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Worlds apart? On Niklas Luhmann and the sociology of education

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Abstract
In an effort to address the relationship between globalisation, education and Niklas Luhmann's branch of systems theory, we present his essay, published here for the first time in English translation, 'Education: Forming the life course', next to the nine contributions that compose this special issue and build on this and his other writings to take up the theme of education in world society. To conclude, we underline that systems theory's emphasis on functional differentiation helps to address two lacunae in the today prevailing sociological practice. By positing the development of self-referential domains as modernity's central mode of differentiation, it provides sociology with a comprehensive theory of world society. By the same token, it also allows one to observe education as a global affair with, so to speak, a life of its own.

Keywords
Niklas Luhmann, globalisation, social theory, functional differentiation, lifelong learning, medium/form

Introduction

For scholars of education, Niklas Luhmann hardly ranks among the household names of contemporary social theory. To this day, his sociological systems theory does not enjoy (or suffer) the same popularity as Pierre Bourdieu's theory of social fields or Michel Foucault's genealogical study of power. Truth be told, even sociologists might secretly have to admit a rather limited acquaintance with Luhmann's work. His oeuvre is hardly taught in universities beyond Germany

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and rarely mobilized in research. In sociology of education, only a handful of scholars, some of whom are contributors to the current special issue, have genuinely engaged with the theory. To a large extent, this state of affairs can be attributed to the theory itself: it certainly is demanding, complex and does not resemble anything sociologists are used to reading. Those who have patiently undertaken the study of this oeuvre are, however, bound to appreciate its precision, intellectual rigour and many counter-intuitive viewpoints. When moving from one of his many books to the next, and from one of his innumerable articles to another, tenacious readers will soon recognize the remarkable unity and cumulativity of his prolific work.

In an effort to foster further engagement with Luhmann's distinct brand of systems theory and to thus address the growing rift between sociological theory and educational sociology, we present an essay by Luhmann, published here for the first time in English translation, 'Education: forming the life course', next to the nine contributions that compose this special issue and build on this and his other writings to take up the theme of education in world society. As readers of these pages will see, Luhmann's perspective carries a certain disruptive potential for the field of education research. Often-repeated dirges about how education is (mal)governed, corrupted by the economic imperatives of neoliberalism or generally lacks proper autonomy find little support in his systems theory. As such, his writings not only fill a persistent gap, but also challenge and counter the relentless repetition of many of the field's most established assumptions. Before letting Luhmann and the other contributors have their say, we offer some opening thoughts.

Worlds apart?

As is fairly well known, Luhmann had but one intellectual project: for over 30 years, until his death in 1998, he developed, with a rarely seen radicality, a theory of society that features a claim, still peculiarly bold today, to universality – a supertheory of 'everything social' (1995: xlvii). This aspiration finds perhaps its clearest expression in the simplicity with which he defined modern society, long before the globalisation debate broke loose, as a world society (Luhmann, 1971). No longer limited by states or territory, he considered that the now globe-spanning reach of communication had turned society into a single world society. It is important to note that his account of such a world society does not rest on any assumptions regarding its unity or integration. None of today's most pressing or fundamental problems converges within the confines of a single state or logic, still less can it be solved there: 'Should politicians leave the matter of the exploitation of resources completely to the market price mechanism? Should social selection be entirely left to pedagogists?' Luhmann hence provokingly asks, adding that it 'would be very difficult and possible only in a "recherche des temps perdu" (sic) mood, to go back to a world in which such a unity were possible' (Luhmann, 1982a: 240).

While he shared with the discipline's founders the ambition of elaborating a theory of society and although he too understood it as sociology's task to answer the question of how social order is possible, his systems theory refuses all traditional solutions to that question: 'generalised cultural values, political power, communicative rationality, and hermeneutic empathy' (Stephan Fuchs, in Luhmann, 1988: 23) – none of these usual suspects finds much clemency in his writings. Equally opposed to mono-causal accounts of society's modernisation (such as Max Weber's thesis of rationalisation, Karl Marx's materialist portrayal of capitalism or Emile Durkheim's organic solidarity), Luhmann seems to willingly forego such affirmative denominators that seek to grasp the very essence of modernity. Rather, modernity is said to denote an *absence*: central to his sociology is the incommensurability of the various domains (they might once have been called value spheres)

constituting society. His analysis depicts modern society as multiple (or polycontextural, to use a term he borrowed from Gotthard Günther) and its sociological observation as necessarily partial and paradoxical.

