(Article begins on next page)

The rats under the rug[*]

The morphogenesis of education in a global context

Pieter Vanden Broeck

Abstract: In this chapter, I shall focus on the boundary work that accompanies the formation of the education system. Drawing on Michel Serres's parasitology, I propose to rethink the differences of context between the household and school as interferences or perturbations of a system that undermine its normal or aspired-to operativity. The attempt to exclude such disturbance – the expulsion of the so-called parasite – should accordingly be considered the constitutive moment for the formation of the education system. On the basis of such characterization, I then turn to contemporary examples of transnational and digital education that eschew the classroom in favour of new formalizations that roam far beyond the national project of mass schooling. The global scope of such education, I will argue, hinges on their ability to successfully re-formalize education, thus dismissing the formal traits of classroom instruction.

Keywords: rationality – parasitology – embarrassment – global education – platforms – projects

I.   Introduction: Education, rationality, and its other side

Few themes are rooted as firmly in sociological tradition as the study of rationality. It forms the leitmotif of how sociologists examine a wide range of phenomena, stretching from the everyday practices by which we create social order up to the construction of scientific discovery. In large measure we owe this centrality to Max Weber, for whom rational action was the hallmark of modernity. As is well known, he pointed to rationality as the force that drove gods and unruly fate from our lives, along with unthoughtful traditions and the all too capricious realm of feelings, with its overpowering outbursts of passion or spontaneity. Instead, a calculating attitude is since said to prevail, intent on making the world more controllable and hence predictable. In Weber's account of our becoming modern, human action increasingly favoured such an instrumental orientation to the world, where the conditions for goal attainment are carefully weighed in terms of risks and resources. This rational outlook shrinks the world to a tool, or an impediment, for our purposes. When grasped in these terms, rationality obtains the shape of a script for actors, a programme to follow so as to optimize a course of action and maximize its hoped-for benefits. Weber thus laid the foundation for any sociology

---

that refers to rationality as a matter of acting *individuals*, either when modelling their singular behaviour as the utilitarian pursuit of self-interest (rational choice theory), when theorizing such voluntaristic effort as normatively organized (the early Talcott Parsons) or when labelling as rational the outcome of their intersubjective agreement (Jürgen Habermas).

Against such a view, or perhaps rather in an effort to venture beyond it, this chapter wagers that it might be more fruitful to consider rationality as a trait of *systems* instead of calculating actors. With this substitution, swapping the focus from purposeful humans to faceless systems, I wish to depict how education can be viewed as developing a rationale of its own, regardless of the human beings involved. As such, my contribution not only departs from the Weberian conception of rationality as a world orientation guiding the action of individuals. It also steps beyond his understanding of education as being subject to this instrumental orientation to the world. What follows will not portray an exogenous "rationalization of education*"*. By the latter expression, Weber (1946:240-244) sought to summarize how education participates in the spread of bureaucracy and is ultimately transformed by this "irresistibly expanding bureaucratization of all public and private relations of authority", a process he saw intruding into all questions of intimately cultural character. For Weber, the problem at hand was to describe the role education plays in the establishment of a society-spanning bureaucratic structure. My interest in rationality, on the other hand, is to describe how *a reason proper and specific to education* comes into being. In particular, I wish to address how such a *ratio* makes itself apparent when education is organized on a global scale, beyond the borders of nation states and classrooms. What is at stake in this chapter, is to uncover how new educational practices, taking place on a global scale from their outset, develop and how they relate to the school classroom. In Europe, EU governance has since years contributed to the 'projectification' of education via funding programmes with a global outreach. The ongoing pandemic has spurred face-to-face instruction to move from the classroom towards globally operating platforms. With the current chapter, I wish to place these two present-day developments, projectification and platformization, in an historical overview to highlight a dynamic that shapes their evolutionary path.

Taking cues from Niklas Luhmann's theoretical framework, I shall attribute such an educational rationality neither to knowledge, nor to knowing subjects or to other *idées fixes* stemming from Europe's philosophical tradition. Instead, with a recourse to second wave cybernetics, rationality will be redefined *as the ability of a system to observe and then orient itself by means of the difference between its own doing and that which such doing designates as foreign to its own operativity* (Luhmann 1977, 1998). In Luhmann's work, rationality refers to this particular probing capacity, the ability of *systems* to organize and reorganize their own operativity in light of the effects thereby brought about in the *environment*. His notion of rationality means to capture the strange feedback loops drawn by a system that seeks to control the effects it has on its environment, but that can only do so by means of the repercussions these effects have for its own working, as Elena Esposito (2021:191-193) summarizes. Being rational, to sum it up, has more to do with a game of blind man's buff than with the self-actualized certainty we commonly associate with the term: one gropes in the dark chasing the disorienting, often contradictory indications stemming from the outside world and alters course according to perceived changes, hoping not to break a leg.

What is gained from such a tottering, tentative rationality, is never a steady foothold, not even a temporary one. Luhmann's redefinition of rationality in terms of the difference between a system and its environment does not bring us back to a unitary world on which Reason can report with authority. Instead of such self-assurance come always adjustable distinctions, differences which are open to change and hence provide detachment from what initially appeared necessary and hence unalterable. I omit, for reasons of clarity and conciseness, much of the proto-mathematical technicalities that usually adorn the literature once arrived at this stage. The keyword "re-entry" can suffice here to guide interested readers towards more exhaustive theoretical discussions and explorations of its formal calculus (*cf.* Baecker, 2007). Instead, I wish to draw attention to the conceptual merits of such an abstract redefinition of rationality as the tentative boundary management that systems engage in vis-à-vis their environment.

