

Tensions as a rule: Re-imagining the development of special education by functional system theory

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Abstract

This article aims to re-imagine special education through the theoretical lens of functional system theory, tightly connoted with the sociological work of Niklas Luhmann. Regarding this perspective, modern society's social system is characterized by 'functional differentiation.' Its subsystems emerge concerning particular functions. This conceptual approach can be seen as a toolbox to unpack the complex relations of special education organizations, professions, and an academic discipline. First, special education is an organic part of a mass education system. Special education is a strategy of an education system to solve issues of variance of learners' needs. Second, organization, practice, and special education theory are contextually contingent. Thirdly, inherent frictions can be related to special education functions of serving in two functional systems: a functional system of health and one of education. Employing the case of Sweden and using system theory and re-imagination lens, I show that special education since the 1990s and even before has served as an inclusion project. It was also an issue of constant re-arrangement of special education into the education system by negotiation between medical and pedagogical means. Therefore, in this article I claim that dilemmas and tensions must be the rule.

Keywords: Special Education, System Theory, Professions, Organization, Academic Disciplines

Introduction

Inclusion of children with special needs in compulsory education is a much-debated issue in various national contexts – and thus across differing educational systems – concerning how to achieve every child's right to education. At a policy level, this issue is a self-evident part of discourses on education and schooling in democratic societies, manifested in documents such as the Salamanca Declaration. However, the issue is complicated. General education in public schools is inherently complex, even apart from the ambition to make it accessible for all, and change occurs very slowly (Tyack & Cuban, 1995). Schooling is often more complicated than depicted in the political vision of a school for all (Wermke et al., 2020).

In this paper, I argue that investigating the tension between policy and practice and the detailed reason for the tensions can be the starting point to understanding frictions in special education and its role in inclusion. To start with, in this paper, I define inclusion following the Salamanca Declaration. An inclusive school enable all children learning together. Regular schools must recognise and respond to the diverse needs of their students, while also having a continuum of support and services to match these needs (UNESCO, 1994). In the notion of 'support and service to match needs', the modern nature of special education evolves: "Education designed to facilitate the learning of individuals who, for a wide variety of reasons, require additional support and adaptive pedagogical methods in order to

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participate and meet learning objectives in an educational programme.” (UNESCO, 2011, p.1). Consequently, inclusion and special education are *conditio sine qua non* to each other, i.e., necessarily complementary. With this, tensions are natural and lead to a plethora of contradictions and dilemmas. For example, ideologically, full inclusion, i.e., instruction of all children together, should be the educational aim within a society; educational settings like this must, however, not be fertile for each individual in his or her need for special support. Moreover, if inclusion needs special education, it may lead to special education approaches being presented as inclusive solutions (Hjörne, 2004). Finally, special education support in inclusive settings might come at the price of stigmatisation (Neumann et al., 2020).

I argue that a theoretical approach based on the idea of functional differentiation can be fertile for passing the ideological and political overload in the academic discourse on inclusion and special education. This overload has given rise to the concern that political and partly even academic ambitions for inclusion and professional endeavours to create an inclusive pedagogical practice might drift apart or become irreconcilable (Magnusson, 2022). As a result, scholars and practitioners are inclined to follow an urge to ‘radicalize’ argumentation for their respective positions. When a theoretical perspective on a complex phenomenon such as ‘doing inclusion’ remains one-dimensional, theorization might be restricted to the level of critique rather than explaining the practice and why such practice is as it is (Wermke et al., 2020). Discussions of what inclusion means and its relation to special education have resulted in many debates; however, this is rather in policy arenas than in fields of practice and research (Magnusson, 2019; Magnusson, 2022). In such a situation, it is not surprising that the Danish professor of education, Susan Tetler, considers that there has been far more focus on the reasons for inclusion than on how inclusion can be practised (Tetler, 2015).

