



HAL
open science

Standards and the transformations of modes of governing. Perspectives from Convention Theory

Laura Centemeri, Carlotta Mozzana

► **To cite this version:**

Laura Centemeri, Carlotta Mozzana. Standards and the transformations of modes of governing. Perspectives from Convention Theory. Rainer Diaz-Bone; Guillemette de Larquier. Handbook of Economics and Sociology of Conventions, Springer, 2025. <hal-04830891>

HAL Id: hal-04830891

<https://hal.science/hal-04830891v1>

Submitted on 11 Dec 2024

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



HAL Authorization

Laura Centemeri and Carlotta Mozzana, forthcoming, « Standards and the transformations of modes of governing. Perspectives from Convention Theory». In: Diaz Bone R., de Larquier G. (eds), *Handbook of Economics and Sociology of Conventions*. Springer, Cham.

Standards and the transformations of modes of governing. Perspectives from Convention Theory

Laura Centemeri, Centre d'Étude des Mouvements Sociaux - EHESS/CNRS/INSERM, Paris, France, corresponding author: laura.centemeri@ehess.fr

Carlotta Mozzana, Università degli Studi di Milano-Bicocca, Italy

Abstract

Economics and sociology of conventions (EC/SC), also known as convention theory, has long focused on standardization. Its founders played a significant, yet not entirely acknowledged, role in developing and establishing the predominantly Anglo-Saxon field of the sociology of standards. The EC/SC perspective on standards centers around the idea of “investments in forms”, developed by Laurent Thévenot as part of a material approach to power and the coordination of action. From a convention theory perspective, the chapter discusses the importance of standards in understanding neoliberal globalization. Standards are advocated by both market and non-market entities to achieve legitimate coordination, comparability, and compatibility, bypassing the regulatory authority of the state. Thus, *governing* with the support of standards transforms into *governance* through standards. In the first section, the chapter further explores Thévenot's approach, focusing on his analysis of the neoliberal turn as *standardizing liberalism*. Thévenot's framework is then compared with other perspectives on the political implications of standardization and, more broadly, quantification within the EC/SC tradition. The discussion then shifts to contributions in convention theory that deal with standards in specific policy areas, such as health, education, and urban planning. These policy insights show how measurable standards and certifications can radically transform economic sectors, everyday life, and ordinary experiences. They also highlight the complexity of current developments related to datafication and digitalization and the contribution EC/SC can bring to this debate.

Key-words (5-10 max):

Standards, indicators, standardizing liberalism, regimes of engagement, quantification, health, education, urban policies

Index terms

capitalism, care, critique, datafication, digitalization, education, engagement, environment, equivalence, governance, guaranteed city, health, investment, standardizing liberalism, objective objectives, oppression, power, quantification, sacrifice, standard, standardization, state (absent, neoliberal, situated), violence

1 Introduction

Since the 1990s, the sociological study of standards has gained considerable traction due to two overlapping tendencies: (1) the importance of standards and standardization has grown in tandem with the rapid globalization of the economy and the development of new technologies, with the consequent need to govern such processes; (2) the “material turn” (Pellizzoni

Laura Centemeri and Carlotta Mozzana, forthcoming, « Standards and the transformations of modes of governing. Perspectives from Convention Theory». In: Diaz Bone R., de Larquier G. (eds), *Handbook of Economics and Sociology of Conventions*. Springer, Cham.

2016) in social sciences has brought heightened attention to the importance of sociotechnical networks, infrastructures, and the living environment in shaping social relations.

Standards, norms, and conventions have significant overlap. Thus, it is no surprise that the founders of economics and sociology of conventions (in short EC/SC) have been concerned with standards since the mid-1980s. However, the specificity of EC/SC's approach to standards has only recently started to receive more comprehensive attention as an original and pioneering contribution to the predominantly Anglo-Saxon field of “sociology of standards” (Timmermans and Epstein 2010). This chapter contributes to this ongoing dialogue (see also Diaz-Bone 2016; Mennicken and Salais 2022).

In the EC/SC perspective, standardization reduces uncertainty and increases the chances of successful coordination. It implies devising specific “investments in forms” (cross reference [Investments in Forms: Background and Ongoing Developments](#); see also cross reference [The Genesis of Economics and Sociology of Conventions at the Turn of the 1970s and 1980s](#)) that can guarantee conformity in an objective, verifiable manner. The concept of “investments in forms” was developed by Laurent Thévenot based on his work on (statistical, legal, and administrative) *coding operations*. Thévenot's approach to understanding the diversity of forms (from “habitual form” to “state form”) and the activities of formatting and “con-forming” helped clarify the sociological nature of questioning standards as part of a material approach to power and the coordination of action.

Through connecting “forms” with “regimes of engagement” (cross reference [Laurent Thévenot's Sociology of Regimes of Engagement and Grammars of Commonality](#)), Thévenot developed an original analysis of the violence exerted by forms of governance of social processes through objective standards and the opacity they introduce concerning the existence of a multiplicity of normalities and a plurality of social constructions of the common good. As Luc Boltanski and Ève Chiapello (2005) discussed, denouncing the violence of standardization is the foundation of the “artistic critique” of capitalism. This argument is also significant in the contemporary rise of “ecological critique” (cross reference [Green justification and environmental movements](#)). Setting “green” standards is deemed inadequate for guiding collective action in light of the irreducible complexity of living systems.

The chapter discusses how neoliberal globalization depends on establishing measurable standards to facilitate market coordination in all policy domains and reach “objective objectives.” Objectivity involves the potential for verification across different times and locations, facilitated by more or less stable and impersonal instrumentation. This implies that there can be varying degrees of objectivity, leading to stronger or weaker standards (Thévenot 2009).

Together with the denunciation of the tyranny of the market, *certified standardization* can be analyzed as “the fate of virtue under the conditions of neoliberalism”, quoting sociologist Lawrence Busch (2011: 291). Since the early 1990s, Busch has been studying standards and quantification in dialogue with EC/SC (Cheyns and Ponte 2019). His contribution highlighted the complex role played by standards in modern economic development. In fact, modernization used standards to establish uniformity and equivalence, extending the state's infrastructural power (as discussed by anthropologist James C. Scott). Conversely, in neoliberal globalization, standards are advocated by both market and non-market entities to achieve legitimate coordination, comparability, and compatibility across different situations, bypassing the state, which in this context is no longer the central regulatory authority. His analysis aligns with Laurent Thévenot's by emphasizing that modern state *governing with the support of standards* has transformed into multi-actor and multi-level *governance through standards* to achieve “objective objectives” (Thévenot 2015).

Laura Centemeri and Carlotta Mozzana, forthcoming, « Standards and the transformations of modes of governing. Perspectives from Convention Theory». In: Diaz Bone R., de Larquier G. (eds), *Handbook of Economics and Sociology of Conventions*. Springer, Cham.

In the following sections, the chapter discusses the origins and evolution of Thévenot's approach to the neoliberal turn as the rising of *standardizing liberalism* (section 2). Thévenot's influential work comprehensively analyzes the growing power of standards in a globalized world from the EC/SC perspective. In particular, the approach of regimes of engagement brings to light a specific kind of “oppression” exercised by this mode of governing through standards and objective objectives. In a nutshell, it involves a form of “anthropological simplification” (Breviglieri 2018a). In section 3, Thévenot's framework is then compared with other perspectives on the political implications of standardization within the tradition of EC/SC, focusing on the contribution of Robert Salais to the understanding of the neoliberal turn as based on the elaboration of a neoliberal version of the convention of the “absent state” which has now to be “made absent” in all policies. The chapter then moves in section 4 to contributions inspired by the EC/SC dealing with standards and standardization in specific policy areas, such as health, education, and urban planning, thus showing how “[...] in contrast with inaccessible and centralized bureaucratic authorities, contemporary formalized objectives come close to agents” (Thévenot 2015: 195). These policy insights highlight the complexity of current developments related to datafication and digitalization and the contribution EC/SC can bring to this debate.

2 From investments in forms to *standardizing liberalism*: towards a certified calculable global world

Laurent Thévenot has provided a comprehensive reconstruction of the various influences that have shaped the concept of investments in forms (cross reference [Investments in Forms: Background and Ongoing Developments](#)). He emphasizes the early focus of the EC/SC program on materiality, environment, and the ecology of action. Conventions are not just shared beliefs, opinions, or collective representations; the coordination of action occurs within a material environment and through an engagement of actors with the *milieu*. According to Boltanski and Thévenot's understanding of justification (Boltanski and Thévenot 2006), orders of worth are the outcome of a historical process in which two dynamics combine: the search for a social order that realizes a vision of the common good and investments in forms that mold the environment into a materiality that serves this purpose.

The interconnection among normativity, materiality, and the ecology of action was further explored in the 1990s, in Thévenot's elaboration of the regimes of engagement perspective (cross reference [Laurent Thévenot's Sociology of Regimes of Engagement and Grammars of Commonality](#)). The engagements approach involves exploring normativity beyond the public orders of worth that support public convention-based forms, enabling operations of equivalence-building backed by institutional legitimacy. Thévenot became interested in normative orientations resting on logics of the valuable not supported by a shared vision of the common good, such as those that engage the body in its distinctive relationship to a given milieu through familiarity or the “excitement of exploration” (Auray 2011). He also argues that when implementing an action plan, there is a specific normative orientation at work based on an instrumental engagement with the context.