A first, very evident advantage of approaching rationality as the aptitude of systems to handle purposefully the relationship between themselves and their environment, is that new, unsuspected sites of *ratio* appear in sight. Rationality is no longer a privilege of humans and their actions but becomes central to portray how the social world, including education, organizes and reorganizes itself. Transposing the above general and indeed overly abstract characterization to the topic of education, the question of rationality becomes one of maintaining and crossing the distinction between education and the rest of society – of *how education manages its boundaries*, in short. Education can then be observed as rational, whenever it attunes its own highly specific operativity of instruction (*system*) to the perceived demands or hoped-for outcomes occurring beyond its borders (*environment*). When education fashions itself as preparing the future professional life of its students, for example, by fine-tuning its pedagogical offer (*system*) to the estimated needs of the labour market (*environment*), such an attempt at self-rationalization becomes apparent. The same holds true whenever instruction (*system*) tries to attenuate the differences in upbringing (*environment*) among its pupils in order to guarantee them all an equally open future outside of school, unconditioned by their unequal starting position. Perhaps nowhere clearer than in its most elementary of intentions, namely the ambition to teach (*system*) so as to guide or to affect the learning processes pertaining to its addressees' invisible world of thought (*environment*), education can be described as the effort of establishing a *sui generis* rationality.

Secondly, redefining rationality as a characterization of how systems internally account for and respond to their outside environment has the benefit of pointing almost effortlessly towards the all too apparent difficulties to align one with the other. As the sociology of education likes to underline, school does not at all eliminate inequalities (one example standing for all: Bourdieu & Passeron, 1970), nor does school success safeguard future professional success (their canonical opposite: Boudon, 1974). Speaking of rationality should indeed not be taken to imply that society is thought to evolve or to be steerable towards preferable, more worthwhile outcomes. Luhmann's redefinition of rationality should not be mistaken as the recipe for such aspirations. On the contrary, his understanding of system rationality draws attention above all to the *deficits* of reason and the problems that arise whenever social activity develops in either wilful or forced disregard of its constitutive environment. As the endless strings of ecological catastrophes illustrate, society as a whole can hardly be described in terms

of reason. Our shifting climate exposes the evident difficulties modern society faces taking account of the natural world. "The undeniable, serious, future-threatening changes in the natural environment triggered by society itself are gradually becoming the rationality problem of this century" Luhmann (1988) had hence already noted at the end of the eighties, spelling out the impasse which contemporary society is grappling with: modernity "depends on a high indifference to its environment for its own operations, but can no longer afford precisely this."

Making rationality distinction-dependent, contingent upon how the distinction between a system and its environment is drawn, Luhmann reformulates and silently upturns the Weberian notion of rationality. His abstraction uncouples it from acting individuals and from the prospect of a society-wide bureaucratic structure. The result is not a lazy postmodern compromise, where everybody and everything enjoys its own rationality, but an attempt to articulate the resulting pluralism as the core of the modern experience. In modernity, runs Luhmann's analysis (1998:25, 38), rationality increasingly "shifts to high-energy rationalities that only cover partial phenomena, only orient society's functions systems." With the summary label of functional differentiation, he sought to spell out how the various spheres of social activity – such as education, politics, economy, law or science, next to, and perhaps surprisingly, love or art – become the true "operative dischargers of rationality in contemporary society." This reformulation or rather abstraction of goal rationality into system rationality does not necessarily lead to a rosier diagnosis than Weber's evocation of bureaucratic capitalism as an iron cage.[1] Luhmann's variation on this well-known theme lets it erupt into a multitude of domains, each with its own totalizing aspirations and without a common paradigm to reassemble them (Luhmann, 1991). The result, Luhmann notes, falling for a slight moment out of his typically subdued tone, is a society marked by "an excessively close connection between the rationality of the functional systems on the one hand and their fatal consequences on the other" (Luhmann, 1996:197). Much, if not all of Luhmann's work can be read through this prism, as a research programme that charts out these functional rationalities and their lack of integration.

But especially in his later years, his attention shifted increasingly to rationality's other side, zooming in on that which slips away through the cracks of reason. The intent or hope is not at all to thus come towards a tribunal of Reason, able to separate the wheat from the chaff, the reasonable from the unreasonable. Rather, the ambition is to portray rationality in more detail by including its always co-present opposite, acknowledging (rather than resolving) its inherent doubleness. What Luhmann aspires to, is hence to gain

> a more precise understanding of the 'other side of rationality,' one that could
> be characterized by the semantics of paradox, imaginary space, the blind spot

---

[1] Or perhaps more accurate: a shell hard as steel (*cf.* Baehr, 2001). Luhmann's (1996: 196) assessment of this Weberian imagery shows the direct lineage between the two oeuvres: "Max Weber had started this in a certain way when he spoke of value conflicts, life orders and tragic problems or of bureaucracy acting like a steel casing. Weber was himself involved in a pessimist assessment of rationality with the assumption that bureaucracy was also everywhere, in the press, in the parties, in all organisations. But this must of course be formulated differently at the end of this century than at the end of the previous century and hung on a much broader and also more abstract theoretical framework, that is the only possibility".

of all observations, the self-parasitizing parasite, chance or chaos, reentry or necessity, externalizing toward an 'unmarked state.' These are ideas that would gain their contours exclusively from precision, fixed by rationality, and that would finally lead to an indirect self-characterization of the rational (Luhmann, 1998:40).

The following pages will seek to build on this ambition to explore the Dionysian unruliness that is always tied in with the Apollonian search for order and logic. By focusing on how Luhmann depicts the relation between school education and its environment, they wish to elucidate how he understood the birth of modern education as accompanied by an exclusionary movement that sought to expel part of the environment, as if it were a pest or a parasite, and so to get rid of the rats hiding under the rug, so to speak. Speaking of educational rationality and its other side, to rephrase it slightly differently, is hence above all a matter of looking at how education constructs the difference between its own reality and the outside world – and thus of highlighting what such a construction shuts out, what it treats as unwanted. The underlying suspicion is that the movement of expulsion Luhmann observed in school education proves to be instructive for better grasping the *ratio* that currently shapes the globalization of education.