Against this backdrop, endeavours to re-imagine special education in the scholarly format of a special issue are very welcome initiatives. I want to contribute to this project by putting forward a little-used grand theory, the theory of functional systems and functional differentiation, which is mainly related to the scholarly work of the German sociologist Niklas Luhmann (1927-1998), rather than international special education research. From this perspective, I want to re-imagine special education as a full and legitimate part of a mass schooling system. Compulsory schooling must handle students' conditions, which can be handled in varying ways. In other words, a school system that, due to its compulsory character, must enable teaching and learning for *all* children in one way or another. A school for all is, first of all, an organizational imperative. All children must be educated in certain settings for almost all of their childhood and youth (even when they do not want to). The special education system is fully part of the general system, and both provide functionally equivalent solutions (Luhmann, 2002) for the schooling of different groups of children with diverse needs. This interpretation expands the famous argument of Thomas Skrtic (1991) that special education is a requisite for the regular education system to survive. I argue that special education is an organic part of the education system. It has evolved via functional differentiation.

This paper, thus, first of all, has an educational ambition. It presents a possible way to understand dynamics and frictions in special education as it evolves in the educational organizations (schools), educational professions (educators), and academic education disciplines. The premise of special education as mass education can lead to a more analytical, non-normative understanding of it and its value for inclusion. This relates to the German sociologist Rudolf Stichweh's (2016), based on functional system theory, the argument that in modern societies, exclusion from one configuration always leads to inclusion in other configurations. Students excluded from regular school will be included in special schools. Consequently, a special school system is added to modern society's mass education project (Boli, Ramirez, & Meyer, 1985) due to the latter's inability to include all children. The first includes the excluded children.

While, major object of interest in this paper, is the theoretical elaboration of special education and inclusion in the light of specific theory, its object of study, is the case of Sweden. To contextualize the theoretical framework employed in this study, I will first present the current Swedish education system. Various aspects of this system will be used to illustrate the application of the theoretical framework.

However, Sweden is also interesting to an international audience since it is typical of Western democratic education systems. It presents a comprehensive, non-tracked regular school system with few special schools specializing in various special education support needs categories. Students with special needs of any kind have the right to support of different kinds. The country is committed to the Salamanca declaration and the UN Convention on the Rights of People with Disabilities. Like many other countries in the global North, it has undergone reforms of tremendous decentralization, accountability, and rational choice-directed school reforms and reform attempts since 1990 (Wermke & Salokangas, 2021).

This paper is structured in the following way. First, I present the case of Sweden's education system as it exists today, as an illustration. The next section will provide a more extensive presentation of system theory and functional differentiation. I pinpoint, in particular, the theory's value in explaining the complex nature of special education as an organic part of the education system, building both on educational and medical traditions. Doing so, it might become clear that the dilemmas of special education between medical diagnoses and educational planning are unavoidable. In the next section, I employ the theoretical lens to explain the peculiar relationship between special education organizations and professions and regular education organizations and professions, aiming to show that both sides are part of the same system. Concerning special education organizations and professions, the academic discipline of special education emerged. Even the nature of this discipline can be explained by system theory. Here, I will look into why the normative character of special education is unavoidable. Finally, I conclude with a discussion on the value of systems theory for re-imagining special education, shifting it from a normative to a purely analytical issue. In doing so, I provide tools to accept that the tension in special education will always be the rule, rather than the exception.

The Swedish case²

Today, the Swedish school system presents a decentralized governance regime. From the 1990s onward, a series of reforms were enacted that profoundly changed the educational landscape in Sweden. The far-reaching decentralization reforms that shaped the Swedish education system in the 1980s and 1990s led to a highly marketized system. The resulting competition between schools, including the established 'education vouchers' provided to each student to finance their schooling, encouraged parents to make individual school choices and ultimately led to the additional expansion of private schools. Since the middle of the 2000s, we have seen an ongoing re-centralization wave in Sweden (Wermke & Forsberg, 2017). Consequently, several re-centralization and re-regulation programs have been launched and implemented since the early 2000s. For instance, the Swedish Schools Inspectorate (SSI), which regularly inspects and controls public and private school actors, was founded in 2008, providing increased opportunities for state injunctions and imposition of fines at the local municipal level (Rönnerberg, 2011). The SSI strictly monitors if and how the needs of students in need of special support are followed up. The Education Act of Sweden from 2011 has strengthened students' rights to get special support. Moreover, each regular school is supposed to have access to appropriate special education and student health competencies.