It is important to stress that in Thévenot's view each regime rests on specific “investments in forms”. Investing in forms consists of the costly “sacrifice” of alternative coordination potentialities to ensure future returns in terms of economies in the cognitive and practical processes of coordinating actions (Thévenot 2022). In other words, “invested forms” contribute to knowledge and valuation because to “put into form” means establishing the probative information (or “formatting the information”) to reach a certain kind of coordination. However,

Laura Centemeri and Carlotta Mozzana, forthcoming, « Standards and the transformations of modes of governing. Perspectives from Convention Theory». In: Diaz Bone R., de Larquier G. (eds), *Handbook of Economics and Sociology of Conventions*. Springer, Cham.

they also respond to the practical need for coordination with the (social and material) environment.

Investing in forms is as much the creation of general categories that allow general equivalences to be established from the perspective of a legitimate “common good” as it is the habitual way of doing a task that is stabilized from the repetition of action and that ensures the “ease” of familiarity. What changes in these examples is the *temporal* and *spatial validity* of the invested form and its *solidity*. Temporal validity pertains to how long the investment remains operational within a user community. Spatial validity defines the boundaries of the community within which the form is considered valid. Furthermore, the strength of an invested form is contingent upon its solidity or “[...] the weight of its material equipment” (Thévenot 2009: 794).

The concept of investments in form allows for distinguishing various degrees of standards’ objectivity. Therefore, a high level of objectivity is linked to a high level of temporal and spatial validity of the standard. However, objectivity is also connected to solidity, which refers to the fact that the production of knowledge in its due form depends on instrumentation that is, in its turn, standardized and hardly dismantlable: for example, “[...] randomized clinical trials, which rests upon the solidity of statistical equipment” are considered as more objective evidence than “expert consensus” (Thévenot 2009: 794). These developments of the EC/SC are influenced by the critical dialogue with Michel Callon and Bruno Latour’s actor-network theory (ANT) perspective. In particular, Latour’s (1998) critique of the inadequacy of the *cités* model to grasp the implications of ecology’s growing political relevance prompted Thévenot to elaborate on the insight that ecological issues require a better understanding of the different ways in which humans engage with non-humans and the “distributions of competences” these engagements entail (Lafaye and Thévenot 2017). However, rather than embracing the ANT idea of a network devoid of ordering and coherence principles Thévenot analyses “translations” as operations that require managing tensions between different evaluative logics and “frictions” of practical engagements.

2.1 The changing role of standards in the process of globalization and the establishment of the EU common market

Thévenot’s approach to standards and his perspective on neoliberalism as *standardizing liberalism* cannot be adequately comprehended without considering the conceptual background of regimes of engagement that have been briefly summarized. A standard is a form that historically originates in the “industrial world”. It provides economies of scale, thus contributing to the industrial worth of technical efficiency, performance, and productivity that rests on the capacity of beings to integrate themselves “into the machinery” (Boltanski and Thévenot 2006). Standards sustain a regular future-oriented temporality and a homogeneous detached Cartesian space that are both crucial features of the ideology of productivist progress (Thévenot 2009). They are invested forms endowed with strong objectivity as previously defined.

According to this view, in the industrial world, standardization was, first and foremost, the concern of manufacturers looking for savings in product variety and interchangeability, thanks to uniformization (Thévenot 1997). Standards were initially thought to make technical tools, methods, and products more compatible. Through a compromise with civic worth, industrial standards also played a pivotal role in developing public services. In capitalist societies, however, the growing importance of market competition provided impetus to a search for variety, which led to a demand for “quality” that brought standards to play a decisive role

Laura Centemeri and Carlotta Mozzana, forthcoming, « Standards and the transformations of modes of governing. Perspectives from Convention Theory». In: Diaz Bone R., de Larquier G. (eds), *Handbook of Economics and Sociology of Conventions*. Springer, Cham.

also in the market world as part of “quality conventions” (Eymard-Duvernay 1989). Quality standards thus expanded their scope along market worth, where they sustain the common identification of marketable products and services.

The expansion of international markets, including the creation of the European common market, prompted further evolution. The rise of “global value chains”, which are networks of production and trade across countries, is accompanied by the emergence of non-state methods of governance through standards (cross reference [Convention Theory and the Governance of Global Value Chains](#)). Market standardization thus broadened its scope beyond quality. It was no longer limited to helping the coordination of producers, sellers, and buyers to guarantee efficiency and competition. It became the way to consider normative expectations of consumers and citizens beyond the scope of industrial and market qualifications, bypassing state authorities’ role of certifying civic worthiness. These include, for example, product safety, environmental values, and fairness in commercial and work relations. The agri-food sector has been one of the leading “laboratories” of these transformations. Food scholars have long grappled with the changing role of standards and their influence on government policies (cross reference [Agrofood Dynamics in the Turn of the Century in the Light of Convention Theory](#)).

According to Thévenot, this transformation of standards has been fraught with consequences. Technical standards now are meant to guarantee, with a high degree of objectivity, civic claims that were previously managed by public services under metrology frameworks set by governments. These frameworks have been removed because they impede market competition. For instance, European directives have encouraged the substitution of state regulations with regulatory procedures that rely on “voluntary” compliance (Thévenot 1997).

On this background, *standards are no longer meant to produce uniformization but to support human agency individuation and the capacity to act according to a plan*. In this “standardizing liberalism” (Thévenot 1997), non-market worths are reduced to measurable properties attributed to the certified and measurable quality of market goods and services, while market coordination is assumed as a “neutral” mechanism of coordination. Individual consumers’ choices in the marketplace thus replace political processes.

Thévenot’s perspective echoes Busch’s “differentiated standardization” concept, drawing from Busch’s extensive research into food and agriculture regulation. Inspired by the orders of worth framework, Busch identified different types of standards according to the “world” to which they belong: *ranks* in the market world, *filters* in the civic world, *ranks and divisions* in the industrial and domestic world, *olympian* type of standards in the inspirational and opinion world (Busch 2011). Standards may conflict across value chains, requiring compromises. However, powerful actors like retailers and processors can impose their views on others. This example shows that using standards in organizing value chains raises inherent power issues and democratic concerns.

In Busch’s historical reconstruction, the expansion of neoliberal globalization led to the need for implementing control mechanisms to prevent misuse and violations. This triggered the rise of the tripartite standards regime (TSR) of *standards setting, certifications, and accreditations* (Busch 2010: 58; Loconto et al. 2012). Employing standards, certifications, and accreditations while organizing firms into supply chains is a measure to mitigate market volatility and deter short-term profit maximization. Following Busch, the illusion of the self-regulating market generates the reality of a Hydra-kind of governance. This structure operates outside the traditional systems of state-led governance while drawing from existing national and international laws (such as anti-fraud, property, and contract law): it is not entirely within

Laura Centemeri and Carlotta Mozzana, forthcoming, « Standards and the transformations of modes of governing. Perspectives from Convention Theory». In: Diaz Bone R., de Larquier G. (eds), *Handbook of Economics and Sociology of Conventions*. Springer, Cham.

the state nor fully outside of it, but instead fully integrated within market rationality (Loconto et al. 2012: 7).

The TSR involves a complex network of organizations: standards development organizations (SDOs); certifying bodies (CBs) that certify individuals, companies, and objects to those standards; and accreditation bodies (ABs) that accredit certifiers and SDOs. They collectively engage in “conformity assessment”, which involves thousands of organizations certifying, auditing, and verifying various claims of adherence to standards (Busch 2011: 200). The sanction enforcing conformity is denying access to a given market.

Governance through standards to reach objective objectives requires the systematic execution of audit processes that extend beyond the financial industry, where they were initially developed. For standards to fulfill their promises of conformity, there has been a trend toward increasing formalization and auditability of individual and organizational performance. This means a growing emphasis on clearly defined processes and measurable outcomes to ensure compliance with standards. Additionally, reorganizations are being promoted to streamline and improve the auditing process. The goal is to create more efficient and effective systems for monitoring and ensuring adherence to established standards and regulations. However, these changes may hinder organizations’ ability to achieve their primary social goals while producing new social inequalities and suffering. A specific form of violence permeates this flexible, market-friendly regulation: the “violence of audits” (Busch 2011: 222), which is based on the “[...] (re)establishment of the links between and among statistical control, experimental control, and social control” (Busch 2011: 228).

2.2 Understanding the (oppressive) power of standards

Addressing the implications of standards in terms of their violence or their oppressive power is a crucial issue in EC/SC. Busch's critique of audit violence is complemented by Thévenot's emphasis on the “oppression” of standards from an engagement perspective. Standardization involves assigning stable properties – preferably but not exclusively in a measurable form (Diaz-Bone 2016) – and requires heavy investments in forms to certify them with high objectivity. Conformity to the standard and its measurement are assumed to guarantee *non-market worths that have become objective market product properties*. From the engagement perspective, the expression of these non-market worths, in turn, rests on engaging with the environment according to the plan's logic: seizing the environment in the functional format.

To resume, what Laurent Thévenot defines as *standardizing liberalism* operates through disciplining practical engagements and transforming and “conforming” policies. On the one hand, it rests on the “substantialist reduction” of nonmarket orders of worth to measurable properties of market goods. The market order is not simply prioritized over alternative orders of worth; it is considered *exterior* to the political debate. Market coordination is ideologically promoted as a neutral and horizontal tool of coordination. Policies are no longer about debating the normative foundations of ends and means; they are concerned with defining “objective objectives” out of (standardized market) realism. This transformation aligned with the increasing appeal of “evidence-based” policy evaluation and the econometric turn of policy evaluation (Thévenot 2011). As further detailed in the upcoming sections, the policy itself is condensed into a plan format with its objectives (Thévenot 2009; see also Supiot 2017).