II.   School education and its context

Georg Simmel (1950:21) once compared sociology to geometry, noting how they share a primary interest in the formal traits of phenomena, often leaving the analysis of their content to other scientific disciplines. Either when observing interaction or inquiring into organizations, sociology indeed usually displays little interest in *what* is actually said among participants or *what* organizations precisely decide on. Rather, the stress falls on the *form* of these phenomena – on their role-taking procedures, for example, or the structure of their conflicts – and the thus emerging geometry of the social world. It should hence not surprise that systems theory too shows a particular interest in abstract forms, even if it operates along different conceptual oppositions. In what follows, I propose to explore how Luhmann's understanding of *context* can be brought into this equation. Both notions, form and context, will act as stand-ins for the more general terms already introduced, system and environment respectively. The goal is to transpose the dynamic between the two sides of this opposition to the historical emergence of school education and its context, thus laying bare how an educational rationality develops and at what cost. To that end, I shall first briefly overview how form has been understood by Luhmann in the domain of education, so as to underline subsequently how his varying use of the notion of context offers useful hints on how to grasp the relationship between education and its form of school.

In Luhmann's account, the uniquely modern emergence of multiple distinction-dependent rationalities is closely related to their reference to a highly specific problem for which they claim universal authority – a reification process Luhmann (1995:464–465) also

abridged as *hypostatization*. In contemporary society, finding solutions to the quandary of how to organize the scarcity of natural or human resources, for example, is thought of as the exclusive prerogative of the economy. Education, much like the economy and other major domains of social activity, similarly claims a monopoly for its own, highly specific reference problem. Many sociological accounts of what education does or aspires to do formulate education's problem in terms of individuals (the transmission of knowledge and skills) or their relationships (establishing normative consensus). The classical notion of socialization, then, serves to make such answers more probable. Luhmann made the infamous move to relocate humans outside of society, so as to highlight how the inner world of our individual thoughts strictly differs from the distinct logic of communication processes. As a result, his theory cannot be content with the answers commonly given by sociology to the question what education sets out to do. Luhmann painstakingly attempts to avoid the catch-all formulae, the "magic spells" (2002:48) provided by classical sociology. Education, so goes his tiptoeing around the all too human-centric formulations of mainstream sociology, deals with the predicament of how to increase the odds of mutual understanding (2002:81). Such a problem description starts from the hardly polemical given that what happens in our heads is fully untransparent to others and vice versa. How then to successfully imagine – imagine, *not* know or share: no philosophical (or any other sort of) mentalism is implied here – what others think when using words, representations, and other cultural schemes, becomes highly improbable in such a constellation.

School education can be described as the delegation of this problem of reference towards a different system type, an organization, which by its decision-making ability specifies, in always selective and hence contingent ways, what the pedagogical intention will amount to in the daily hustle and bustle of school life. Described in this way, school (as an organization) and education (as a function) do indeed *not* coincide. Luhmann's systems theory maintains a sharp distinction between function systems and organizations and considers such a difference characteristic for the complexity of modern society, preventing organizations from representing a function *in toto* or functions from being fully organized.

> In highly complex societies, none of the central functions of the societal system can be assumed by a unified organization – and today even less so than before. [...] The converse side of this impossibility of delegating major societal functions en bloc to single organizations is that such broad functions cannot be adequately mirrored or understood within the narrow limits of organizations. Neither the leeway for varying societal functions nor the conditions for the compatibility of their divergent ways of being fulfilled can be adequately expressed at the level of organizational goals and criteria (Luhmann 1982:81).

The school organization hence neither represents education's function exclusively or exhaustively, nor does education become 'organizable' as a whole. In this precise sense, it would be wrong, or at least short-sighted, to think of the relationship that Luhmann draws between education and school as a simple equation. For his systems theory unites the two in a functionalist manner, where the latter (school) is only a possible *solution* that emerged over the

course of history in order to tackle the problem raised by the former: how to educate, when such a question no longer finds a legitimate answer in the nature of its addressee but turns into a matter of decision-making, that is: of organisations?

School education can hence be theoretically reframed as this act of delegation, lending its instruction a very recognizable shape or form, as I have elaborated elsewhere (Vanden Broeck, 2021). When speaking of the form of school education the question is not a matter of its essential substance or identity, but of a horizon of possibilities that emerge with this delegation to an organization and the difference that is thus established with all other social activity. The question I wish to raise now, is how the distinction thus surfacing between school education and society can be understood in terms of their interrelationships.

In order to answer that question, I sketch below an exegetical summary that re-reads Luhmann's writings and stages it as if it were a classical drama (*cf.* Freytag 1900), in an effort to thus unearth the tragedy played out by the two protagonists, school and its context.

1. **Exposition**: As in every play, first one needs to set the scene and properly introduce the characters. While the form of school has been characterized above already, the notion of context is still largely a stranger. Context is a word Luhmann uses sporadically when it comes to education and almost exclusively to indicate a specific and situated world. Never does the word develop into a self-standing concept with its own definition. But it is rather easy to notice how the notion implicitly functions as a complement to his much more frequently used concept of environment (*Umwelt*). Environment is by definition a residual but constitutive category. In Luhmann's systems theory, it acts as the undefined counterpart necessary to define the identity of systems. It is part of the conceptual dyad – system *and* environment – through which definitions in search of a system's essence or ultimate substance can be avoided and rephrased in terms of relationships: "the system is neither ontologically nor analytically more important than the environment; both are what they are only in reference to each other" (Luhmann 1995: 177). Context, in turn, is used to identify specific parts of the relevant environment. Where environment is by definition a residual (but constitutive) category, the undefined counterpart necessary to define the identity of systems, context is used to identify specific parts of the relevant environment. Frequently returning to the expression of education *"in the context of"*, for example, Luhmann uses the word to highlight how either a specific pedagogical practice, the evolving formulas by which education describes itself or the changing societal conception of time, all frame, enclose and thus specify education by virtue of being its socio-historical context (Luhmann & Schorr, 2000:69-96, 106, 165-180). The career of pupils, similarly, is described as stretching out over a variety of discontinuous contexts provided by the school system (2000:303), indicating again how context is a term used in reference to a specific, always determined part of the world surrounding the actual phenomenon put under attention.