According to the Swedish Education Act, special education support should be provided in regular schools (Barow & Östlund, 2020). In Sweden, approximately 1% of all students attend special schools for pupils with intellectual disabilities (*särskola*). Just over another 1% receive support in special classes (*särskild undervisningsgrupp*). A few students attend state-run schools for children who are blind, deaf, or have severe speech impediments. Consequently, most Swedish special educators work in inclusive settings, in regular schools. Regarding research, Swedish special educators often provide individualized support, mainly in the form of small groups (Göransson et al., 2017), although in recent years, the focus has increasingly moved toward advisory work, school development, and promoting inclusive learning environments (Cameron & Lindqvist, 2014).

² This section has been developed more in detail in Wermke & Beck (2023).

System theory and functional differentiation

The conceptual work in this paper draws on the German sociologist Niklas Luhmann's theoretical understanding of social systems, which will lead me further to an examination of the dynamic relationship between educational professions, educational organizations, and academic disciplines. To understand Luhmann's reasoning on education and, with this, on educational professions and organization, it is necessary to state his *system's theoretical* epistemological premises (Luhmann, 2002). We build here on his posthumously published *The Education System of Society* (*Das Erziehungssystem der Gesellschaft*, ed. by Dieter Lenzen). Luhmann's academic production is tremendous, elaborating on the sociological nature of society and its many functional systems that have evolved through functional differentiation. Parts of his scholarly work have been translated into English and Nordic languages. For example (also posthumously), his work with Karl-Eberhard Schorr from 1979, *Reflexionsprobleme des Erziehungssystemes* has been translated into English in 2000, *Problems of Reflection in the System of Education*. However, his later work on education, such as *Das Erziehungssystem der Gesellschaft*, has not been translated yet. The section discussing organizations, professions, and academic disciplines in education builds on another piece of literature that draws on Luhmann's reasoning. Here, the works of Raf Vanderstraeten, Stefan Hopmann and Jürgen Schriewer are very valuable.

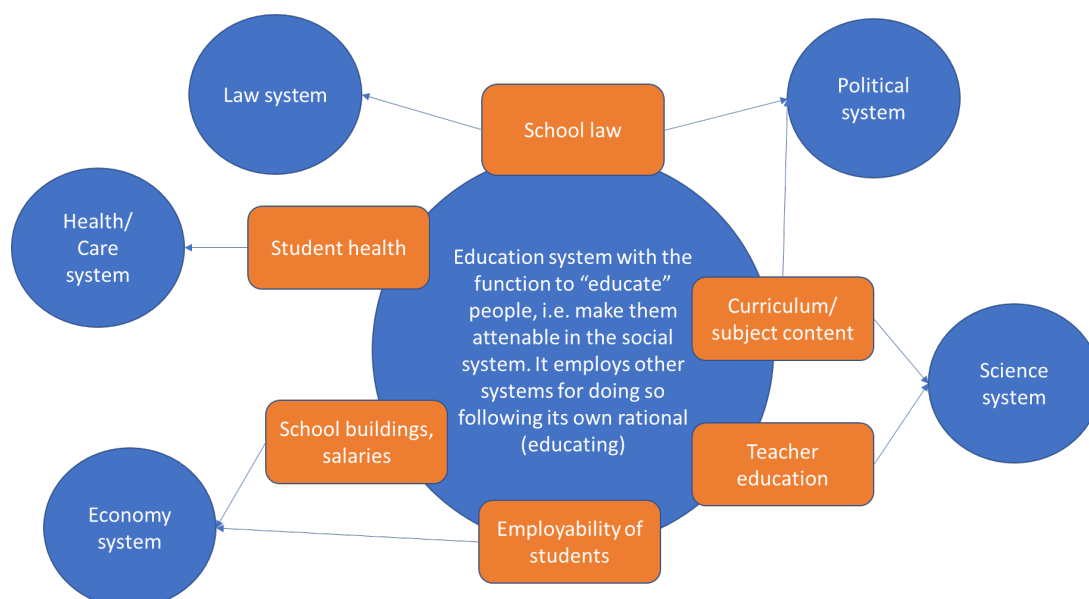
Back to the theory: From a system theory perspective, modern society's social system is characterized by *functional differentiation*. Its subsystems emerge concerning particular functions. This subsystem is described in agency terms ("the system does"). This includes the arrangement of persons in structures. System theory, thereby, does not speak about a structure-agency dualism. With this, the theory can be used universally. Persons are part of various functional systems. A system is a social phenomenon that includes all social operations. Moreover, a system is closed for other non-system-owned operations. The system reproduces itself through chains of system-owned operations, demarcating from its environment. That is why there are different systems in a society that have a responsibility for a particular function of the society.