On the other hand, standardizing liberalism as a mode of governance is based on the idea that the material world of products, through which human interaction takes place, should become a set of *certified objective options*. These certified options would ensure individuals that fundamental values or goods are being fulfilled when they select them (Thévenot 2022). In other

Laura Centemeri and Carlotta Mozzana, forthcoming, « Standards and the transformations of modes of governing. Perspectives from Convention Theory». In: Diaz Bone R., de Larquier G. (eds), *Handbook of Economics and Sociology of Conventions*. Springer, Cham.

words, standardizing liberalism rests on “the illusion that human beings are freed from dependency and hierarchy bonds and only connected through a world of things”: they are seen as independent individuals “[...] facing an array of secured options” (Thévenot 2022: 238). The “engagement in a plan” becomes naturalized as the standard way of coordinating with the environment. Additionally, any “sacrifice” resulting from this format must be overlooked, leaning on the “trusting side” of the engagement: this means that one must keep the “eyes closed” on the convention-based nature of the market reality (cross reference [Investments in Forms: Background and Ongoing Developments](#)).

Two forms of invisibility are created in this manner: one involves the political and debatable nature of justice as related to plural visions of the “common good”; the other pertains to the existence of ways to engage with the environment that, like familiar engagements, are not based on functionality to a specific plan of action. Thévenot notes that this “fetishism” of utility can be found also in Karl Marx's naturalization of the distinction between use value and market value. In both cases, the focus shifts away from viewing value as the result of a dynamic evaluation process equipped with shared conventions and submitted to tests of reality (Thévenot 1997).

In his collaborative research with Emmanuelle Cheyns on the “Roundtable on Sustainable Palm Oil” (RSPO) (cross reference [Ecological and Sustainability Voluntary Standards](#)), Thévenot adopted the framework that has been shortly summarized to explore the enforcement of transnational standards that claim to certify sustainability in global value chains, independently of the political authority of states via multi-stakeholder governing bodies (“roundtables”). How are standards put to a critical test? The authors show that in the task of collecting evidence, auditors mainly rely on industrial forms of proof, disqualifying local communities’ forms of knowledge of the environment. This leads to the exclusion of specific viewpoints and silencing meaningful experiences and life forms. This silencing occurs by establishing that legitimate “formats of information” are those based on general functional qualities of the environment because of their more substantial degree of objectivity. “Familiar attachments” and the potential ecological relevance of the familiar way to know and engage with the environment are not considered relevant. Against these forms of exclusion, NGOs and other mobilized groups can work either to transform concerns to allow them to be expressed in the accepted format (a standard “empowerment” strategy) or to create spaces for the expression of other “grammars of commonality” (cross reference [Laurent Thévenot’s Sociology of Regimes of Engagement and Grammars of Commonality](#)).

Exploring standards-related oppression can be considered part of a broader consideration of quantification's social implications, applications, and misuses. Within the Anglo-Saxon context, this analysis embraces a governmentality perspective influenced by the ideas of Michel Foucault (Mennicken and Salais 2022; Diaz-Bone 2016). Since the 1990s, the founders of EC/SC have been actively involved in this debate, arguing for the need to analyze quantification as a tool for reproducing power structures and as a support to forms of coordination that can realize diverse visions of a legitimate order.

Regarding the dialogue between the Anglo-Saxon and the French EC/SC perspectives, an influential book published in the *Raisons Pratiques* series, edited by Bernard Conein and Thévenot (Conein and Thévenot 1997), includes a seminal contribution by Geoffrey Bowker and Susan Leigh Star. This contribution explores standards and standardization from the approach of science and technology studies (STS). It provides an opportunity to clarify the differences between the STS and the EC/SC approaches to standards. Translated by Thévenot and Romuald Normand, the chapter focuses on the history of the International Classification of Diseases. Bowker and Star define standardization as constructing *uniformities* across time

Laura Centemeri and Carlotta Mozzana, forthcoming, « Standards and the transformations of modes of governing. Perspectives from Convention Theory». In: Diaz Bone R., de Larquier G. (eds), *Handbook of Economics and Sociology of Conventions*. Springer, Cham.

and space by generating agreed-upon rules. According to their definition (Bowker and Star 1999: 13-14), standards are “[...] any set of agreed-upon rules for the production of (textual or material) objects”, usually enforced by a legal body. Moreover, standards persist over time, have “[...] significant inertia [and] are deployed in making things work together over distance and heterogeneous metrics” (Bowker and Star 1999: 13-14).

While this perspective shares a family resemblance with EC/SC, there are also significant differences in how the power of standards and their violence are analyzed. Bowker and Star's analysis centers on a comprehensive exploration of standardization processes from the perspective of conflicting interests: “[...] adoption of certain standards is a sort of contest with the ‘victor’ achieving formalization of their own values and practices as agreed-upon or default policy. [...] Even before work on standardization begins, the negotiations and agreements necessary to allow heterogeneous groups to work together inevitably ensconces some agendas while marginalizing others” (Slota and Bowker 2017: 545-546).

In particular, Susan Leigh Star reconceptualizes standards as “investments” within a feminist perspective of the infrastructure (Star 1991; Lampland and Star 2009). She argues that standards introduce inequality into the social world by creating a yardstick based on the social group that defines the standard, thus creating a gap with other social groups. Star critiques standards and standardization processes from the perspective of unrepresented minorities who bear the burden of the “distribution of the conventional” and the maintenance of the standard. This perspective sheds light on the “sacrifice” implied by the standard as an investment, highlighting that for one social group to maintain a type of coordination, other social groups have to endure the disadvantage of reduced diversity. The invisibility of the standard as a social infrastructure contributes to the social invisibility of the discrimination suffered by nonconforming individuals.

Thévenot (1997) criticized Star's “identity politics” of standards from an EC/SC perspective for not considering the connections between political liberalism and economic liberalism. Star framed the difference between individuals as an inequality of access to options. Star's approach, aimed at understanding the experience of encountering conventions in real everyday life, is based on the concept of “social worlds” as developed by pragmatist sociologist Howard S. Becker (cross reference [Art Worlds, Valuation, and Convention Theory](#)). However, Thévenot argued that examining personal encounters with social conventions through the prism of social worlds, which are convention-based by definition, fails to recognize the dimension of coordination with oneself across multiple engagements. The engagement perspective shows instead that the (liberal) individual choosing options according to her interest is already the product of specific formatting of agency and the environment adapted to a “liberal grammar of commonality of plural interests”.

The differing perspectives in the Anglo-Saxon and French (EC/SC) traditions of sociology of standards illustrate varying degrees of reflexivity concerning the relative nature of the liberal grammar of commonality, which, in the engagement approach, coexists with other grammars, such as the one based on the plural orders of worth or the one grounded on personal affinities to common places. This also implies different perspectives concerning the role of the state. According to Salais (2008), the Anglo-Saxon viewpoint considers the state external to civil society and sometimes even hostile. Consequently, developing a positive conception of the state within this framework proves to be quite challenging. The following section will explore the relationship between standards and various “state conventions” based on Salais's research.

3 Standards, indicators, and the convention of the absent neoliberal state: the European laboratory

Laura Centemeri and Carlotta Mozzana, forthcoming, « Standards and the transformations of modes of governing. Perspectives from Convention Theory». In: Diaz Bone R., de Larquier G. (eds), *Handbook of Economics and Sociology of Conventions*. Springer, Cham.

Robert Salais is an EC/SC scholar who, like Laurent Thévenot, began by analyzing the “worlds of production” to become increasingly interested in the changing modes of governing. Like Thévenot, this prompted him to investigate the growing utilization of standards to erode the distinctions between the political, technical, and economic spheres, accounting for establishing *a form of market realism that neutralizes critique*.

3.1 From equivalence by abstraction to concrete identification: different ways to deal with uncertainty and to rely on standards

In his influential work with Michael Storper on the “worlds of production” (Storper and Salais 1997), Salais highlighted the importance of standards in reducing uncertainty in both the market and industrial world. Standards are based on establishing a specific kind of equivalence, which the author refers to as “by abstraction” (or *de dicto*). This mode of identification by abstraction is contrasted with “concrete identification” (or *de re*). Concrete identification reduces uncertainty through specialization, personalization, and experience-based judgment (Salais 2008).

The need to address the ecological implications of production has recently led Salais (2019) to partially correct this perspective. Abstraction and concrete identification are not two principles of equivalence but rather two ways of “grasping” (*saisir* in French) the coordination situation. In the “by abstraction” (or Cartesian) mode, materiality exists as an “object,” while in the “concrete identification” mode, materiality exists as a “thing” (in Aristotle's sense). Drawing upon the philosophical distinction between object and thing, Salais defines the object as subordinate to the subject. In contrast, the “thing” indicates the object's indeterminate natural properties. In his view, EC/SC has been mistakenly focused on objects, neglecting things. He then distinguishes between two types of conventions. The type 1 convention is the one EC/SC has mainly focused on. It is based on equivalence between situations founded on a general predicate. The type 2 convention is based on trans-identification between situations, and it is based on the particularity of the thing.

In light of this analysis, Salais criticized the management of ecological issues by setting general, even global, standards. The ecological crisis necessitates a more significant transformation, specifically, making space for the “thing” within each “object”. It also requires moving from (and, if possible, articulating) a type 1 convention (equivalence according to a general predicate: nature is a capital like any other) to a type 2 convention (common identification of the particularity of the thing, in the specific context between specific participants and over time).

Salais argues that Thévenot's approach is based on a perspective focused on objects, with occasional “confusion” between object-oriented and thing-oriented viewpoints. This critical remark reveals, however, a fundamental misunderstanding of the perspective of regimes of engagement. As previously discussed, the concept of engagement is specifically designed to enable an ecological understanding of action that goes beyond the dichotomy between subject and object. Several works, drawing on a convention-based perspective of engagements, have highlighted the multiplicity of modes of existence, experience, and valuation of materiality that lead to a radical rethinking of productive practices, for example, in agriculture (see Centemeri 2018; Silva-Castañeda 2012). Through ethnographic approaches, these contributions demonstrate the complexity and difficulties of the intertwining of what Salais refers to as type 1 and type 2 conventions and the centrality of problems of incommensurability

Laura Centemeri and Carlotta Mozzana, forthcoming, « Standards and the transformations of modes of governing. Perspectives from Convention Theory». In: Diaz Bone R., de Larquier G. (eds), *Handbook of Economics and Sociology of Conventions*. Springer, Cham.