Hence, while sociological accounts of modern society regularly associate its current state and evolution with the development and primacy of a preponderant logic (most frequently the economy or politics), systems theory starts from a different – indeed opposite – premise. It opposes all views attributing modernity's specificity to a single ordering principle: to reduce, for example, modernity to (neoliberal) capitalism, or alternatively to characterise it by technological progress or an all-encompassing exercise of political domination, are claims whose common flaw, according to Luhmann (1995: 464–465), is to oversimplify and thus misunderstand modernity by reducing it to only one of its many facets. Luhmann's systems theory advances the following alternative: not the predominance but instead the lack of any predominant logic, and the ensuing functional differentiation of society into a multiplicity of highly specific logics – each with its own totalising claim to universality – establishes world society. What distinguishes this world society from earlier, pre-modern societal forms is its distinct mode of differentiation:

> The societies of our tradition had to build their own identity on a scheme of differentiation implying inequality, be it the inequality of city life and country life (citizens and farmers, center and periphery), or the inequality of social rank; i.e., the distinction between noblemen and commoners. This order required (in spite of admitted mobility for demographic or other reasons) a description that insisted on natural positions or fixed places. Knowing your nature would then mean: knowing where and in which family (and therefore: for what) you are born. [. . .] This world we have lost, and we lost it because the societal system changed its structural frame, its mode of differentiation. The primary mode of societal differentiation switched from center/periphery or rank differentiation to functional differentiation. Now functional systems are the same and different at the same time; the same because they follow the same imperative of functional autonomy and operational closure, and different because they serve different functions. (Luhmann, 1993: 489–490)

Our modern condition is summarised as the slightly anarchic and often conflictual coexistence of emergent functional logics that lacks any pre-established hierarchies – a predicament Luhmann portrays with a neologism borrowed from early cybernetics, 'heterarchy'. In that sense, as the above quotation emphasises, its component parts – the so-called function systems – are considered to be *equal*: science does not enjoy a higher or better view on society than art or the economy; neither is there any reason to believe that education is any less, or more, in control than law or politics. At the same time, such function systems are also *different* from one another in that each deploys its own, highly selective, view on the world and reconstructs that world internally according to its own logic. 'None of the functional systems can now claim a privileged position', Luhmann (1988: 27) therefore concludes, since 'each develops its own description of society according to the presumed priority of its own function'. Unlike the stratified separations of the past, the thus emerging functional differences no longer coincide with a given space or population. Functional systems know no physical boundaries: they do not contain a certain group of individuals, they do not end at this or that spatial frontier (Luhmann, 2008: 41). Systems theory's observation of modernity as functionally differentiated amounts therefore inevitably to a theory of globalisation (Luhmann, 1982b: 132; see also Teubner, 2012) – and as a *theory of functional differentiation* strongly differs from neo-institutionalist accounts of world society stressing its global convergences (e.g. Meyer, 2009).

That society no longer depends primarily on a hierarchical order to discriminate between spaces and people but instead relies on the processing of functional differences is a very foundational – and

maybe the most provocative – statement that systems theory makes about modernity. This is also where, for example, Bourdieu's and Luhmann's essential difference lies. In Bourdieu's work, functional differences remain subordinate to stratification: the autonomy of specialised domains (like the fields of education or art) is only partial, and their true purpose ultimately consists in offering so many battlefields in which to reproduce and legitimise society's hierarchical order (see, for example, Bourdieu, 1976). In contrast, for Luhmann, with the turn to modernity, functional differentiation replaces stratification as society's primary mode of differentiation; and while inequalities may persist and even escalate (Luhmann, 1997a), analytically they are relegated to being the (increasingly uncontrolled) side-effects of autonomously operating systems, in particular education and the economy.

Perhaps because of its long-established reliance on the French post-structuralism of Bourdieu or Foucault, contemporary sociology of education does not readily concede much autonomy to its object of study. The subdiscipline seems mostly geared towards the opposite direction, emphasising how various (economic, political, cultural) instances intrude and shape education in and across distinct national contexts. Indeed, today's mainstream sociology of education starts from premises far remote from systems theory. It often understands education as resulting from non-educational forces, placed thus under external control: governmentality, stratification by means of economic and cultural capital, symbolic violence. The resulting paradox is then the following: most sociology of education has little or no consideration for education as an autonomous domain. Instead, it describes education as shaped, or even corrupted, by non-educational instances, and sees it as its main purpose to debunk and denounce such colonisation: by the upper-middle class, by the market and private interests, but equally by political decision-making, by the neurosciences or the burgeoning EdTech industry. The list seems endless.

