘output legitimacy’ (Scharpf, 1999). The authors argue that these two aspects of standard-setting are recursively related: initially standardisation organisations aim at securing high levels of participation, which serves as the main means of generating input legitimacy for a standard and thus increases the chances of its becoming adopted. Higher levels of adoption mean that more potential users will base their assessment of the standard on its regulatory effectiveness. Thus, over time output legitimacy is likely to become more important for adoption than input legitimacy. Another interesting point that Botzem and Dobusch make is that there are shifts between the inclusion and exclusion of participants in the standard-setting process over time. This is because high levels of participation complicate the development of effective standards, so standardisation organisations are likely to restrict participation once a sufficient level of output legitimacy has been reached.

### **Dynamics Related to Standardisation as Organisation**

There are two main types of tension related to standards as a form of organising modern society. The first type concerns the relation between the voluntariness associated with standards and their regulatory function. As many standardisers realise, the voluntary element in the adoption of standards makes them a relatively weak form of organising, because it entails the risk of them having little practical effect. To offset this weakness, they are often complemented with other elements of organisation, such as monitoring, sanctions, hierarchical authority, membership or constitutions (Ahrne & Brunsson,

2011). Monitoring, for instance, is a common addition to standards set by social movements (Fransen & Kolk, 2007). The development of monitoring standards for workplace conditions in global supply chains, such as Social Accountability 8000 (Gilbert & Rasche, 2007), is a case in point.

Standards are often also supplemented with various forms of sanctions. For instance, adopters who fail to comply with a standard's requirements may be removed from the list of compliers or become subject to boycotts (Rasche, 2009). Adopters who do comply, by contrast, may be rewarded with so-called 'positive sanctions', such as receiving certification or being allowed to use product labels (Waddock, 2008). The initiative for monitoring or setting up sanctions does not necessarily come from the standardisation organisations themselves. Carrying out certification audits is an established and profitable industry, especially since auditing services are often paired with those of external consultancies (Frankel, Johnson, & Nelson, 2002). While auditors themselves believe that they help clients to improve their standardisation processes (Power & Terziovski, 2007), some studies have shown that auditors who certify that a client complies with a standard often lack sufficient knowledge about that client's industry (Boiral & Gendron, 2011).

Another way of adding more organisation is to attach standards to large formal organisations in the hope that these will make the content of the standards internally compulsory, or to the state, which adds a hierarchical element to the process of adoption. For example, many environmental organisations try to persuade large transnational companies to make their standards part of their policy, or the state to incorporate them into legislation (Gulbrandsen, 2012). International law firms and legal associations that are involved in transnational standard-setting for corporations and

market transactions aim to attach specific standards to the hierarchy of states or to international governmental organisations (Quack, 2007).

The paper by Slager, Gond, and Moon (2012) in this issue offers several good examples of the dynamics that arise from this type of tension and of the elements that complement standards in order to reinforce their regulatory impact. Taking an institutional work perspective (Lawrence, Suddaby, & Leca, 2009), they study the dynamics of micro-level activities through which standards acquire their regulatory power. Drawing on a longitudinal study of the development of the FTSE4Good index, a responsible investment standard, they show that, because of their voluntary nature, standards need to be accompanied by different types of institutional work, which varies according to the different stages of the standardisation process. They also emphasise that this involves many different types of actors and forms of interaction.

The paper by Haack, Schoeneborn, and Wickert (2012) in this issue also explores the dynamics resulting from the tension between the voluntariness of standards and their regulatory impact. Like Slager et al., they too examine how different groups develop and maintain the regulatory power of standards. Their empirical case concerns the so-called Equator Principles, a corporate responsibility standard for international project finance, and focuses on the dynamics of interweaving narratives and counter-narratives associated with the standard. It is only through these complementary discursive-ideational processes, they argue, that the regulatory power of voluntary practices of corporate responsibility practice is asserted.

In the context of organising by means of standards, a second type of tension arises from the conflict between the freedom to set standards and their potential regulatory impact. Because standards are voluntary, in principle everybody is free to set

new standards. However, the existence of multiple equivalent or very closely related standards often undermines their regulatory effect. This is most obvious in the case of compatibility standards, which aim to improve coordination between different parties. Coordination can only be achieved if the different parties involved follow the same standard; often it does not matter which standard they follow, as long as it is the same standard (Farrell & Saloner, 1988).