(Centemeri 2015) and “irreducibility” (Chateauraynaud and Debaz 2017) in the definition of the ecological quality of products and processes.

Salais's interest is focused on understanding the state's potential role in fostering greater centrality of type 2 conventions. In his analysis, the state is at the crossing of two “languages”: the language of the *demos* (conventions) and the language of the *power* (rules). These languages are not equivalent: there is an antecedence of conventions of coordination between persons over institutions of regulation (cross reference [The Pragmatic and Democratic Approach to State as a Convention Between Persons](#)). The “convention of the state between persons” fixes a specific compromise between conventions and rules. Three types of state can be identified as a recurrent reference for this compromise: the external, absent, and situated (see Storper and Salais 1997).

Promoting the “situated state” appears crucial for addressing social and environmental justice issues. The convention of the “situated state” suggests that the common good can only be truly understood in the specific situation and considering the situated events. The “local” *demos* should take part in defining and carrying out the common good, using their common-sense knowledge. Following Salais, this understanding of the common good can only emerge as all the involved parties coordinate their actions and draw on their common-sense knowledge. Standards potentially have their place in this coordination in the form of collectively agreed-upon standards open to regular revisions and deliberation, with limited spatial and temporal validity.

However, starting with the 1970s, the neoliberal version of the convention of the absent state has gained traction in Western countries. The partisans of this convention denounce state interventions as obstacles to the free deployment of individual capacities *in all policy spheres*, not just the economic one. As mentioned, the market is not presented as an “order of worth” among others but as a neutral instrument of coordination. The common good is reduced to “objective objectives” (Thévenot 2015).

Implementing this specific type of convention of the state has emerged progressively as a crucial component of the historic process of construction of the European Union. The convention of the neoliberal absent state has been a way to avoid the conflicts between the supporters of the different visions of a federal or republican political direction in supporting the development of the Union. Even if other conventions of the state have not disappeared (Diaz-Bone 2016), the European Union has been reduced mainly to a “bureaucratic skeleton” that serves an ideology of efficiency, disconnected from any concern for the public good (Salais 2013). This has fatally weakened the political motivations behind the European political project and promoted a regime of “a-democracy”. Quoting Salais (2022: 397), a-democracy is “[...] a political regime that maintains the formal procedures of democracy, but impedes, not formal participation of citizens and actors, but any palpable outcomes positive for them”.

According to Salais, the reference to the convention of the neoliberal absent state justifies the injunction to institutions and actors to cooperate actively and invest in new forms by changing and designing adequate incentives and penalties to *suppress the state from all situations, not just in the economic sphere*. The state undergoes a transformation into multiple semi-autonomous management centers, which operate as quasi-companies. These are considered actors, among others, and are subject to the same forms of modeling as any other microeconomic actor (Desrosières 2014). They are consequently also subject to “audit violence”.

The implementation of the Open Method of Coordination (OMC) as an intergovernmental policy-making mechanism in the EU is consistent with the integration of techniques derived from the private sector and corporate management into public policies, in line with the principles of New Public Management (NPM) whose spreading was supported by international

Laura Centemeri and Carlotta Mozzana, forthcoming, « Standards and the transformations of modes of governing. Perspectives from Convention Theory». In: Diaz Bone R., de Larquier G. (eds), *Handbook of Economics and Sociology of Conventions*. Springer, Cham.

organizations like the OECD. Adopted as part of the Lisbon Strategy in 2000, the OMC does not lead to binding EU legislative measures, nor does it require EU countries to introduce or modify their laws. The OMC is principally based on jointly identifying and defining *objectives to be achieved* (adopted by the European Council); jointly establishing measuring instruments (statistics, indicators, guidelines); benchmarking, i.e., comparison of EU countries' performance and the exchange of best practices, monitored by the Commission (Publications Office of the European Union 2017).

A dense network of standards and indicators is at the heart of this method. Standards can be *design standards* setting “more or less detailed specifications of individual components of social and/or technical systems”; *terminological standards* “ensuring the stability of meaning over different sites and times”; *performance standards* setting “outcome specification”, *procedural standards* “which specify how processes are to be performed” (Timmermans and Epstein 2010: 72). Indicators serve as tools for guiding action and aligning public policies. Their role encompasses both descriptive *and* normative dimensions. They depict the current state of a situation while concurrently playing a role in its transformation, thereby generating a dynamic feedback loop (cross reference [Socio-economics of Quantification and Value: The Perspective of Convention Theory](#)).

3.2 *The fuzzy standardization of the new politics of numbers and the impasses of critique in times of a-democracy*

The EU case confirms that the convention of the neoliberal state's “absence” relies on the pervasive – almost Orwellian – use, in all policies, of performance evaluation and rankings (or benchmarking) based on measurable standards and indicators. Invented in the early 1980s by the American firm Xerox, *benchmarking* is defined as a management method based on competitive evaluation; it encompasses a wide array of comparative evaluation techniques that assess the performance of individuals, populations, or institutions using standardized metrics and rankings.

Applying the EC/SC framework has effectively provided valuable insight into the normative implications that underlie the complex technical aspects of the “new politics of numbers” (Salais and Mennicken 2022). Alain Desrosières' contributions are particularly significant (Diaz-Bone 2016). He advanced the understanding of the relationship between statistics and the implementation of public policy. His work elucidated how various forms of government rely on distinct methods of quantification (Desrosières 2014).

Desrosières highlighted the importance of comprehending the effects of the feedback loop between quantification and actors' behavior that characterizes the NPM. Feedback operates through the abovementioned tool, benchmarking, which involves *evaluating performance*. This represents a fundamental departure from what Desrosières defined as the “realist epistemology” that forms the basis of official statistics metrology. It embodies a shift in the use of data in policy, focusing not on measurement (of reality) but on evaluating performance.

Following Desrosières, the neoliberal state assumes market-based microeconomic dynamics as its reference. It attempts to guide these dynamics through incentive systems and accepts the core assumptions of rational expectations theory. Quantification now serves as a means to justify predetermined policy measures rather than a fundamental step in their elaboration and development within a broader public deliberation process on the relevant social ends and means to achieve them.

In the EU case of the OMC, for example, political authorities – “the Center” (Salais 2022) – establish objectives and select indicators, providing a concise description in written form. The

Laura Centemeri and Carlotta Mozzana, forthcoming, « Standards and the transformations of modes of governing. Perspectives from Convention Theory». In: Diaz Bone R., de Larquier G. (eds), *Handbook of Economics and Sociology of Conventions*. Springer, Cham.

Center then issues a directive to the statisticians at Eurostat (the statistical office of the European Union) and the national statistical institutes, delegating the task of standardizing the terminology. For example, statisticians are responsible for determining the criteria for what constitutes a person in employment. A person in employment, as defined by the convention of quantification supported by the International Labour Office (ILO), is a person aged 15 or over who has done at least one hour's paid work in a given week. This statistical definition of a person in employment may substantially differ from what an ordinary EU citizen assumes as being a person in employment. Indicators thus create a form of "cognitive ambiguity" (Salais 2022).

Due to the institutional variances across different countries, statisticians encounter challenges defining certain crucial aspects of statistical categories and measurement procedures. Complete standardization of these aspects remains unfeasible. EU indicators thus rest on a "fuzzy" (*flou* in French, Desrosières 2014) form of standardization. Exploring the professional cultures and practices of the technicians involved in these transformations, Desrosières demonstrated their discomfort with the vagueness of this process that contradicts their ethos of pursuing reliable standards that accurately reflect reality in transparent and verifiable formats. However, they are forced to accept compromises, as without them, it would be impossible to provide the requested indicators.

Consequently, indicators rely on "fuzzy" forms of standardization with a high level of disputability. Still, disputes and compromises are typically excluded from public visibility and confined to the backstage of technical expert discussions. These compromises are not just technical details but fundamentally political operations that shape policies' "knowledge basis" (Salais 2022). The problem is that once introduced in the social world, measurable standards and indicators are taken as true, neutral, and indisputable (cross reference [Socio-economics of Quantification and Value: The Perspective of Convention Theory](#)).

To qualify these new practices of governing by numbers (Bartl et al. 2019; see also Supiot 2017), Salais speaks of "governance-driven quantification" or "inverted statistics" (Salais 2022). Using numbers as political arguments is not a new phenomenon; neither is the reduction of qualitative social and historical processes to simplified standards. Drawing from his extensive research on the socio-historical analysis of the unemployment category, Salais argues that the novelty of governance-driven quantification lies in how the quantification processes are organized to showcase the effectiveness and success of the implemented policy (Salais 2022: 381).

The primary goal of governance-driven quantification is not merely to extract general knowledge from various social conventions and devise policies to accommodate these norms. Rather, quantification is intended to serve as a tool to encourage the transformation of social conventions in line with specific quantified objectives that are considered optimal from the standpoint of the market, which is taken as the reference by "the Center". This evolution is at the core of the emergence of the regime of a-democracy.

Critique seems superseded and obsolete by the "regimes of truth" established by governance-driven quantification (Salais 2022). The displacement and distribution of legitimate authority in measurably certified goods, services, and processes make it difficult to question it: authority imposes itself in the name of an argument of realism. This argument rests on taking the individual who plans action through engaging with an objectively certified environment (to attain an objective) as the uncontested and uncontestable *metron* of the human being. Authority loses its political visibility as processes impose themselves as "factual" (as an *état de fait* in French) in the name of their measurable "substantial properties" (Thévenot 2010).