Next to this largely familiar use of the term as the stage or setting for other phenomena, Luhmann also uses context to describe the close link between socialization and its immediate setting. Differing from the classical view that understands socialization as conducive to the internalization of values (Emile Durkheim) or normative consensus (Parsons again), Luhmann

does not define the concept with reference to its capacity to successfully establish social conformity; quite to the contrary.[2] What is said to define socialization is its inevitable *context dependence*. Being socialized always implies learning in a specific context; it is restricted to the immediate setting wherein it occurs. When in Rome, one learns to do as the Romans do. But that is of little use elsewhere. What is learned through the accidental and largely implicit learning processes of socialization does not travel well beyond its context of origin. Precisely therein lies its main difference from (formal) education. What education achieves through its formal institutions, is setting standards for life outside of school or university. And hence, Luhmann (1987:178) notes, not without irony, that despite all the advertising for lifelong learning, "education does not have itself as its ultimate purpose. It creates conditions for participation in other systems, and since the 18th century this has been thought of primarily, almost exclusively, in terms of professional careers."[3] It is nothing short of utopian to expect that learning, whether formal or informal, leads us towards the normative consensus Parsons and Durkheim spoke of, in the sense of an agreement between our states of consciousness.

> But feigned consensus (if one may put it that way) is indispensable if the autopoiesis of social systems is to continue. And through education (we can now also say: training) it can be achieved that this is also possible in non-standardized situations, whereas socialization remains very strongly bound to its original context (Luhmann 2002:81).

When such socialization occurs within the settings of the family, context becomes a shorthand for the household, usable to indicate one's descent (*Herkunftskontext*). It indicates the limited perimeter family life offers for education as a distinctly formed activity (Luhmann 2002:60-61). Here the story suddenly gains interest, because even if family education admittedly does not crystallize into a distinguishable (sub)system of education itself, its undeniable relevance means that school might very well obtain a primacy, but never an exclusivity on education. The two main characters not only require and evoke each other; the suspicion grows they also live at odds with one another. Not least because in modern family life, the possibilities for instruction are heavily confined by the redefinition of education in the household as preparation or support for school (*cf.* Tyrell & Vanderstraeten 2007). The household is expected to play second fiddle, as it were, without making too much of a scene.[4]

---

[2] *Cf.* Luhmann (1987:177): Socialisation "is not simply a transfer of conformity patterns, but the constantly through communication reproduced alternative of conformity or deviation, adaptation or resistance".

[3] On the end(lessness) of education and its relationship with career formation, see also Giancarlo Corsi (1999, 2020).

[4] On the growing discontent this role distribution creates and the resulting surge in homeschooling, see Alice Tilman and Eric Mangez (2021). About the often paradox attribution of responsibility that comes along with the uneven role distribution between school and parents, see Hanne Knudsen & Niels Åkerstrøm Andersen (2014). As to the competition that school education increasingly faces from other societal spheres – in addition to family life, that is – see Corsi (2021): because the labor market and mass media increasingly project career paths entirely foreign to the trajectories set out by formal education, the question arises how schooling should navigate this uneasy coexistence.

2. **Rise**: The play has begun, the protagonists have shown who they are, and the playwright hopes some interest has been aroused. Let us now pan across to show how the relationship between school and its context is further complicated. This is a good moment to point out that Luhmann uses context as well to indicate the historical change by which modern education became a specific setting in its own right. What is at stake in his writings could easily be summarized as an account of how education itself gradually became a "system context" (2000:124), that is: a context of its own, emancipating itself from all other spheres of social activity.

Central to this development is the creation of a space or setting where, owing to its spatial layout, instruction unfolds under the condition of mutual perception. Pointing out how interaction in classrooms always develops under the condition of a shared situatedness – a physical co-presence of pupils and their teacher in a shared space – Luhmann remarks how this context enforces self-restriction onto all participants. All involved parties, teachers included, know they are perceived while they perceive each other. The classroom, in short, fences off a space for *reflexive perception*, a context (for the perception) of perception. Precisely this perceptual context, where "perceiving" always equates "being perceived", creates and ensures, so Luhmann emphasizes, the "peculiar and peculiarly evidential kind of sociality that makes it possible to focus the explicit communication on teaching" (2002: 57). Since all references to the shared context require no further explication, because their meaning is evident and visible to everybody present, the interaction is relieved from this communicative burden and can concentrate on instruction. The teacher only has to point to a pupil and say "you", for all the others to breathe a sigh of relief as the class continues. Such indexical expressions (like "you" or "we", "this" or "that") and other situation markers that would undoubtedly require further explication in a written text like the current chapter, can be left implicit in class since its narrow perimeter limits their possible meaning sufficiently. The resulting complexity reduction, Luhmann notes, is what makes instruction possible in the first place.

3. **Climax**: What thus comes to the fore is a specific world of instruction, a world of school with its own autonomy. Behind the closed door of the classroom, education develops and implements its society-wide competence for conveying the knowledge considered necessary to lead our lives and codes (with the help of grades, tests, and assignments) the outcome of the resulting interaction as either successful or not. Any educational rationality, any attempt to attune the instruction to the perceived demands or changes of its environment starts from here. Only with the technical invention of the classroom could instruction emancipate itself from the surrounding social activity and begin the impossible task of bridging the thus created distance between education and society. Classroom interaction denotes, in other words, how school education creates the therefore necessary, secluded space. Classrooms provide a space where professional teachers can give expression to what education is and entails, freed from direct external interference. That holds true for religion and politics, historically the two ambits of society most closely involved with education, but also for the science that helped propel this move towards autonomy.

> The world of schools: it no longer only represents a Pedagogy that has been emancipated from "religion" and "state"; instead, it is a special world of specific experiences that neither the scientific Pedagogy nor the political system can ignore (Luhmann & Schorr 2000:124).

Once instruction moved into the classroom, the necessary leeway – regarding who to teach what and when or how – emerged for school education to shape into its own distinctive form. From homework to salaries via school buildings, teaching material, professional qualifications or curricular principles and much more: apart from the good intentions shared by parental and scholastic education, "everything else needs to be rebuilt from there" (Luhmann 2002:61).