Regarding Luhmann (2002), the social system of law operates exclusively on whether something is legal/illegal, i.e., on questions of legality. The social system of the economy operates exclusively on whether something can be paid for/cannot be paid for, i.e., on financing questions. The social healthcare system is exclusively about healing and coping, whether somebody is healthy or sick. The social system of educational science operates exclusively on whether something is transferable/non-transferable, i.e., teachable/unteachable to others. This is about the questions of forming people who are able to attend to society.

The education system is one of those functional systems. Other sub-systems with other functions are the environment of the education system. It is possible to interrelate with other systems, but only under certain conditions. Functional systems are so-called *self-referential*. Systems differentiate in all their (system-relevant) communications between what is about the system itself (intern, self-referential) and its environment (external, reference to other systems). In a functional system of education, students can, in the long run, not be paid for learning. Their learning must build on other conditions, i.e., educational means. What students learn must be believed to be valuable for their future. Moreover, other functional subsystems (e.g., economic system, political system, science system) are only of interest to the education system in certain aspects, which are needed for the subsystems (e.g., teachers' salaries, reforms, or education acts). However, this autonomy of a functional system comes with a price of increased complexity. I show this in Figure 1.

Figure 1

*The structural linkages of an educational system with other sub-systems in the society/social system.*³



From this theoretical perspective, there is no longer a meta-system or center of society located above the subsystems to control them. However, how does *change* happen in such an understanding of the social world? From a system theoretical perspective, there is a pluralistic picture. No central/focal point puts fundamental norms and directives on the other subsystems. Rather, there are fluctuations and dissipative (self-organizing) structures. Each subsystem oscillates between its opportunities. Change is triggered within the system, i.e., it handles its opportunities to react to the respective triggers. This is the idea of autonomous structures of a system (Luhmann, 2002).

Luhmann (2002) also argues that fluctuations, e.g., a revolution, could roll through all the systems and affect them in the subsystems' specific ways. We believe this understanding matches our interest in special education. I believe that the developments and visions of inclusion that have been manifested in the Salamanca Declaration (UNESCO, 1994) and the Convention on the Rights of Persons with Disabilities (UNESCO, 2006) are nothing less than a revolution. The ambition to enable people to participate in society in the same way, independently of their very different conditions, in particular with certain disabilities, is a tremendous paradigm shift. After centuries of exclusive models of institutions and ideas of the existence of educable vs. ineducable human beings, the last 40 years of the inclusion movement are very new, triggering changes in all subsystems of the social system (Ainscow et al., 2019).