One problem with this approach is that if there are competing standards, adopters are likely to select the one that is least demanding or fits best with their existing practices (Sunder, 2002). Thus, some organisations may introduce new standards explicitly in order to evade compliance with existing standards (Richardson, 2011). In response, attempts are made to restrict or coordinate the creation of standards by establishing organisations with that purpose. A prime example is the establishment of international standardisation organisations which are supposed to add organisation by providing a kind of constitution to the field of standardisation. By arguing that standardisation should only take place within these organisations and conform to certain procedural rules, they try to control the proliferation of standards. Another example of dealing with the freedom to set standards is to add organisation in the form of membership; the formation of industry consortia for standard-setting is a case in point (Leiponen, 2008). Industry consortia are comprised of members of a particular industry that join forces to develop standards for themselves: all members of a consortium are expected to comply with the standards formed by the consortium and not with competing ones. A well-known example is the Society for Worldwide Interbank Financial Telecommunication (SWIFT), which is a consortium of banks, brokers, dealers, and investment managers that develops compatibility standards for the

facilitation of financial transactions between member organisations. All members of SWIFT apply the same standards, ensuring compatibility between their operations.

The paper by Reinecke et al. (2012) in this special issue describes a further way of dealing with the tension between the multiplicity of standards and their regulatory impact. In their empirical study of corporate responsibility standards in the global coffee industry, Reinecke et al. show that, while the different standardisers wish to regulate the coffee industry, they also want to preserve their organisational autonomy and identity. As a result, they are not prepared to withdraw their own standard or to generate a joint standard. The authors show that this can lead to a form of ‘meta-standardisation’ which coordinates their regulatory efforts to some extent. A meta-standard contains some common elements that all similar standards need to incorporate, such as common vocabulary or shared certification platforms, but allows for differentiation on the level of specialised attributes, such as the emphasis that each standard places on environmental aspects or aspects of social sustainability. Thus, by combining collaboration and competition, meta-standards provide a way of preserving some regulatory power of otherwise competing standards.

## **Conclusion**

Over the last few decades, standardisation has grown from a topic that was of interest primarily to engineers into a distinctive area of research across many different academic disciplines, and a central area of research in organisation studies. In this paper we have suggested that organisation(s) and standardisation are related in three distinctive ways: first, organisations are affected by standards, in the sense that every area of their

activities is potentially or actually regulated by one or many standards. Thus, any researcher studying organisations will almost inevitably have to take into account the effect of standards as a kind of external ‘input’ into the organisation. Second, most standards are produced by organisations. In the context of organisation studies, standards can be viewed as particular types of products or ‘output’ of such organisations. Third, standards are a form of organising modern societies. From this perspective, the topics of standardisation and organisation converge: *standardisation is organisation*.

Beyond its immediate relevance to organisation research, the topic of standardisation, due to its cross-disciplinary nature, might also offer organisation scholars the opportunity to make contributions to other areas of science. In the past, organisation research was characterised by the extensive import of concepts and ideas from other disciplines. By contrast, standardisation is one of the areas where organisation research can demonstrate its relevance to other sciences (Ahrne & Brunsson, 2011): for instance, it can offer insights into how standards are developed, whether or in what way such standards are adopted by organisations, or how the organisation of society by means of standards compares to other forms of societal organisation.

A further aim of this paper was to draw attention to the dynamic aspect of standardisation. While standards might aim at the creation of stability and sameness, standardisation itself is a highly dynamic phenomenon. Even the stability of standards themselves has to be understood as the result of underlying dynamic processes. We highlighted some of the dynamics that arise in each of the three areas of standardisation that we examined, and the important research questions to which they lead. Some of

these questions have already been addressed – notably by the papers included in this issue. Beyond these, another topic worth investigating systematically concerns the dynamics that arise from the multiple ways in which the three areas of standardisation interrelate. Some of the papers in this issue have already hinted at how these dynamics interact – Botzem and Dobusch (2012), for example, explore the relation between the dynamics of participation within standardisation organisations and those of the regulatory system, while Haack et al. (2012) examine the relations between the dynamics of the standardisation regime (i.e. standards as organisation) and the internal dynamics of the adoption of standards. We hope that these explorations will inspire researchers to look deeper into these intriguing questions.

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