But while the modern school system thus (re)built education almost from scratch, it is certainly true that the resulting autonomy depended and today still depends on state involvement for many of its administrative and regulative needs. That makes it, even nowadays, hard to recognize the functional autonomy of the education system. Instead of insisting on educational autonomy, it might seem more appropriate to consider school as a cog in the machinery of the state administration, steered by its responsible ministry. The bulk of studies on education policy certainly seem to contend as much. Education's dependence on its political administration should however not be confused with a lack of educational autonomy, Luhmann (2002:116) warns us. "The state can introduce school obligation and carry the costs of schools and higher education"; nevertheless "it can as an organization of the political system not teach itself." For teaching, schools with teachers, pupils and curricula occur and one does not get very far explaining what happens in schools, if the resulting amalgam is understood as a mere matter of state governance or political decision-making, Luhmann (2002:147) underlines. One can, in that regard, note a slight parallel with certain branches of the Anglo-Saxon literature. When speaking of a so-called "grammar of schooling", David Tyack and Larry Cuban (1995) reached a very similar conclusion, stressing how only very "few reforms aimed at the classroom make it past the door permanently" (Cuban 1990:11). For Luhmann too, the withdrawn space of the classroom generates an educational sovereignty within its limited perimeter. But curiously enough, the autonomy thus gained is observed as hinging on a very specific act of *exclusion*.

4. **Fall**: The latent conflict between the school and its context, which has been palpable from the outset, starts to gain clearer contours. Elaborating on the conditions necessary for the crystallization of education into a world *sui generis*, Luhmann indicates classrooms as the "technical invention" to keep the encompassing environment from seeping in, thus spurring the differentiation of education as a system, different from other societal spheres (Luhmann 2002:119). Understood as such, the environment comes to stand for an *obstacle* to overcome, something that must be kept at bay for instruction to become possible. That holds in particular for the context of one's upbringing, for the household. "The function of education is transferred from homes to schools and from fathers to teachers," (Luhmann 2002:176) and since then, any interference from pupils' households in the teaching amounts to an unwanted intrusion. With a variant on Ernst Gellner's (1983) transition to exo-education, moving education outside of the family household, Luhmann indeed labels school as the evolutionary achievement that

expels the context established by pupils' family background, so as to organize inclusion universally, without distinction (Luhmann 1990, 2002:61). School is expected to be the place where one stops being a daughter or a son, at least temporarily. Without this expulsion of the family background – or emancipation from it, as pedagogy undoubtedly prefers – there can be neither pupils nor students.

The expression Luhmann (1990) favours to portray this state of affairs is the *homogenization* of education's point of departure on which all school interaction is said to rest. By addressing all pupils as equal at the beginning, by exorcising their differences in upbringing, as if they were all starting from a blank slate, their diverging previous experiences can be ignored and all differences among them that come to light afterwards, during their school career, can be attributed to the thus developing education system itself.[5]

> In this way, the differentiated system of education reacts to a society in which, in general, origin is not a useful indicator of the future, but everything depends on what happens "in between". Accordingly, pedagogy shifts from the care (of fathers) for their offspring to the care (of educators) for the becoming-human (idea) and career (end dates) of the children. And it is no longer a matter of securing the well-born against the constantly lurking dangers of corruption and depravity (and especially in the weak and seducible youth). Rather, it is a matter of making the children into something other than what they are and would become on their own.

Precisely on this point Luhmann's position differs from Pierre Bourdieu's (1966) otherwise closely related expression that school is indifferent to the pupils' differences. Where Bourdieu only sees social conservatism, Luhmann points out the semantics and technology that made autonomous education possible in the first place. But for both authors, school's urge to homogenize pupils as equals by disregarding their differences inescapably involves harm – whether one dubs it symbolic violence (Bourdieu) or speaks, with Luhmann, of the cutting lines that a system traces in order to exclude the interference of any third party.

5. **Catastrophe**: The main character is not only a hero. Like all tragic heroes, it turns out to be deeply flawed. Similar to the establishment of any system rationality, the birth of school is strongly entwined with that which it actively seeks to exclude as foreign to its own doing. At this stage, the exegetical trajectory takes a surprising turn. Regardless, or rather exactly because of the disregard for disparities in upbringing that school education needs to profess, these class differences have a curious way of returning into the classroom. As sociological research over the past half century has repeatedly shown, the expulsion of the household has never been entirely successful. It might very well be that social descent is no longer the organizing principle of education. Children from better-off families nonetheless still have better chances of succeeding in the school system. The excluded household comes to haunt the classroom's lofty pedagogical ideals of equality, much like the parasite's inevitable return,

---

[5] Note that speaking of equal opportunity, rather than of equality, or the more recent talk of 'inclusive education' does not discredit Luhmann's assertion in any way, since what is at stake in these practices is not at all the acknowledgement of difference as such, but again rather its neutralization.

which without exception comes to disturb any hope for harmony or pure order, as Michel Serres warned us.

> The rats climb onto the rug when the guests are not looking, when the lights are out, when the party's over. It's nighttime, black. What happens would be the obscure opposite of conscious and clear organization, happening behind everyone's back, the dark side of the system. But what do we call these nocturnal processes? Are they destructive or constructive? What happens at night on the rug covered with crumbs? Is it a still active trace of (an) origin? Or is it only a remainder of failed suppressions? We can, undoubtedly, decide the matter: the battle against rats is already lost; there is no house, ship, or palace that does not have its share. There is no system without parasites (1982:12).

Similarly, differences of social descent indeed return to torment the classroom, although the instruction desperately seeks to remain impartial to them and must do so to even begin teaching. Whether it is at the beginning of the pupil's school career or at the beginning of class, Luhmann (1990:86) echoes Serres, each moment of instruction first requires an exclusion of its constitutive context, an expulsion which then ultimately and tragically defeats itself.

> The beginning is not eradication, it is exclusion of the third to establish a systemic logic. It ensures the unequal growth of what is equal and a more or less good harvest. But exclusion, inherent logic, equality and more or less are artificial institutions like geometry. They exclude what Pascal called "coeur" and what today is sometimes treated under the (less appropriate) title of "lifeworld". No wonder that what is excluded tries to return – be it as the Other (Böhme & Böhme 1983), be it as a parasite (Serres 1982), in any case as "noise" that disturbs the lesson.