Laura Centemeri and Carlotta Mozzana, forthcoming, « Standards and the transformations of modes of governing. Perspectives from Convention Theory». In: Diaz Bone R., de Larquier G. (eds), *Handbook of Economics and Sociology of Conventions*. Springer, Cham.

The request for realism also shapes how dissent is expressed and managed. Mirroring the changes in the political economy, social movements have shifted away from grand claims of the “civic” worth of a cause, which many participants view as too ideological and unrealistic. Instead, they are moving towards a commitment to so-called “realistic” or “pragmatic” plans, resulting in fragmentation into small causes and small collectives that come together for their defense (Thévenot 2010).

However, new forms of organizing and expressing critique are also emerging that disavow this trend, such as in the case of the Notre-Dame-des-Landes *Zone à Défendre* (ZAD). The N-D-L ZAD is a movement of occupation that emerged from the opposition, motivated primarily by ecological concerns, to the (now abandoned) project of building a new airport in Nantes, France. This and other instances of *mobilization through occupation* demonstrate the emergence of a form of “emplaced resistance”. This involves refusing to rely solely on metrics and standards to convey the worth of the environment. These measures are seen as easily manipulated to benefit the most powerful interests.

Another rising form of mobilization is “statactivism” (Bruno et al. 2014). Typically regarded as stable and definitive, numbers can be questioned and transformed by developing alternative measurement systems and counter-quantification practices. These alternative measures may arise as a response to limitations or biases in traditional quantification methods, offering a more comprehensive and rich understanding of the phenomena under consideration. As many examples of workers' mobilizations or environmental struggles show, “statactivism” requires alliances between local citizens and expert activists. As illustrated by the above example of the Roundtable for voluntary sustainability standards (see section 2), “statactivism” also involves recognizing and addressing epistemic diversity by composing diverse ways of experiencing and valuing the world.

4 From certified cradle to certified grave: Promises and perils of regulating life by standards

Governance through standards to reach objective objectives involves a peculiar version of authority enforced by certified objects, services, and processes. As a result of a compromise of industrial and market orders of worth, contemporary standards are meant to encourage innovation while guaranteeing a market-friendly kind of certified diversity. Innovation originates in reducing “common goods” (health, safety, equity, respect for the environment, inclusion, etc...) into certified and measurable qualities – or quantified properties – of objects, processes, and services. In establishing standards, decisions concerning technical aspects taken in private settings and “grey zones” directly influence shaping the political and moral understanding of the common good. In democratic regimes, however, rival ideas of the public good are supposed to be open to debate and deliberation in legislative bodies that hold sovereign power, while a-democracy is rooted in the public actor’s commitment to endorse market coordination as the only viable way to achieve social goals.

Standardizing liberalism is based on the premise that all aspects of human life can be regulated by certified standards so that everyone can ensure their dedication to the common good by choosing a certified product or service without deliberation with others. Possible negotiation among “stakeholders” is the most that could be accommodated within this framework, as the example of voluntary sustainability standards shows.

The EC/SC perspective has led to many scholarly investigations focusing on dissecting and exploring the emergence of governance through standards to reach objective objectives in various policy areas. This scholarly research covers a wide range, from the transformations in

Laura Centemeri and Carlotta Mozzana, forthcoming, « Standards and the transformations of modes of governing. Perspectives from Convention Theory». In: Diaz Bone R., de Larquier G. (eds), *Handbook of Economics and Sociology of Conventions*. Springer, Cham.

the agro-food sector, which has been heavily impacted by this significant transition since the 1980s (cross reference [Agrofood Dynamics in the Turn of the Century in the Light of Convention Theory](#); [Convention Theory and the Governance of Global Value Chains](#)) to the growing concern for global ecological issues (such as climate change or biodiversity loss) that has been met by building structures of governance through standards that appear however largely ineffective in tackling real ecological problems and that are primarily market-driven (cross reference [Approaches to Ecological Problems in Convention Theory: How Legitimate Is Environmentalism ?](#)).

Adopting new public management tools and methods in public services has also been an essential topic for EC/SC scholars, along with the transformation of welfare systems in Western democracies. Under the convention of the neoliberal absent state, the primary objective of the welfare state has become to address and deter individuals' strategic behaviors through the design of incentives and sanctions founded on anthropological premises of individuals' immoral (and not simply a-moral) nature (Batifoulier et al. 2007).

As demonstrated by EC/SC scholars' analyses of the transformations in health and education policies, using a rationality-based coordination approach for social objectives tends to ignore the presence and significance of diverse value systems. They argue that it is essential to engage in deliberation to establish conventions that contribute to creating a world, as defined by Hannah Arendt, that is common to ourselves and others.

EC/SC does not focus on “[...] the enactment of market competition economics' theoretical calculative agent” (Thévenot 2009: 801), which is the main preoccupation of the stream of science and technology studies (STS) economic sociology initiated by Michel Callon. Convention scholars pay attention to the widespread presence of tensions arising from conflicting conventions of qualification, which indicate a plurality of orders of worth in society and of practical ways to engage with the environment. Standardization does contribute to giving market worth a superior position, creating an imbalance with other forms of worth and hindering critique and political debate. However, there is more to it. Once established, governance through standards and the array of indicators and audit procedures required to ensure coordination across a policy field wield significant influence in restricting specific *valuable experiences*. Standards influence practices. They do this by altering accountability, emphasizing or de-emphasizing hierarchies, shaping people's expectations, and defining specific ways of action. This influence, while not wholly imperceptible and often met with “strategies” and “tactics” of resistance (De Certeau 1984), is subtle and insidious.

4.1. Health and education from standardization to digitalization

The contributions of EC/SC in health and education offer insights into the diverse and complex value systems that influence definitions of good health and education. They also shed light on the conventions that govern the socio-technical and economic organization of health and education systems.

In the health sector, EC/SC scholars highlighted the crucial role of compromises between three historically influential value systems in shaping health conventions: the market, industrial, and domestic orders of worth (Batifoulier 1992). Other perspectives on the common good held historical relevance, like the worth of inspiration. The healthcare systems established in the early 1900s were built upon the idea that medical professionals needed creativity.

Health and healthcare systems have undergone a profound transformation since the 1980s, and the movement of standardizing liberalism influenced the reforms adopted. They empha-

Laura Centemeri and Carlotta Mozzana, forthcoming, « Standards and the transformations of modes of governing. Perspectives from Convention Theory». In: Diaz Bone R., de Larquier G. (eds), *Handbook of Economics and Sociology of Conventions*. Springer, Cham.

sized the pivotal role of adopting market-oriented strategies and promoting industrial efficiency (cross reference [The Industrialization of Healthcare and Its Critiques](#)). This transformation towards industrial efficiency has been implemented across all healthcare system levels, starting with the standardization of medical practice. Implementing the “industrial quality convention” in this domain did not solely result in a rationalization process; it also functioned to monitor and eliminate unsafe practices. More importantly, it promoted a precise conception of quality within a context where alternative perspectives could also be valid (cross reference [The Industrialization of Healthcare and Its Critiques](#)).

A form of civic critique has stimulated a parallel dynamic of transformation. Citizen-patient organizations have started questioning doctors' paternalistic attitudes and authority (Barbot and Dodier 2002). This has led to the establishment of new quality standards and the development of new justifications for medical decision-making. Laws were put in place to uphold and safeguard citizen-patients' rights. Simultaneously, however, there was a push for new decision-making criteria that relied more on objective knowledge, which sustained a process of quantification and rationalization of medical expertise in guidelines and standards to orient medical practice. This shift, known as *evidence-based medicine*, emphasized the importance of measurable standards in organizing healthcare at all levels.

In evidence-based medicine, the certified quality of knowledge serves as the yardstick for defining accredited procedures. A departure from the traditional approach, medical and care practices no longer rely on a blend of diverse knowledge and contextual assessments driven by multiple normative criteria. Instead, they are structured to conform to objectively standardized procedures to ensure a predictable outcome. Using measurable quality standards helps rationalize medical work by disqualifying the singularity of the practitioner-patient relationship as a source of relevant knowledge and legitimate normative orientations. This has been functional in reinforcing both market and industrial quality conventions.

This transformation has significantly impacted the relationship between health professionals and patients and dramatically transformed the work conditions in health care. In a study on the evolving landscape of work in public hospitals, Alexis Jeamet (2020) shed light on how nurses are experiencing a form of “dispossession” in their work. This occurs due to the standardization of their activities, which has led to time constraints and a narrowing of the focus of their caring activities. Nicolas Da Silva (2021) states that the “industrial convention of care work” heavily relies on standards to regulate hospital activities and categorize different diseases and related procedures. One prominent example is the Diagnosis Related Group method, which serves as a standard classification system for healthcare management founded on evidence-based medicine. This method has been embraced by healthcare systems in various countries such as France, Switzerland, and Italy. It has significantly reshaped care practices, understanding illnesses, and dynamics between healthcare professionals and patients through extensive standardization (Streckeisen 2021).

Adherence to measurable performance standards has progressively been considered essential for effectively managing day-to-day operations in health care services. Technical guidelines serve as the defining criteria for practices, marking a shift from the openness of medical procedures to more experimental paths. Paradoxically, standards and market coordination have been justified to overcome the limit represented by the uniformity of the “offer” of the traditional organization of public health services and meet the demand for more personalized care (Batifoulie and Diaz-Bone 2021).