Outside mainstream sociology of education, pedagogical science for its part often takes an opposite stance. It assumes that education can successfully resist or even transform society, and sees it as its task to explain how. While differing in several respects, such sociology and pedagogy share an understanding of the relationship between education and society that opposes and subordinates one to the other. Assuming the primacy of society over education, or vice versa, neither of the two positions seems capable of acknowledging education as a self-standing phenomenon – a self-differentiated system – *within* modern society. To observe *education as a system* requires one to adopt a particular perspective that replaces causal and linear approaches to social phenomena with a more complex, circular and paradoxical perspective. Instead of 'A causes B', systems theory therefore suggests observing how 'A causes A', how systems emerge and result from their own operations. While systems theory offers different conceptual possibilities for dealing with the emergence and expansion of function systems, in his article for this current journal issue, Luhmann chooses to start with a particular problem: that of the medium that the education system uses.

Forming the life course

Initially published in German in 1997 as a chapter in *Bildung und Weiterbildung im Erziehungssystem* (Luhmann, 1997b) and now for the first time available in English translation, the text presents a double interest in the context of this special issue. Empirically, it does not limit itself to schools and higher education but takes note of the continuous expansion of lifelong learning, as well as various other educational settings (including kindergartens, vocational training or even 'educational travel'). Theoretically, the text assigns itself the task of exploring what makes for the unity of this apparent 'conglomerate' and how education thus nonetheless comes about as a single system (*cf.* Luhmann, 2002, 2004; Baraldi and Corsi, 2017). It draws on the concept of medium as a means to achieve its ambition. This goal itself takes part in the broader enterprise of describing how modern

society develops and becomes global thanks to its functional differentiation. This is how Luhmann spells out the relationship between those aspirations in this text:

> Only with the functional differentiation of societal subsystems and their particular media does the dynamic develop that characterises modern society, a dynamic of expansion through restriction, of the development of complexity through the reduction of complexity, and, above all a dynamic of reproducing media through continuous changes to the forms it permits.

Luhmann, and for that matter Talcott Parsons before him, noted how the differentiation of each function system in the 17th and 18th centuries originated in the rise of a specific medium. Function systems each emerge and expand thanks to the exploitation of their particular medium. The above quotation's description of modern society's dynamic as one 'of expansion through restriction' rests on the two key attributes that characterise a medium: they offer a very specific (hence restricted) yet universal (and thus expandable) way of dealing with the world.

Playing with the untranslatable difference between *Bildung* and *Erziehung* – (self-)edification versus formal education comes close – Luhmann's text aims to explain not only the emergence of school education, but also the development of adult education and lifelong learning by exploring the common medium thanks to which they grew and expanded into a global system of education. In his search for education's medium, Luhmann found a first, provisional, answer in Philippe Ariès' (1960) controversial work on the history of family life. With the modern invention of the child come indeed a number of new possibilities for the expansion of education, in particular through intentional systematic education in schools and home education in families. Childhood became, so to speak, education's quasi-exclusive territory.

Well aware of education's increasing expansion across the entire lifespan, Luhmann starts his argumentation with the following problem: what makes the 'unity of the difference', to use a quasi-Hegelian expression he favoured, between the education of children in schools and the lifelong learning processes that more and more adults become enrolled in? While seeking an answer to that question, Luhmann points towards the emergence of the novel in the 17th century and the more recent development of the mass media in the 20th century (on this topic, see also Corsi in this issue). He takes the emergence of the novel as one of the many upheavals characterising the turn from premodernity to modern times. The novel reveals a fundamental change in how society conceives of individual lives. Novels do not tell true stories, nor do they narrate, as in the old model, 'the "fate" that the hero cannot escape'. The novel communicates and makes socially plausible the idea that one's life could be(come) different: thanks to novels, 'the reader is confronted with live models and experiences that could be his own' (Luhmann, 2000: 122). As Gustave Flaubert skilfully narrates in his *Madame Bovary*, by losing herself in the reading of novels the heroine ends up with an unsurmountable distance between the tedium of her daily life and the much more exciting lives of the fictional characters she envies. The novel allows her to examine her own life from the outside, as it were. Her own life course becomes visible through comparison with the (fictional, yet plausible) lives that others live and that disclose how she could have lived, if she were not trapped in her own present.[1]