With his reference to Serres's parasite, next to Hartmut and Gernot Böhme's (1982) seminal work on the other side of (Kantian) reason, Luhmann spells out the tragedy that lurks beneath the development of systemic rationality and the ensuing geometry of educational forms.[6] For each form of education that appears, an unwanted and expelled part of the environment silently returns to unsettle the thus emerging ratio. While school education cannot but embrace ideals of equality to become a workable reality, the rampant inequalities it generates always carry the distinctive mark of the exclusion that was therefore necessary (Corsi, 1992). The household welcomes itself back uninvited to the classroom in the guise of stubborn class differences that the teaching is unable to acknowledge. The rats return, inevitably, and the question is now how this applies to those forms of education that venture outside the classroom.

---

[6] For an elaborate and knowledgeable comparison between the oeuvre of Serres and Luhmann, see Benedikt Melters (2016). As the repeated mention of parasites in Luhmann's writings already suggests, Serres's desire to roam the indeterminate non-place 'in front of' difference, rather than to resolve its ambiguity, need not necessarily be at odds with a Luhmannian interest in the various processes of 'necessification' populating our social world, as Melters too concludes, but may very well complement it.

III.   School is out: transnational education and its context

As I have elaborated in this chapter, Luhmann's oeuvre can be read as an account of how modern education obtained its precise form of school and allows one to highlight how this morphogenesis corresponded with the emergence of a precarious, always imperfect boundary management. Educational rationality, to summarize, covers then precisely this attempt to purposefully manage the borders between education and society – an attempt that always carries its own failure, so to speak. There is no building without rats, no Apollo without Dionysus, no system without an excluded environment ready to seep back in. Central to the historical evolution leading to the birth of school education has been the novel prominence of loosely coexisting societal functions and the delegation of that function, in the case of education, to the organizational level of schools. Education, when understood as such, hence stands for nothing more than a form-less function. It establishes merely a problem of reference that asks how to change people intentionally into persons able to participate in society (Luhmann 2002:38) – that is: capable of playing the serious game of feigned consensus. The distinctive form of school then appears as a variable and historically varying answer set out to solve that problem.

Such a perspective leaves the door open for other forms that address the same problem and, by way of conclusion, I would like to indicate how two such alternative 'formalizations', in turn, re-enact the tragedy sketched above. Perhaps not surprisingly, each of them relates closely to forms of supranational statehood that increasingly differ and are even said to oppose the nation state. Hence we come to the subject of global education. Because even if the education system functions on a worldwide scale, as I have recently addressed together with Eric Mangez (2021), it is a rather straightforward conclusion that school education constitutes a form of instruction with limited geographical reach. Schools, although undoubtedly a globally present institution (*cf.* Meyer 1992), do not organize education beyond national borders. To conclude, let me enumerate two contemporary organizational examples that on the contrary seek to precisely do that.

1. **Transnational projectification**: In recent decades, the European Commission has undertaken several reforms designed to harmonize its widening range of funding programmes in the field of education. The various funding programmes (Erasmus, Comenius, Grundtvig, da Vinci) previously overcrowding the Euro-pantheon were gradually streamlined into a single comprehensive programme providing financial support for learning activities both inside and outside formal education. The resulting global funding instrument of the European Union, branded *Erasmus+* in 2014 and renewed for seven more years in 2021, breaks down education's sectoral boundaries while extending its reach to youth work, travel and even sport. The programme today funds a wide range of educational activities that go far beyond the institutional boundaries of school education

and organize mobility projects, either virtually (online) or in the physical world (offline). Somewhat parallel to its funding efforts in the field of research, the programme thus provides financial support for the projects of transnational networks that group together for a limited duration a multitude of organizations from around the globe, both educational and non-educational, for a one-off objective that is not expected to be repeated. These networks of organizations are not limited to education's formal institutions, but regularly include parties that would normally engage in very different social functions, whether private or public. In this way, funded projects assemble extremely heterogeneous networks, which can span almost anything imaginable between nurseries and Fortune 500 companies.

2. **Global platformization**: The current pandemic, with its widespread closure of schools and universities, has thrown into sharp relief how the introduction of digital technology fundamentally reshapes the organization of education. Within a few months, it became evident that schooling without school or studying without campus prompts the influx of new, private actors on an unprecedented scale, further expanding the global education industry (*cf.* Verger et al. 2016). Private-run platforms are now a fixture in education, whether in higher education or kindergartens, and a number of so-called *mega-platforms* stretch out effectively over the entire globe. As Benjamin Bratton (2015) has theorized upon, such platforms establish a novel architecture for dividing up the world into new sovereign spaces that increasingly overlap, compete with and even perforate the borders of state sovereignty. As the burgeoning model of hybrid instruction has made tangible over the past year, by attempting to straddle both online and offline audiences, education finds itself in a strikingly similar predicament, caught in the uneasy balance between the norms of (national) school instruction and (global) platforms coming with their own rules of use.

What unites the two developments, next to their ability to organize education beyond national borders, is a profusely professed discontent with school.

For decades now, the European Union has made no secret of its disgruntlement with the national school systems of its member states. Resorting to the new(ish) vocabulary of *learning* – such as lifelong learning of course, next to learning outcomes, learning environments and other permutations – EU policy openly disavows education that remains fenced within its formal institutions (*cf.* Mangez & Vanden Broeck 2020). "Education and training can only contribute to growth and job-creation if learning is focused on the knowledge, skills and competences to be acquired by students (learning outcomes) through the learning process, rather than on completing a specific stage or on time spent in school," communicated the Commission to its member states already in 2012. Such disapproval echoed a statement from 1995, where it was made clear that while "reliance on a single institution to build up employability is an increasingly unsatisfactory option, people cannot be left to fend for themselves either. The indications are that it is by being positioned in a co-operative network that people will be best served in educational terms". The network-run projectification that Europe funds and thus promotes under its Erasmus+ banner, is nothing if not the globe-spanning implementation of its openly asserted frustration with education's formal institutions.