The idea of a society, i.e., a social system, comprising various functional systems that 'handle' various significant social problems, and the relations of various functional systems to each other have a fertile value for explaining the theoretical concepts of inclusion and its counterpart exclusion. Since systems are thought to have borders to their environment, i.e., other functional systems, they include certain phenomena and exclude others. When a system grows, it grows by taking responsibility for more 'problems.' It also includes the problems and solutions in its system by taking these away from other systems. An example of such inclusion and exclusion dynamics is the tension between health/care on the one hand and the education of children needing special support on the other. Historically, the work with children having disabilities was always part of a – in terms of system theory – health system. Here,

³ The figures in this section have been developed in a Swedish work on special educator: Wermke, Höstfält, Magnusson (2024).

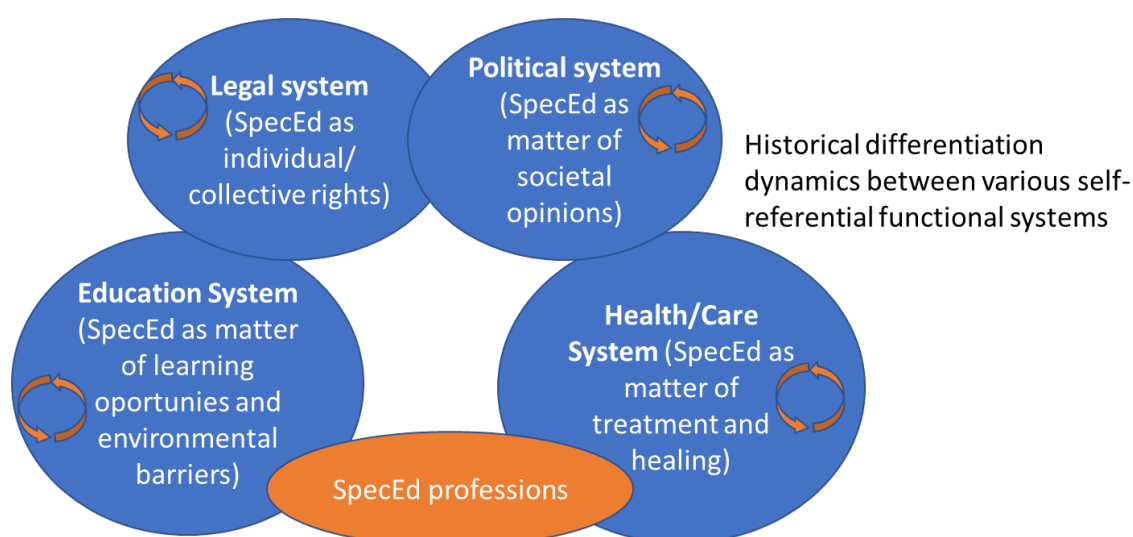
the contradicting nature of special education today, as it literary sits between the health and education system, becomes particularly visible. Children having particular disabilities were seen as in need of caring and healing. The traditional special education discipline *Heilpädagogik* (still existing in Germany or Switzerland), literally translated to healing education, still tells us about both tradition and transition (Hjörne & Säljö, 2009). For Sweden in particular, the history of schools for children with an intellectual disability in Sweden is also telling in this respect: In 1944, compulsory schooling was introduced for all children who were considered to be ‘capable of education’ (*bildbar*). The county council (*Landstinget*) was given responsibility for providing education and care for these children. The National Board of Education (*Skolöverstyrelsen*) was given responsibility for supervising education, and the National Board of Medicine (*Medicinstyrelsen*) was appointed as the principal of the schools (Berthén, 2007). However, it was not until the end of the 1960s that compulsory schooling was introduced for the so-called uneducable children (Göransson et al., 2021).