In the course of the 20th century, Luhmann's argument continues, the mass media played a similar role and even accentuated the modern tendency to observe one's own life course from such a second-order perspective, at the expense of a more immediate experience. The mass media put forward 'a world of images that throws strong light day by day on what we are not and what we do not have.' Direct involvement with the present becomes supplemented, if not displaced, by how the mass media construct reality and thus undermine the authority of our own experience. Through the mass media, 'we grow accustomed to reality being conveyed as information', Luhmann writes.

And, as he added elsewhere, information is a profoundly ambivalent matter: 'Like the sacred of old, information has a benign and a frightening side. It helps – and it troubles' at the same time (Luhmann, 2005: 28; our translation). Information 'provides connectivity options, but in so doing – on the other side, the "unmarked space" of its form – it always renews the background knowledge that there are other possibilities too' (Luhmann, 2013a: 311–312). What is can now constantly be confronted with what could have been. But we do not have the time or the resources to become all that we could become or acquire all that we could acquire. This all too familiar hiatus gives rise to the particularly modern phenomenon that leads one to constantly see one's own life course 'against the backdrop of an inexhaustible number of possible combinations'.

   Once one's future is no longer prearranged by one's birth, once alternative models to lead one's life are made available, its course becomes perceived as amenable to revisions – 'modellable', as it were – and subject to change. In Luhmann's account, this evolution has led to the emergence of the *life course* as a *medium*. Education, for its part, is said to exploit this medium by asserting itself as the proven means to handle the resulting openness of the future. It fashions its purposes as providing individuals with knowledge, skills or competences, while continuously reviving the expectation that lives can be lived and evolve uncoupled from the limits of their social origin. Education – the unapologetic thesis of Luhmann's article can thus be summarised – appropriates the life course for its own expansion as lifelong learning. This medium – the now newly conceivable notion that one's life can take various courses – is presented as the most fundamental condition of possibility for the 'system-atisation' of education over our entire life courses. Much akin to the invention of the child, the modern understanding of our individual fate as endlessly rewritable narratives is depicted as the mechanism that creates the necessary space for education to exist in. Here again, one may note in passing the stark contrast between Luhmann's own perspective and most sociology of education. While he sets out to explain the new expectation to shape an open future as education's main condition of possibility, such sociology as a rule understands its task as verifying whether education succeeds in keeping its promises.

   In conclusion, it is worth pointing out that this evolution comes together with a profound, more ample transformation of the way time is socially conceived (*cf.* Decuypere and Vanden Broeck, 2020). Modernity does not just promise to uncouple one's origin from one's future, it also assumes that 'society's future will be different from its past' (Luhmann, 2013b: 152; see also Luhmann and Schorr, 2000: 68). Precisely this orientation to future change opens up the possibility of developing an intention to change the present, whether through political projects, scientific research plans or, indeed, pedagogical intervention. In Luhmann's perspective, the intention to change people's life courses by educating them, thus detaching their past from their future, is what makes education recognisable as an activity distinct from all others. It constitutes the problem of reference that symbolises the unity of educational efforts in all shapes and forms.[2]

The contributions

It will come as no surprise that several contributions to the current special issue thematise and build on the notion of an intention to educate. Systems theory, it is worth noticing, has given a great deal of consideration to the paradoxical nature of intentions, even beyond the domain of education. Intentions seem entangled in strange loops: once put into the world, their very presence induces reactions which escape their control, and might even lead to their own disappointment. Luhmann repeatedly drew attention to the paradox that the formulation of an intention necessarily unveils not only its pursued goal, but also (and simultaneously) its very existence as such. Observers can then react to the (communicated) goal and/or to the (simultaneously communicated) intention itself. Processes of this kind are at work across different societal spheres. In politics, they help explain

why steering regularly provokes unexpected reactions, impairing in this way its own success (Luhmann, 1997c, 2019). That education reforms frequently fail (Vanderstraeten, 1997) and always trigger undesired side-effects finds here a possible explanation too (Mangez and Vanden Broeck, 2021).