The same dissatisfaction pervades the recent history of educational technology. Ever since the widespread diffusion of mass media, every technological aid has been touted as a new solution to bridge the gap between the school class and society at large. Whether it was radio or TV, computers or the internet, the promise has always been to bring back the outside world into the classroom, with the often not even implicit ambition of thus revolutionizing an instruction mode declared broken and obsolete (*cf.* Cuban 1986). As Audrey Watters (2021:11) has recently hinted, each of these promises carried teleological assumptions about where education is inevitably heading: a future that is "more technological, more 'data-fied', more computerized, more automated". Implied in these lofty prognoses is the same dissatisfaction with school already pictured above: the classroom is too secluded from the world to allow for learning skills that really matter, and its heavily institutionalized character lacks the flexibility necessary for life in contemporary society. Much like the edu-projects funded by the European Union, the advent of educational platforms takes such unhappiness with school even a step further, by effectively offering a distinct organizational modus (*cf.* Stark & Pais), capable of by-passing the requirement of physical co-presence within a classroom. With the help of online video instruction, perhaps aided by artificially intelligent personalization algorithms and the like, they openly aim not only to break down the classroom's walls, but to substitute for school all together. As a Californian *ed tech* start-up, egregiously named *Outschool*, has been promising: school's out.

By now this refrain should sound eerily familiar. The old is pushed out and expected to make room for new and brighter futures. It should not surprise, then, that much of the tragedy we have outlined in this chapter – school's expulsion of the family context and the subsequent, uninvited return of the household dressed up as class differences that disturb the classroom – can be expected to repeat itself within education's more novel organizational forms. The unwanted, exorcised school always returns. How that happens is a fully unexplored terrain, waiting for further sociological research. Some contours are easily visible: the differences that characterize schools' highly specific mode of instruction seem to linger on, despite (if indeed not because of) all organizational and pedagogical novelty. Even when reducing instruction to interaction with a faceless, glowing screen, platforms cannot but perpetuate the role distribution between teacher and pupil institutionalized by schools. Even in projects that let the boundaries between education and society implode, somebody or something is expected to take the teacher's role towards others who are expected to learn. Similarly, the distinction between instruction and evaluation, this most basic difference structuring all that is taught in school, always returns. Maybe in an unexpected, reversed order, as in the transnational projects funded by Europe, where an ex-ante evaluation always precedes the actual instruction (Vanden Broeck 2020); maybe in the shape of automated correction systems or byzantine learning analytics. Either way, escaping the unity of this distinction, first established by modern school education (Luhmann 1992), between education *stricto sensu* and the accompanying selection (who did better, who did worse), seems impossible.

One wonders if the Serresian metaphor of a parasite covers this phenomenon entirely. Without a doubt, the notion highlights brilliantly the incredible tenacity of that which the desire for system(at)ic order treats as unwanted and hence seeks to banish. But who is whose parasite in this educational symbiosis? Who is leeching off whom? Is the difference as asymmetrical as the notion seems to evoke? Is there not something more at play in this account of the

crystallization of distinctly shaped contexts for instruction occurring within the global education system? What the metaphor offers in visceral spectacle, it seems to lack in evolutionary perspective. It appears less suitable to draw how education's past and recent history is as much the birth tale of new organization types and their societal trajectory, as it is a return of the repressed.

Perhaps then the uncanny reappearance is less a parasite, but an atavism, a return of traits we thought (or hoped) to be lost along society's long evolutionary path? Alas, that too only covers part of the phenomena. A snake suddenly has legs again, a horse's toes grow back, and somebody might grow an extra row of nipples. But the perdurance of differences in upbringing throughout school education is not a one-off throwback, an odd curiosity that strikes unpredictably. Nor should it be expected that scholastic differences will rear their heads only once in a while to shake up newer forms of education. The past's presence seems as durable as it is unasked for. Even switching from Serres's parasitology to Jacques Derrida's (1994) hauntology, the evolutionary mechanism envisaged here is not fully fathomed. Some pasts may very well haunt the present from beyond their grave. But in order to resurrect as a ghost, one first needs to die – and the household never really disappeared as a site for education. Nor did school for that matter. Johann Wolfgang Goethe, in turn, purportedly spoke of ducks to portray how some enduring pasts refuse to die (Eckermann 1852:325). Like a diving duck, the past might disappear for a while below the surface. But it always turns up again, alive and kicking, and typically not where expected. This bucolic imagery of waterplay, however, fails to fully satisfy too. For it lacks the bewilderment and tension inherent in the process of change discussed in this chapter.

The Italian *imbarazzo* might offer a final solace. Its double meaning, largely absent in English, covers both the sense of being an obstacle or hinder (*essere d'imbarazzo*) and the more familiar state of perplexity or uneasiness (*essere in imbarazzo*). The word identifies as much the source of nuisance that impedes a normal course of events, as the state of shame we might wish to bestow on it. When dealing with the boisterous novelty of learning platforms and the like, one might feel tempted to speak of *embarrassing* novelties, so as to highlight how the new seldom lives up to its promises to outdo the past. But perhaps it makes more sense to speak of pasts that get in the way of the new, that indeed embarrass. By refusing to disappear, the past is obstructing the novelty of the present to fully assert itself and thus always embarrassing it, as it were. Such talk of *embarrassed* novelty should not be taken as a negation or unwillingness to acknowledge the newness of the organizational changes I have outlined above. Transnational projects are not simple perpetuations of what Guy Vincent (1982) once dubbed the *forme scolaire* and neither are digital learning platforms. The specificity of these new educational forms cannot be fully grasped, however, if one does not observe how they always incorporate and are unsettled by the past they fervently seek to dismiss.

IV.   References

Baecker, D. (2007). *Form und Formen der Kommunikation*. Frankfurt am Main: Suhrkamp.

Baraldi, C., Corsi, G. & Esposito, E. (2021). *Unlocking Luhmann*. Bielefeld: Bielefeld University Press.

Böhme, H. & G. Böhme (1982/1996). *Das Andere der Vernunft*. Frankfurt am Main: Suhrkamp.

Bourdieu, P. (1966). L'école conservatrice: Les inégalités devant l'école et devant la culture. *Revue française de sociologie*, *7*(3), 325-347.

Bourdieu, P. & Passeron, J.-C. (1970). *La reproduction*. Paris: Minuit.