The regimes of engagement framework have proved effective in showing how standardization of medical and care activities makes it particularly difficult to engage in “familiar engagement”. As previously discussed (see section 2), familiar engagement points to a mode of

coordination “below conventions” (Breviglieri and Stavo-Debauge 2006). It relies on gradually establishing a unique connection with people and a milieu. This personal bond is not intended to be evaluated for public approval but aims to provide a *sense of ease*, a component of the health experience. The ease of familiarity is not the domestic vision of justice but the result of the singular quality of the relationship created through engaging familiarly with the milieu. This form of engagement is a fundamental dimension of the *logic of care* (Mol 2008) essential to “good care”. That is why “good care” cannot be standardized or conventionalized based on type 1 conventions (see section 3; Pattaroni 2005). For example, when working with especially vulnerable populations, such as homeless people, Marc Breviglieri (2012) has highlighted the need for social workers to adopt a sensitive and personalized approach that deviates from standardized procedures. Furthermore, in this specific case, the inter-affectivity of the familiar engagement requires a profound understanding of the person’s loss of the inner resources to act autonomously. The increasing influence of the “logic of choice” (Mol 2008) in health and social services, with the injunction of treating patients as individuals who make their own decisions autonomously, is revealed as a potential obstacle to providing “good care”.

Market and industrial standards have set the stage for an evolution in the health sector toward a “market trajectory”, where competition is a regulating principle to define the quality of the system, “along with the potential for exploiting it” (Batifoulier and Diaz-Bone 2021: 15). In fact, the healthcare sector is crucial for understanding capitalism and its recent changes. *Health capitalism* indicates a “new spirit of capitalism” centered on pursuing “good health”. Economist of French regulation theory Robert Boyer has described this evolution of capitalism as “anthropogenetic” (Batifoulier et al. 2018; Batifoulier and Diaz-Bone 2021). As a result, healthcare, education, and culture sectors are now recognized as critical drivers of economic growth. Beyond industrialization, financialization is also significantly transforming these policy fields.

The ongoing evolution in healthcare is also driven by the increased use of datafication, digitization, and algorithmization, with far-reaching implications for the healthcare industry and practices related to health in everyday life (cross reference [E-Health and the Digitization of Health](#)). Datafication resulted in the expansion and diversification of the sector, with more medical companies, health data infrastructures, and data producers emerging. These investments in (digital) forms are functional to “governing by digital traces” (Thévenot 2019). Data and digital traces can be analyzed as conventions without semantic content and thus “pure” self-evident standards (Diaz-Bone 2016). They produce new difficulties of coordination, lack of transparency, and an increasing influence of private actors in the sector, with the privatization of infrastructure, devices, and data and a growing opacity in decision-making processes. Furthermore, health has been privatized in another way: it is now seen as an objective that individuals are responsible for achieving through daily health practices based on self-tracking health indicators or digital tools for individual self-optimization. This approach creates a unique combination of standardization and a sometimes playful form of self-measurement through digitally engaging in “exploration” (Auray 2011).

The evolutions briefly discussed in the health field show more than just a similarity to those observed in education (cross reference [Convention Theory and Sociologies in Education: A Constructive and Reflexive Dialogue to Renew the Critique of Neoliberalism and Its Extension; Education and Conventions](#)). Standardization, datafication, and digitalization have led to similar privatization in the organization of education systems and educational practices. The standardization of e-learning interfaces has led to the “learnification” of education, redefining all educational aspects as measurable learning outcomes (Landri 2018). New “edu-

Laura Centemeri and Carlotta Mozzana, forthcoming, « Standards and the transformations of modes of governing. Perspectives from Convention Theory». In: Diaz Bone R., de Larquier G. (eds), *Handbook of Economics and Sociology of Conventions*. Springer, Cham.

tech” businesses are developing digital infrastructures that play a crucial role in this process, thus allowing knowledge and data to be monetized and used for profit. As a result, “learnification” drives the growth and diversification of the education sector, bringing in new players and creating new ways of coordination. Education increasingly relies on private or non-public infrastructures primarily based on market coordination principles.

As in the case of health policy, this technological transformation was preceded in the 1990s by the emergence of the evidence-based approach to quality in education, linking quality to the internal efficiency of education systems (Normand 2016). The evidence in education is backed by expertise and statistical analysis. Educational standards are established through randomized controlled trials and meta-analyses, which help design guidelines that reshape educational practices.

This standardization process is closely linked to the growing significance of international agencies and organizations, highlighting the increasing importance of global standardization in education. Romuald Normand speaks of the emergence of an international government of education by standards. Examples include the Programme for International Student Assessment (PISA) promoted by the OECD, the use of education indicators in the Open Method of Coordination (OMC) at the EU level, and international standards for measuring the quality of education systems and their management (efficiency, total quality management). These standards promote reorganizing educational policies to control national and international curricula and harmonize procedures. Previous conventions are considered outdated in a globalized world and replaced by managerial accountability techniques in line with the principles of New Public Management. In his research on the effects of European “governance technologies” (quality standards, evidence) on the academic profession, Normand (2016) points to the emergence of a new professionalism, that of “the expert” and “the entrepreneur”. These two figures of academic work challenge the more traditional figures of “the Mandarin” and “the peer”. By analyzing the new investments in forms that sustain coordination in education, Normand’s work highlights the emergence of new structural tensions impacting people and organizations, the goods they guarantee, and those they sacrifice.

4.2 Standards and the city: The variety of urban cosmopolitanisms at the risk of certified attractiveness

EC/SC scholars have made significant contributions to enhancing the understanding of contemporary urban change by redefining prevalent diagnostic frameworks of the “neoliberal” or “entrepreneurial” city and “growth machine” (cross reference [Justifying the Elephant in the Growth Machine: Urban and Planning Theory Understood Through Convention Theory; Sustainable Urbanism. Green Engagements and Compromised Conventions in the Twenty-First Century](#)). One way has been to analyze how standardizing liberalism has impacted urban government dynamics.

This issue is central to Breviglieri’s longstanding research on the contemporary transformations of Mediterranean cities, mainly focusing on their waterfronts and historical centers (see Breviglieri 2018a, 2018b). Breviglieri’s work rests on an original approach in which the EC/SC dialogues with the “Southern Thought” (*Pensiero Meridiano*) of the Italian philosopher Franco Cassano (see Ferretti 2023 for an introduction in English). His work represents a rare instance of EC/SC engaging with decolonial and post-development approaches. Breviglieri’s research delves into the fundamentals of urban governance through standards, the resistance it encounters, and the resulting transformations of “urban ambiances”, including their impact on children’s experiences of the city.

Laura Centemeri and Carlotta Mozzana, forthcoming, « Standards and the transformations of modes of governing. Perspectives from Convention Theory». In: Diaz Bone R., de Larquier G. (eds), *Handbook of Economics and Sociology of Conventions*. Springer, Cham.

Breviglieri coined the term “guaranteed city” to describe urban governance focused on ensuring individual and public goods through standards and expert certification procedures. In the guaranteed city, the urban environment is organized with “conventional references” to facilitate predictability in “normal” usage. Governing the urban space through standards means focusing on improving urban quality of life according to the measurable standards set by international bodies. It aims to make the city attractive for capital investments, tourists, digital nomads, and other potential “consumers” of the city. The attractiveness coefficient becomes a standard of valuable market information. Breviglieri emphasizes that “attractiveness” becomes more important than residents’ “attachments” to their habitual and ordinary activities in the city.

Cities, caught up in a system of competition that makes them particularly sensitive to the effects of reputation, have become the target of marketing consultancies and image agencies. Governed in this way, cities are presented as places of certified promises (on paper), such as decarbonization and sustainability of infrastructures, quality of heritage, creativity, multiculturalism, etc. The city becomes a space for individuals to pursue their goals and empower themselves.

Breviglieri's research reveals that shaping urban space according to guaranteed standards reduces its sensory qualities. The guaranteed city requires an effort to “clarify” undefined spaces (e.g., wasteland, squats), leading to an abundance of normative landmarks and convention-based references that dictate expected standard actions in urban spaces. This impacts, for example, how art can creatively intervene in urban space in a politically meaningful way (Piraud and Pattaroni 2018).

Breviglieri is interested in exploring how promoting the autonomous individual as the standard for urban dwelling leads to what he defines as “anthropological simplification” (*réduction anthropologique* in French). This simplification is evident in urban spaces such as Mediterranean port cities, where multiple faiths, cultures, and economies have historically coexisted without relying on a liberal “grammar of commonality”. Contemporary development plans for waterfronts and historic city centers in Southern Europe are part of a global movement rooted in urban redevelopment projects in the US during the second half of the 20th century, particularly in Baltimore and San Francisco. These models were adopted in the UK in the 1980s and then in northern and southern Europe with the backing of EU policies before being implemented in other regions, such as North Africa.

The roots of these urban planning operations can be traced back to an economic reorientation influenced by the neoliberal convention of the absent state in the aftermath of the 1970s crisis. These operations were also justified by the principles and values of political liberalism and its intrinsic normativity. Political liberalism supports a normative conception of public space as distinct from private space. However, separating public and private space is not an inherent feature of urbanity but rather specific to a particular model of liberal urbanity. Through the tools of regimes of engagement and grammars of commonality, Breviglieri thus seeks to highlight the existence of various urban “cosmopolitical visions” to which market-oriented standards are blind.

The work of Luca Pattaroni (2015) also aligns with this approach to exploring the impacts of standardizing liberalism on urban struggles. His long-term study examines how the urban struggles of the 1960s and 1970s, particularly the movement of squats in Geneva, have contributed to the emergence of a “new spirit of the city”. The research emphasizes how governing urban spaces through standards and objectives constrains the expression of alternative political visions and the construction of commonality. This restriction hinders the articulation of ideas about the common good and inhibits critical analysis of societal organization (or

Laura Centemeri and Carlotta Mozzana, forthcoming, « Standards and the transformations of modes of governing. Perspectives from Convention Theory». In: Diaz Bone R., de Larquier G. (eds), *Handbook of Economics and Sociology of Conventions*. Springer, Cham.