In the classroom as well, when the intention to change people is communicated, it can turn against itself: 'the person who is expected to become educated acquires the freedom to travel some distance or to seek and find "other possibilities" ' (Luhmann, 1995: 244). Pupils in schools necessarily know that they are being observed and involved in a system which aims at transforming them. They might attempt to game the observers, contest their authority or perhaps decide to follow their instruction. Whatever they do, however, it cannot be considered an intentional effect but results instead from how intentions are processed by their addressees. The latter might accept or even feel motivated by this situation. However, even that cannot hide from sight the fact that intentions cannot secure their own success without relying on processes that they trigger but cannot control. Education, therefore, cannot mean that learners are the product of the activities of those intending to transform them (Vanderstraeten and Biesta, 2006: 160). Instead, as Peter Fuchs puts it, education 'stimulates movements of detachment, non-acceptance, refusal; by doing what it does, it creates an area that is no longer within its control' (2006: 395; our translation) and becomes dependent upon the external cooperation of its audience. **Raf Vanderstraeten**'s article in the current issue elaborates on this point while building on a series of earlier contributions (see notably Vanderstraeten 2001, 2004, 2010). Socialisation, Vanderstraeten reminds us, is the more or less continuous, non-intentional and often unnoticed process during which one learns from one's experiences. Education, in contrast, because it results from an intention, is necessarily recognisable as such by all those involved in it. Whenever it takes place, it inevitably differentiates itself from the rest of society. And yet, paradoxically, its very function consists in preparing for that very society: it must thus prepare for what it is not. Building on these considerations, Vanderstraeten emphasises that education might contribute not so much to social integration but rather its opposite: one may therefore wonder whether education should not be considered dysfunctional. Especially when compared with mere socialisation, which remains unnoticed and occurs unintentionally, education seems to create a distance and to increase, rather than decrease, the gap between individuals and society.

Such a lack of control reveals a deeper problem, which Luhmann and Schorr have labelled education's technological deficit. With this unusual formulation, they indicate that education lacks the 'technology' to actually change people intentionally. Education pursues goals that lie beyond the purview of its own operations: being a social process, education operates by means of communications; but the learners' inner worlds (their consciousness) that education targets have and keep their own operative autonomy. Systems theory considers communication and consciousness as two strictly distinct systems, each constituting the other's environment. Both communication and thought – social and psychic systems – are understood as leading a life of their own and as reacting in a highly selective fashion to the changes they observe in their respective environments. At first sight, one might regard such a deficit as a problem or even an obstruction to education. In a sense, this would not be entirely wrong: it does exclude any possibility of intersubjectivity. Education indeed faces a paradoxical injunction: lacking the means of its ambitions, it must do something that it cannot do. As often, however, systems theory turns things around and suggests seeing this deficit not so much as an obstacle but rather as that which prompts the formation of education as a system: because it lacks a proper technology, education must find 'systematic' ways of turning its intention into reality. In this way, education's technological deficit acquires the status of a foundational paradox, instrumental to the formation of education as a system.

Similarly, **Giancarlo Corsi** explains in this issue, the autonomy of the child turns out to be 'not an effect of education', as pedagogy would like to believe, but a 'necessary condition for education to be possible'. Starting from there, his contribution takes a closer look at the life course and suggests that there is another, even broader phenomenon underlying it. In modern society we are all expected to live our lives as careers, as a constantly evaluated series of events, thresholds and turning points that result from the decisions we make, or that others decide for us. The notion of a career sums up in a nutshell how modern individuality results from the projection of an individual destiny, either in the proverbial making of a career for oneself or when, on the contrary, life takes a negative turn: 'Whatever decision is made, it can be observed, and it contributes to the formation of the person's social identity' (Corsi, 1999: 173). Modern individuality amounts to both the intentional and the accidental writing of such individual biographies. The question is then how education's refashioning and appropriation of that career as a life course relates to this state of affairs. How to educate for a world where the relationship between society and individual is summarised as a career, as a continuous projection of changing possibilities? Moreover, as Corsi underlines, such appropriation of the career is hardly exclusive to education but occurs in other functional domains as well. Today's mass media and economy in particular display a myriad of potential aspirations and possibilities to reshape one's career, raising the question of how their offer competes with education's projected life course and how we all can cope with this competition: whose life is it then ultimately?