Boudon, R. (1974). *Education, Opportunity, and Social Inequality*. New York: Wiley.

Bratton, B. H. (2015). The Stack. *Log*, 35: 128-159.

Corsi, G. (1992). Libertà, uguaglianza, eccellenza. I paradossi pedagogici. In R. Genovese (Ed.), *Figure del paradosso* (pp. 275-304). Napoli: Liguori.

Corsi, G. (1996). Sélection ou éducation? Sur la forme du système éducatif. *Recherches Sociologiques*, *27*(2), 81–98.

Corsi, G. (1999). The Dark Side of a Career. In D. Baecker, *Problems of Form* (pp. 171-179). Stanford, California: Stanford University Press.

Corsi, G. (2020). 'Education has no end': Reconciling past and future through reforms in the education system. *Educational Philosophy and Theory*, *52*(6): 688-697.

Corsi G. (2021). Whose life is it anyway? The life course as an observational medium in the education system. *European Educational Research Journal*, 20(6): 740-757.

Cuban, L. (1990). Reforming Again, Again, and Again. *Educational Researcher*, *19*(1): 3-13.

Cuban, L. (1986). *Teachers and Machines*. New York: Teachers College Press.

Derrida, J. (1994). *Specters of Marx*. Routledge: London.

Eckerman, J. P. (1852). *Conversations with Goethe*. Boston/Cambridge: James Munroe and Co.

European Commission (1995) *Teaching and Learning: Towards the Learning Society (White Paper) (*COM (95) 590).

European Commission (2012). *Rethinking Education: Investing in skills for better socio-economic outcomes* (COM (2012) 669).

Freytag, G. (1990). *Technique of the Drama*. Chicago: Scott, Foresman and Co.

Gellner, E. (1983). *Nations and Nationalism*. Oxford: Blackwell.

Knudsen, H. & Åkerstrøm Andersen, N. (2014). Playful hyper-responsibility: Toward a dislocation of parents' responsibility? *Journal of Education Policy*, *29*(1): 105-121.

Luhmann, N. (1977). *Zweckbegriff und Systemrationalität. Über die Funktion von Zwecken in sozialen Systemen*. Frankfurt am Main: Suhrkamp.

Luhmann, N. (1982). *The Differentiation of Society*. New York: Columbia University Press.

Luhmann, N. (1988). Njet-Set und Terror-Desperados. *Die Tageszeitung*, pp. 11-12.

Luhmann, N. (1990) Die Homogenisierung des Anfangs: zur Ausdifferenzierung der Schulerziehung. In N. Luhmann & K.-E. Schorr (Eds.), Zwischen Anfang und Ende. Frankfurt am Main: Suhrkamp.

Luhmann, N. (1991). Paradigm lost: On the ethical reflection of morality. *Thesis Eleven*, *29*(1), 82.

Luhmann, N. (1995). *Social systems*. Stanford, California: Stanford University Press.

Luhmann, N. (1996). *Protest*. Frankfurt am Main: Suhrkamp.

Luhmann, N. (1987). *Soziologische Aufklärung 4*. Wiesbaden: VS Verlag.

Luhmann, N. (1992). System und Absicht der Erziehung. In N. Luhmann & K.-E. Schorr, *Zwischen Absicht und Person* (pp. 102-124). Frankfurt am Main: Suhrkamp.

Luhmann, N. (1998). *Observations on Modernity*. Stanford, California: Stanford University Press.

Luhmann, N. & Schorr, K. E. (2000). *Problems of Reflection in the System of Education* (R. A. Neuwirth, Trans.). Münster: Waxmann.

Luhmann, N. (2002). *Das Erziehungssystem der Gesellschaft*. edited by D. Lenzen. Frankfurt am Main: Suhrkamp.

Mangez, E. & Vanden Broeck, P. (2020). The history of the future and the shifting forms of education. *Educational Philosophy and Theory*, *52*(6): 676-687.

Mangez, E. & Vanden Broeck, P. (2021). Worlds apart? On Niklas Luhmann and the sociology of education. *European Educational Research Journal*, 20(6):705-718.

Melters, B. (2016). Vor der Differenz. Anmerkungen zum Verhältnis von allgemeiner Systemtheorie und der Philosophie Michel Serres'. *Soziale Systeme*, 21(2): 390–418

Meyer, J. W. Ramirez, F. O. & Soysal, Y. N. (1992). World Expansion of Mass Education, 1870-1980. *Sociology of Education*, *65*(2), 128-149.

Serres, M. (1982). *The Parasite*. Baltimore: John Hopkins University Press.

Simmel, G. (1950). *The Sociology of Georg Simmel* (ed.by K. H. Wolff). Glencoe, Illinois: Free Press.

Stark, D. & Pais, I. (2021). Algorithmic Management in the Platform Economy. *Sociologica*, *14*(3), 47-72.

Tilman, A. & Mangez, E. (2021). L'instruction à domicile comme phénomène global. *Éducation et sociétés*, 45(1): 123-141.

Tyack, D. & Cuban, L. (1995). *Tinkering toward Utopia*. Cambridge, Massachusetts: Harvard University Press.

Tyrell, H. & Vanderstraeten, R. (2007). Familie und Schule: zwei Orte der Erziehung. In J. Aderhold & O. Kranz (Eds.), *Intention und Funktion* (pp. 159–174). Wiesbaden: VS Verlag.

Vanden Broeck, P. (2020). Beyond School. Transnational Differentiation and the Shifting Form of Education in World Society. *Journal of Education Policy* 35(6):836–855.

Vanden Broeck, P. (2021). Education in world society: A matter of form. *European Educational Research Journal* 20(6): 791–805.

Verger, A., Lubienski, C., & Steiner-Khamsi, G. (Eds.). (2016). *The Global Education Industry*. London: Routledge.

Vincent, G. 1982. *L'école primaire française*. Lille: Université de Lille.

Watters, A. (2021). *Teaching Machines*. Cambridge, Massachusetts: MIT Press.

Weber, M. (1946). *From Max Weber: Essays in Sociology*. Oxford: Oxford University Press.