“meta-critique”). Additionally, it prevents the expression of familiar attachments, crucial in urban mobilizations and struggles. It requires attachments to be transformed into interests and preferences concerning choices in neighborhood management.

5 Conclusion

The study of standards settings and standardization processes from an EC/SC perspective as infrastructural activities of “investments in forms” helps to shed light on fundamental contradictions of modern societies, mainly how activities that shape the material world contribute to managing the structural tensions between liberty and discipline in the modern social formation. Moreover, the study of standards sheds light on the current form in which processes of standardization, transformations of modernity and capitalism interweave – an issue already introduced by Karl Marx with his concept of “abstract labor” and Max Weber with his notion of the “iron cage”.

The neoliberal turn, understood as the spreading of *standardizing liberalism* conjointly with the neoliberal version of the convention of the absent state, is marked by the proliferation of measurable and certified standards. The neoliberal version of the convention of the absent state generates a “Hydra-like form of governance” (Busch 2010) made of standardizing, certifying, and auditing procedures. The EU example shows that governance through standards to reach objective objectives in all policy fields rests on a pervasive web of “fuzzy” indicators and benchmarking to measure and classify performance.

Convention theory reveals that a hallmark of the neoliberal turn is its push toward dissolving the boundaries between technical norms, social norms, and the “norm of truth” (Thévenot 1997). Standards and standardization processes regulate human conduct and shape the material and living environments based on a mixed legitimacy that combines scientific and technical rationality, concealing their political essence. Justice is supplanted by efficiency and rules by objectives. EC/SC appears to be a real antidote to this tendency insofar as it requires and can support a thorough analysis of these dimensions (epistemic, technical, normative) as distinct, internally diverse, and always intertwined.

Like any other type of governance, governance through standards to reach objective objectives acts through control and regulation mechanisms of a non-directive but negotiating type. This type of government is promoted as *horizontal*, regulating without a visible regulator. In the specific case of governance through standards, the redistribution of authority from a vertical, hierarchical structure to a more horizontal negotiation of choices among individuals engaged in planned action is accompanied by a corresponding shift in authority towards the “objects” that form the “options” available to these individuals (Thévenot 2010). The “authority of objects” in the name of their quantified and measurable properties is hard to challenge. Reasserting the power of “things” (Salais 2019) and their being “irreducible” illustrates one possible direction to challenge the oppression of standards.

The role of science in supporting the authority of “objective objectives” highlights the necessity of clearly articulating the value-based decisions fundamental to producing scientific knowledge. The sociology of quantification within the EC/SC tradition is a valuable tool for unpacking the “black box” of numbers. However, it needs to be supplemented with an approach that explores how numbers are used as a form of language to tell stories and influence public debates. Numbers help shape worldviews and give them authority. One approach that aims to bring the influence of numerical data under (democratic) control is quantitative storytelling (QST, Saltelli and Giampietro 2017).

Laura Centemeri and Carlotta Mozzana, forthcoming, « Standards and the transformations of modes of governing. Perspectives from Convention Theory». In: Diaz Bone R., de Larquier G. (eds), *Handbook of Economics and Sociology of Conventions*. Springer, Cham.

Similarly to convention theory, QST posits that there are plural legitimate evaluative frames and worldviews in society and that “mathematizing” the problem means absolutizing a single view of the issue, preventing the consideration of alternative readings. QTS is a tool to aid deliberation, not decision-making. It has been developed to evaluate which available frameworks to deal with a problematic situation *do not* meet the criteria of quantitative and qualitative analytic checks. This assessment is based on the three dimensions of *feasibility*, *viability*, and *desirability*. These checks are intended to facilitate reaching an agreement on what is not a feasible, viable, and desirable way to proceed. This opens the door to discussing “realistic” but diverse imaginations.

As discussed for health and education, datafication, digitization, and algorithmization further complicate the picture. The evolution from governance through standards to the new perspectives opened by governing through data and digital traces emphasizes the need to revisit the theory of power and domination. There is the risk that these new quantification methods and the performative nature of data may further obscure the importance of democratic deliberation for defining shared social ends and the means to achieve them.

The sociologist Ota de Leonardis (2022) provides a thought-provoking analysis of these trends. By illustrating the effects of quantifying poverty and framing it in terms of a threshold issue, de Leonardis highlights the symbolic and semantic shifts through which inequalities progressively lose their contextual significance and their connection to power dynamics among individuals of varying social standing, ultimately being reduced to a mere measure of separation. Distance, she explains, is no longer a social tie.

Numbers are a form of language that participates in creating “visions”: they are used to tell stories. Through the language of measurable standards, normalizing liberalism promotes stories that empty “boundary struggles” (Fraser 2016) of their moral and political content. The conflicts no longer revolve around the reconfiguration of power structures and dynamics and their legitimacy. Instead, they are now technical disputes centered on numbers, thresholds, and quotas: they deal with variations between different positions, leaving the question of the different natures of the power relations behind those positions unaddressed. Social problems are there to be managed, not solved. Standardizing liberalism thus reveals its most troubling face. According to de Leonardis (2022: 157) this can be summarized as “[...] the dream of a power that dominates by pretending to be both cognitively and morally indifferent”.

Cross References

- Agrofood Dynamics in the Turn of the Century in the Light of Convention Theory (Allaire)
- Approaches to Ecological Problems in Convention Theory: How Legitimate Is Environmentalism? (Plumecoq)
- Art Worlds, Valuation, and Convention Theory (Urrutiaguer)
- Convention Theory and the Governance of Global Value Chains (Ponte)
- Convention Theory and Sociologies in Education: A Constructive and Reflexive Dialogue to Renew the Critique of Neoliberalism and Its Extension (Normand)
- E-Health and the Digitization of Health (Kappler)
- Ecological and Sustainability Voluntary Standards (Cheyns)
- Education and Conventions (Imdorf and Leemann)
- Green justification and environmental movements (Centemeri)
- Health, Conventions, and Society (Batifoulier)
- Justifying the Elephant in the Growth Machine: Urban and Planning Theory Understood Through Convention Theory (Holden)

Laura Centemeri and Carlotta Mozzana, forthcoming, « Standards and the transformations of modes of governing. Perspectives from Convention Theory». In: Diaz Bone R., de Larquier G. (eds), *Handbook of Economics and Sociology of Conventions*. Springer, Cham.

- Laurent Thévenot's Sociology of Regimes of Engagement and Grammars of Commonality (Hansen)
- Socio-economics of Quantification and Value: The Perspective of Convention Theory (Henneguelle)
- Sustainable Urbanism. Green Engagements and Compromised Conventions in the Twenty-First Century (Blok)
- The Genesis of Economics and Sociology of Conventions at the Turn of the 1970s and 1980s (Amossé)
- The Industrialization of Healthcare and Its Critiques (Da Silva)
- The Pragmatic and Democratic Approach to State as a Convention Between Persons (Salais)

References

- Auray, Nicolas. 2011. Les technologies de l'information et le régime exploratoire. In *La serendipité dans les arts, les sciences et la décision*, ed. Pèk Van Anandel and Danièle Boursier, 329-343. Paris: Editions Hermann.
- Bartl, Walter, Christian Papilloud, and Audrey Terracher-Lipinski. 2019. Governing by numbers. Key indicators and the politics of expectations. An introduction. *Historical Social Research* 44(2):7-43.
- Batifoulier, Philippe, François Eymard-Duvernay, and Olivier Favereau. 2007. État social et assurance maladie. Une approche par l'économie des conventions. *Économie appliquée* 60(1): 203-229.
- Batifoulier, Philippe, Nicolas Da Silva, and Jean-Paul Domin. 2018. *Économie de la santé*. Paris: Armand Colin.
- Batifoulier, Philippe, and Rainer Diaz-Bone. 2021. Perspectives on the economics and sociology of health. Contributions from the institutionalist approach of economics of convention – an introduction. *Historical Social Research* 46(1): 7-34.
- Boltanski, Luc, and Ève Chiapello. 2005. *The new spirit of capitalism*. London: Verso.
- Boltanski, Luc, and Laurent Thévenot. 2006. *On justification. Economies of worth*. Princeton: Princeton University Press.
- Bowker, Geoffrey, and Susan Leigh Star. 1999. *Sorting things out. Classification and its consequences*. Cambridge: MIT Press.
- Breviglieri, Marc. 2012. L'espace habité que réclame l'assurance intime de pouvoir. *Études Ricoeuriennes* 3(1): 34-52.
- 2018a. L'affadissement des villes méditerranéennes et la désacralisation de la figure de l'hôte. *SociologieS* [on line], Dossiers, HospitalitéS. L'urgence politique et l'appauvrissement des concepts. <http://journals.openedition.org/sociologies/6821>
- 2018b. The guaranteed city. The ruin of urban criticism? In *Challenges of communication in a context of crisis: Troubles, misunderstandings and discords*, ed. José M. Resende, Alexandre Martins, Marc Breviglieri, and Catarina Delaunay, 206-249. Cambridge, UK: Cambridge Scholars Publishing.
- Breviglieri, Marc, and Joan Stavo-Debaugé. 2006. Sous les conventions. Accompagnement social à l'insertion: entre sollicitude et sollicitation. In *L'économie des conventions, méthodes et résultats. Vol. II Développements*, ed. François Eymard-Duvernay, 129-144. Paris: La Découverte.
- Bruno, Isabelle, Emmanuel Didier, and Tommaso Vitale. 2014. Statactivism. Forms of action between disclosure and affirmation. *Partecipazione & Conflitto* 7(2): 198-220.