The contribution by **Marcus Emmerich** goes back to David Lockwood's (1964) milestone distinction between system integration and social integration to examine how it plays out in systems theory. It deals with a delicate issue: how does systems theory account for social and educational inequalities? While Luhmann's key argument that functional differentiation has replaced stratification as society's primary mode of differentiation does not refute the persistence of social inequalities, it does indicate that they no longer operate as that which makes social order possible and instead rather regards them as a mere by-product or side-effect of educational and economic activity. Emmerich's contribution elaborates an alternative perspective, offering a very erudite discussion that combines Weber's notion of social closure with Luhmann's understanding of operational closure. Stepping beyond Luhmann's own work, he then makes the case that in education social closure makes operational closure possible, and thus allows for the very formation of (school) education as an autopoietic system. While the paper clearly builds its own very distinct path, its conclusions end up not too distant from Corsi's (1996) assertion that education (instruction) and selection constitute two sides of the same coin.

In his contribution, **Thomas Kurtz** illustrates how the sociological observation of education differs from the way the educational sciences approach their object. By means of three introductory considerations, he elaborates on this disciplinary distinction as a difference between internal and external perspectives. The latter difference does not wish to assign a better vantage point to either discipline: even when sociology seeks a more distanced perspective, Kurtz underlines, that does not necessarily produce more objective truths. Conversely, the closer link that educational research maintains with its object does not per se generate more accurate knowledge. In contrast to pedagogical studies, a sociological account of education does not need to seek any follow-up within the educational system, Kurtz argues, in continuation of Luhmann. Sociology does not need to participate in the relentless quest for better education and herein lies the true difference between the two disciplines. What sociology lacks in 'helpfulness', it should however compensate for with counterintuitive findings, and Kurtz clarifies how systems theory attempts to make good on this ambition, discussing education's boundaries, its inequalities and the function of the teaching profession.

In his contribution to the special issue, **Pieter Vanden Broeck** argues for observing education as a matter of form. While acknowledging how Luhmann's own reliance on the distinction between

medium and form has not always been unequivocal when applied to the domain of education, Vanden Broeck re-reads his oeuvre to flesh out a formal method that is suited to study education in and beyond school. Such an ambition starts from the observation that if mass schooling is to be understood as a historically contingent answer to education's pedagogical intention, as the realisation of an improbable solution to a general problem, then sociology can see its task as being to look at whether and how other solutions address that same problem (see also Vanden Broeck, 2020a, 2020b). Peering into the suddenly closer horizon of learning platforms, apps and algorithms, Vanden Broeck contends that an endeavour of this type would have to look out for the ways in which these new pedagogical forms attempt to establish education as a self-standing reality, maintain their boundary with the rest of society and seek to balance external demands against internal possibilities.

Whereas in this first series of contributions the stress falls on the theorisation of education and its relationship to society in the broad sense, the contributions that follow adopt another strategy. Their efforts encompass a stricter scope and take a closer look at the relationship that education maintains with the specific segment of its environment on which it 'leans' organisationally: policy-making. Picking up on recent evolutions in and outside the contemporary nation state, they investigate the close interplay between education and politics as two systems of today's world society.

Gita Steiner-Khamsi relies on systems theory to make sense of the growth of international student assessments and the rise of policy-oriented research knowledge. Perusing the research lines fostered by her and Jürgen Schriewer (1989), she reviews how the notion of externalisation has been fruitful in accounting for processes of global convergence between national policies. It is worth underlining here that externalisation, like the neighbouring and more general notion of asymmetrisation, points towards one of systems theory's most fundamental intuitions. As few others do, the notion seeks to make clear that the emperor wears no clothes: systems are nothing but arbitrary orders that, to come into being, need to hide their own arbitrariness; they need to obfuscate that whatever appears as necessary is nothing but a mere possibility. Externalisation, phrased in less prosaic and more technical terms, seeks to account for the stratagem by which systems that operate in a strictly self-referential fashion can nevertheless constitute and maintain themselves. It designates the process by which such closed systems break the circularity of pure self-referentiality and legitimise themselves by attributing meaning to their environment, outsourcing in this way, as it were, their own lack of necessity. In the same vein, Steiner-Khamsi observes how national education systems rely selectively on international large-scale student assessments as a means to mask their own lack of a stable ground. Her study suggests that the effects of such comparisons depend less on their intrinsic content than on how they are used and reconstructed by those they compare. Subsequently, she draws on Luhmann's understanding of so-called 'structural couplings' to emphasise how research evidence is no longer solely a matter of scientific interest, as it now acts as a policy tool in its own right. Through their structural coupling, the same given thus acquires different meanings and plays different roles in distinct systems, whether science or politics.

For several years now, Niels Åkerstrøm Andersen and his colleagues have developed a corpus of research, building on Luhmannian systems theory, with the purpose of elucidating a number of evolutions in the conduct of the welfare state. With a keen eye for so-called potentialisation techniques, they seek to demonstrate how the welfare state moves away from the mere execution of bureaucratic norms towards procedural, more reflexive policy-making that relies on the resources of local organisations and actors to achieve its own goals. This special issue includes two research papers that well represent this current. The contribution by **Åkerstrøm Andersen** and **Justine Pors** focuses on what others have summarised as the switch from teaching to learning and emphasises its implications for our understanding of what schools are today. In dialogue with previous research by Åkerstrøm Andersen, the authors show that, like several other welfare bodies, schools

increasingly take the shape of autonomous self-referential organisations deemed responsible for their own outcomes and processes. They show how the switch to learning operates as an evolution that encourages schools to mobilise an ever-greater range of means, educational and non-educational alike, in order to fulfil their new mission. In their own terms, this means that schools, as organisations, now mobilise a wider number of logics in their decision-making processes, and thus become increasingly 'polyphonic' and even 'heterophonic'. **Hanne Knudsen**'s contribution belongs to the same line of research. The 'worry conversation' that she analyses illustrates one such new welfare technology: worrisome pupils become the topic of conversation during meetings that gather a number of professionals from diverging fields with the purpose of exchanging their views and finding solutions beyond their respective discipline. The analysis suggests that the function of such meetings consists in loosening the initial coupling between the given case and a specific system, say education, and in further opening up new possibilities of framing the situation differently.

In the final contribution, **Petteri Hansen**, **Kirsten Sivesind** and **Rune Thostrup** experiment with the conceptual repertoire offered by systems theory to observe time. Their article exemplifies how time – either in the shape of past traditions or future expectations – can function as an alternative outsourcing strategy to legitimise the present, equivalent to the aforementioned externalisation techniques that employ geo-political differences. Concretely, their case study examines how a series of policy reports projects education's future. Their analysis shows how attributing particular meaning to the future, either as a locus for impending risk or for new potential, uses time itself as a resource to enable and make certain decisions probable. Investigating those future projections, they advocate for a new approach to comparative studies – one with a 'sensitivity to detect and elaborate on the different social distinctions through which the past, present and potential futures become socially constructed'.

Coda: pandemic education and world society

To conclude, let us return to the reasons behind this special issue and the inclusion of Luhmann's article. Systems theory's emphasis on functional differentiation helps to address two lacunae in today's prevailing sociological practice. By positing the development of self-referential domains as modernity's central mode of differentiation, it provides sociology with a comprehensive theory of world society. By the same token, it also allows one to observe education as a global affair with, so to speak, a life of its own. We chose to include Luhmann's text on 'Forming the life course' in this issue precisely because his writing investigates what made this lively dynamic possible. It shows how educational endeavours of all shapes and forms rely on the same fundamental condition of possibility: the modern understanding of individual life courses as an endlessly malleable substrate for new educational interventions. Their unity results from their common exploitation of that very medium.

When comparing how systems theory and more established sociological approaches analyse the domain of education, one may gain the impression of facing two inverted perspectives. Whereas the former emphasises education's autonomy, the latter often concentrate on heteronomous instances deemed capable of shaping education. While Luhmann's writings advance the expectation of changing people's life course as that which made education possible in the first place, mainstream sociology of education prefers to show that 'in the last instance' education often reproduces, rather than changes, social origins. Each perspective's own blind spots seem to operate as the other's privileged angle. The main lines of force of Bourdieu's theoretical approach, for example, were worked out without taking the dynamic of globalisation into consideration. His framework requires a relatively strong State to guarantee the existence of a unified market in cultural and

economic capital – a State with the power necessary to preserve certain domains of activity from subordination to external hierarchies such as that of the economic market (*cf.* Hilgers and Mangez, 2014). It comes hence as no surprise that when the topic of globalisation is explicitly addressed, either in his own polemical interventions or by those who follow in his footsteps, the absence of such a global safeguard is understood as driving a dynamic of (economic) usurpation, as a political project of disempowerment – and not, as Luhmann upholds, the hallmark of a societal development establishing new domain-specific forms of autonomy, *education included*. One of the greatest merits of Luhmann's enterprise, on the contrary, is precisely that he devoted himself from the outset to providing the theoretical tools to account for society as a global phenomenon. The two approaches also diverge in their observation of modern society's most fundamental characteristics: while systems theory understands the emergence of education in relation to functional differentiation, more established approaches often point to its role in reproducing stratification. The strengths of the one seem to reveal the weaknesses of the other. Could the sociology of education take advantage of both?