Laura Centemeri and Carlotta Mozzana, forthcoming, « Standards and the transformations of modes of governing. Perspectives from Convention Theory». In: Diaz Bone R., de Larquier G. (eds), *Handbook of Economics and Sociology of Conventions*. Springer, Cham.

- Busch, Lawrence. 2010. Standards, law, and governance. *Journal of Rural Social Sciences* 25(3): 56-78.
- 2011. *Standards. Recipes for reality*. Cambridge: MIT Press.
- Centemeri, Laura. 2015. Reframing problems of incommensurability in environmental conflicts through pragmatic sociology. From value pluralism to the plurality of modes of engagement with the environment. *Environmental Values* 24 (3): 299–320.
- 2018. Commons and the new environmentalism of everyday life. Alternative value practices and multispecies commoning in the permaculture movement. *Rassegna Italiana di Sociologia* 64 (2): 289-313.
- Chateauraynaud, Francis, and Josquin Debaz. 2017. *Aux bords de l'irréversible. Sociologie pragmatique des transformations*. Paris: Editions Petra.
- Cheyns, Emmanuelle, and Stefano Ponte. 2019. Convention theory in Anglophone agri-food studies. In: *Ecology, capitalism and the new agricultural economy. The second great transformation*, ed. Allaire Gilles and Daviron Benoit, 71-94. Abingdon: Routledge.
- Conein, Bernard, and Laurent Thévenot, ed. 1997. *Cognition et information en société*. Paris: Editions de l'EHESS.
- Da Silva, Nicolas. 2021. The industrialization of “liberal” medicine in France. A labor quality conventions approach. *Historical Social Research* 46 (1): 85–111.
- De Certeau, Michel. 1984. *Practice of Everyday Life*. Berkeley and London: University of California Press.
- De Leonardis, Ota. 2022. Quantifying inequality. From contentious politics to the dream of an indifferent power. In *The new politics of numbers*, ed. Andrea Mennicken and Robert Salais, 135-168. Cham: Palgrave Macmillan.
- Desrosières, Alain. 2014. *Prouver et gouverner. Une analyse politique des statistiques publiques*. Paris: La Découverte.
- Diaz-Bone, Rainer. 2016. Convention theory, classification and quantification. *Historical Social Research / Historische Sozialforschung* 41(2): 48–71.
- Eymard-Duvernay, François. 1989. Conventions de qualité et formes de coordination. *Revue Economique* 40(2): 329–359.
- Ferretti, Federico. 2023. Geography, pluriverse and «Southern thought». Engaging with decoloniality from the Mediterranean. *Political Geography* 107. <https://doi.org/10.1016/j.polgeo.2023.102990>.
- Fraser, Nancy. 2016. Contradictions of capital and care. *New Left Review* 100: 99–117.
- Jeamet, Alexis. 2021. La part gratuite du travail des infirmières hospitalières menacée par la taylorisation du soin. *Nouvelle Revue de Psychosociologie* 32(2): 71–84.
- Lafaye, Claudette, and Laurent Thévenot. 2017. An ecological justification? Conflicts in the development of nature. In *Justification, evaluation and critique in the study of organizations*, ed. Charlotte Cloutier, Jean-Pascal Gond, 273-300. Bingley: Emerald.
- Lampland, Martha, and Susan Leigh Star, eds. 2009. *Standards and their stories. How quantifying, classifying, and formalizing practices shape everyday life*. Ithaca: Cornell University Press.
- Landri, Paolo. 2018. *Digital governance of education. Technology, standards and Europeanization of education*. London: Bloomsbury Publishing.
- Latour, Bruno. 2008. To modernize or to ecologize? That's the question. In *Remaking reality. Nature at the millenium*, ed. Noel Castree and Bruce Willems-Braun, 221-242. , London: Routledge.

Laura Centemeri and Carlotta Mozzana, forthcoming, « Standards and the transformations of modes of governing. Perspectives from Convention Theory». In: Diaz Bone R., de Larquier G. (eds), *Handbook of Economics and Sociology of Conventions*. Springer, Cham.

- Loconto, Allison, John V. Stone, and Lawrence Busch. 2012. Tripartite standards regime. In *The Wiley-Blackwell encyclopedia of globalization*, George Ritzer (ed.). <https://doi.org/10.1002/9780470670590.wbeog919>
- Mennicken, Andrea, and Robert Salais. 2022. *The new politics of numbers*. Cham: Palgrave Macmillan.
- Mol, Annemarie. 2008. *The logic of care. Health and the problem of patient choice*. Abingdon: Routledge.
- Normand, Romuald. 2016. *The changing epistemic governance of European education. The fabrication of the Homo Academicus Europeanus?* Dordrecht: Springer.
- Pattaroni, Luca. 2005. Le *care* est-il institutionnalisable? Quand la "politique du *care*" émousse son éthique. In *Le souci des autres*, ed. Patricia Paperman and Sandra Lauger, 177-200. Paris: Editions de l'EHESS.
- 2015. Difference and the common of the city. The metamorphosis of the “political” from the urban struggles of the 1970s to the contemporary urban order. In *The making of the common in social relations*, ed. Alexandre Martins and José M. Resende, 141–172. Cambridge: Cambridge Scholars Publishing.
- Pellizzoni, Luigi. 2016. Catching up with things? Environmental sociology and the material turn in social theory. *Environmental Sociology* 2(4): 312–321.
- Piraud, Mischa and Luca Pattaroni. 2018. Urban misunderstandings of the art worlds. Spatial politics of the creative city. In *The challenges of communication in a context of crisis. Troubles, misunderstandings and discords*, ed. José Resende, Alexandre Martins, Marc Breviglieri, and Catarina Delaunay, 178-199. Newcastle: Cambridge Scholars Publishing.
- Publications Office of the European Union. 2017. *Open method of coordination*. <https://eur-lex.europa.eu/EN/legal-content/glossary/open-method-of-coordination.html>. Accessed July 17th, 2024.
- Salais, Robert. 2008. Conventions de travail, mondes de production et institutions: un parcours de recherche. *L'Homme et la Société* 170/171(4–1):151–174.
- 2013. *Le viol d'Europe*. Paris: Presses Universitaires de France.
- 2019. Das Produkt: Objekt und/oder Ding? Neue Dimensionen einer Pragmatik der Konventionen. In: *Qualitätspolitik und Konventionen*, ed.. Robert Salais, Marcel Streng, Jakob Vogel, 343-401. Springer VS, Wiesbaden. https://doi.org/10.1007/978-3-658-26643-1_13
- 2022. “La donnée n’est pas un donné”. Statistics, quantification and democratic choice. In *The new politics of numbers*, ed. Andrea Mennicken and Robert Salais, 379–416. Cham.: Palgrave Macmillan.
- Saltelli, Andrea, and Mario Giampietro. 2017. What is wrong with evidence based policy, and how can it be improved? *Futures* 91: 62–71. <https://doi.org/10.1016/j.futures.2016.11.012>.
- Silva-Castañeda, Laura. 2012. A forest of evidence. Third-party certification and multiple forms of proof. A case study of oil palm plantations in Indonesia. *Agriculture and Human Values* 29(3): 361–370.
- Slota, Stephen C., and Geoffrey C. Bowker. 2017. How infrastructures matter. In *The handbook of science and technology studies*, ed. Ulrike Felt, Rayvon Fouché, Clark A. Miller, and Laurel Smith-Doerr, 529-554. Cambridge: MIT Press.
- Star, Susan Leigh. 1991. Power, Technologies and the Phenomenology of Standards: On Being Allergic to Onions. In *A sociology of monsters? Power, technology and the modern world*, ed. John Law, 26-56. London: Routledge.

Laura Centemeri and Carlotta Mozzana, forthcoming, « Standards and the transformations of modes of governing. Perspectives from Convention Theory». In: Diaz Bone R., de Larquier G. (eds), *Handbook of Economics and Sociology of Conventions*. Springer, Cham.

- Storper, Michael, and Robert Salais. 1997. *Worlds of production. The action frameworks of the economy*. Cambridge: Harvard University Press.
- Streckeisen, Peter. 2021. Medicine and economic knowledge. The relevance of career in the study of transformations in the healthcare system. *Historical Social Research* 46(1): 112-135.
- Supiot, Alain. 2017. *Governance by numbers. The making of a legal model of allegiance*. Oxford: Bloomsbury Publishing.
- Thévenot, Laurent. 1997. Un gouvernement par les normes. Pratiques et politiques des formats d'information. In *Cognition et information en société*, ed. Bernard Conein, and Laurent Thévenot, 205-241. Paris: Editions de l'EHESS.
- 2009. Postscript to the Special Issue: Governing Life by Standards. A View from Engagements. *Social Studies of Science* 39(5): 793–813.
- 2010. Autorita e poteri alla prova della critica. L'oppressione del governo orientato all'obiettivo. *Rassegna Italiana di Sociologia* 4: 627–652.
- 2015. Certifying the world. Power infrastructures and practices in economies of conventional forms. In *Re-imagining economic sociology*, ed. Patrik Aspers and Nigel Dodd, 195–223. Oxford: Oxford University Press.
- 2019. Measure for measure: Politics of quantifying individuals to govern them. *Historical Social Research* 44(2):44–76.
- 2022. A new calculable global world in the making. Governing through transnational certification standards. In *The new politics of numbers*, ed. Andrea Mennicken and Robert Salais, 197–252. Cham: Palgrave Macmillan.
- Timmermans, Stefan, and Steven Epstein. 2010. A world of standards but not a standard world. Toward a sociology of standards and standardization. *Annual Review of Sociology* 36(1): 69–89.