The current pandemic and its global effects on education might constitute an opportunity to reflect on such an endeavour. Observing education in this global crisis, everyone will easily acknowledge how the closing of schools has not brought education to a halt altogether but instead triggered its reconstitution through multiple new means. Learning platforms have flourished as never before. Deprived of its classrooms, education has expanded into homes and families. The crisis has also led to the emergence of private 'learning pods' or 'pandemic pods', to name only one example, supervised either by a hired private teacher or by parents taking turns (Zweig, 2020). Overall, the crisis has installed circumstances favourable to the involvement of new, often private actors looking for financial profit in the domain of education.

Many sociologists have underlined that this situation is likely to increase educational inequalities and even more so their correlations with social status. Once schools close, the effects of individual resources on educational achievement become all the more important. Alternatives, whether digital platforms or others, do not compensate but rather accentuate such problems, since they are far from equally accessible to all and impose their own requirements on their participants.

Observing with a systems theoretical lens, the many changes triggered by the crisis provide a chance to investigate and theorise how education has sought and found new solutions to its problem of reference. An important task here will consist in describing how such new solutions establish and maintain their boundaries. On what grounds do they include or exclude participants and what role do they assign them? How do they select and delimit what is worth (and not worth) learning? How do they assign meaning to past, present and future? It is not difficult to see that answers might vary greatly depending on whether one considers home schooling, with or without learning pods, or digital platforms. Sociology could see it as its task to compare and question these various forms against such criteria.

While the pandemic crisis has triggered dramatic changes in both education and its environment, it is certainly not the only factor likely to irritate education's historic school form. In Luhmann's account, modern society is depicted as an inexhaustible terrain for ever more, ever renewed uncertainty. Firm, self-evident answers have vanished and when new ones reappear, they offer more reason for suspicion than relief. Modernity seems characterised by the omnipresence of multiple, conflicting views on what could or should be done. In education too, the delimitations of what is deemed worth learning no longer hold firm. Whether entrepreneurship or citizenship, intimate relationships or software coding, new educational possibilities continuously appear while the normative certainties that shaped schools until even half a century ago have lost their self-evident character. It is no longer clear what to expect from a 'good' pupil or a 'good' teacher. Neither is it clear what role each of them should play; or what values a teacher should transmit or

even personally embody, as was the case in the past. Ultimately, it is even no longer clear nor self-evident what education should teach, or even whether it should teach at all (see Åkerstrøm Andersen and Pors in this issue). Pedagogical ideals and national curricula that normatively appreciated and canonised a specific body of knowledge have lost their legitimacy and their capability to put a limit on what is to be learned, by whom and when. Instead, as Luhmann and Schorr (1988) had indeed already noticed, learning became the dominant formula that organises education in a different, autonomous way. It is no longer limited by a clearly defined set of fundamental, normative ideals, but allowed to expand globally in all directions: in the temporal dimension, as lifelong learning; in the social dimension, as mass schooling; and in the material dimension, as the 'educationalisation' of all aspects of life. There seems to be no acceptable limit any longer to the list of possibilities with regard to whom, what, and when to educate.

To rephrase in the language of systems theory, we seem to have reached a stage where established systems now observe themselves and their own form as possible limitations to the realisation of their function. Observations of this sort have been made for law (King, 2000), politics (Willke, 2007) or the economy (Esposito, 2011). Well-established solutions, so it seems, now increasingly bring forth their own problems. Such an evolution calls for a renewed sociological perspective – which we have elsewhere labelled Mephistophelian (Mangez and Vanden Broeck 2020) – that would not (only) observe how systems solve their lack of necessity through externalisation to an outside world, but also how certain systems internalise their differences from that external world as productive self-contradictions in order to circumvent the limits of their finite form.

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Notes

1. René Girard's (1961) work on mimetic desire similarly shows how the novel provided readers with objects of desire, points of comparison and models to imitate.
2. For a more detailed presentation of Luhmann's evolving reflection on the unity of education, see Kurtz (2003).

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