Concerning the system-theoretical logic of self-referential systems, communicating special education happened in medical terms within the functional health and care system, such as in diagnoses, treatments, medications, therapies, etc. With dynamics in modern societies, at least in the global North, disability has lost its stigma or definition of something being sick or wrong. With this, institutions such as school were forced to accept all kind of individuals. Even those, who were excluded before. Considering our interests, a school is supposed to be seen as being for all today despite various particularities. As a normative term, inclusion means the self-evident part of all in an organization or system and is our expression for such wishes today. With these shifts, the education system started to take responsibility for children with disabilities. Speaking about special education today happens mostly in educational terms, such as learning, curriculum, pedagogy, assessment, etc. This has also triggered strong dynamics in the legal and political system.

This transition of special educators from one functional system to another indeed has not been a process without friction. The several perspectives in special education, mainly the medical and relational ones, express the two systems being parents of our discipline, i.e. special educators can be seen as ‘travelers’ between at least two systems: the education and health systems. Figure 2 illustrates the idea of various systems to which the education system relates.

Figure 2

Various functional systems of the society and the relation to the functional system of education via the phenomenon of special education (abbreviated as SpecED in the figure).



Inside the functional system of education or understanding mass education

Drawing on system theoretical premises and heavily on Luhmann's work, the Belgian sociologist Vanderstraeten discusses how an educational system makes public education possible.

On the one hand, education needs a scope of action concerning other functional systems to react quickly and appropriately to educational needs that become visible in interaction. Moreover, in education, there must be a hegemony for educational solutions. Solutions must be related to learning, and teaching must be approached with means other than financial or legal. This relates to the logic of self-referentiality. It is impossible to pay students for learning or force them by law to learn long-term. There must be incentives such as internal motivation or certificates that students can use in the future. On the other hand, education needs support to fulfil its function, and facilities and resources are needed to make frequent interaction possible (Vanderstraeten, 2001).

Furthermore, as a process that develops between at least two individuals, learners and teachers, public education is a peculiar site of exchange. It can be seen as an institution where groups come together to learn appropriate behavior, skills, and/or content to participate in society. Consequently, the masses must learn predetermined taught content (Hopmann, 1999; Vanderstraeten, 2007). Moreover, education is built on interaction, and it is broadly accepted in sociological research that interaction is only partially plannable since individuals can only process communication self-referentially (Vanderstraeten, 2001). This means simply that we do not know what others think. We only know what they say and what consequences this has for us, being self-referentially alone. This results in the ambiguity between what is taught (the content of teaching) and what is learned (what it matters for the learner) (Hopmann, 2007). Vanderstraeten (2007) also summarizes several particularities of education in relation to other functional systems. It requires a scope of action to react quickly and appropriately to educational needs that become visible in interaction. Moreover, resources are needed to make frequent interaction possible, and a certain degree of hegemony is required for educational solutions. Solutions must have an educational focus and cannot be approached only through financial or legal means. Furthermore, incentives such as internal motivation or certificates that empower students for their future are needed. All this adds to the complexity of educational organization. Therefore, the education system and the overall school structure are built of what Vanderstraeten calls organizationally framed interactions (Vandersraeten, 2001), which are plannable to a certain extent.

The education system is characterized by social face-to-face meetings, which open up particular forms of interaction (*ibid.*). Inside every school, for example, teachers interact with their students, other teachers, parents, and the school principal on different aspects of the school's everyday work. As described above, there is always an element of surprise in interaction, which takes on a life of its own depending on the participants and the context in which the interaction occurs (*ibid.*). Consequently, school educators need a certain scope of action to respond to their students' reactions. However, they also need a frame, which decreases the complexity of possible reactions in interaction. Simply put, the school system cannot handle the social interaction of education; it needs specially trained people to do this: teachers who can communicate educational objectives. Teachers, however, need the school organization to reduce the complexity of possible interactions. For example, teachers don't need to search for students every morning. Still, due to the organization of schools, they can regularly meet the same students of the same age group who are to be educated on a given subject, which is regulated by the curriculum. Last but not least, teachers (and indeed also special educators) are paid for their services by the school (Vanderstraeten, 2007).

I argue that the tension between school organization and the educational professions must be understood to examine peculiarities such as special education and the work of special educators.

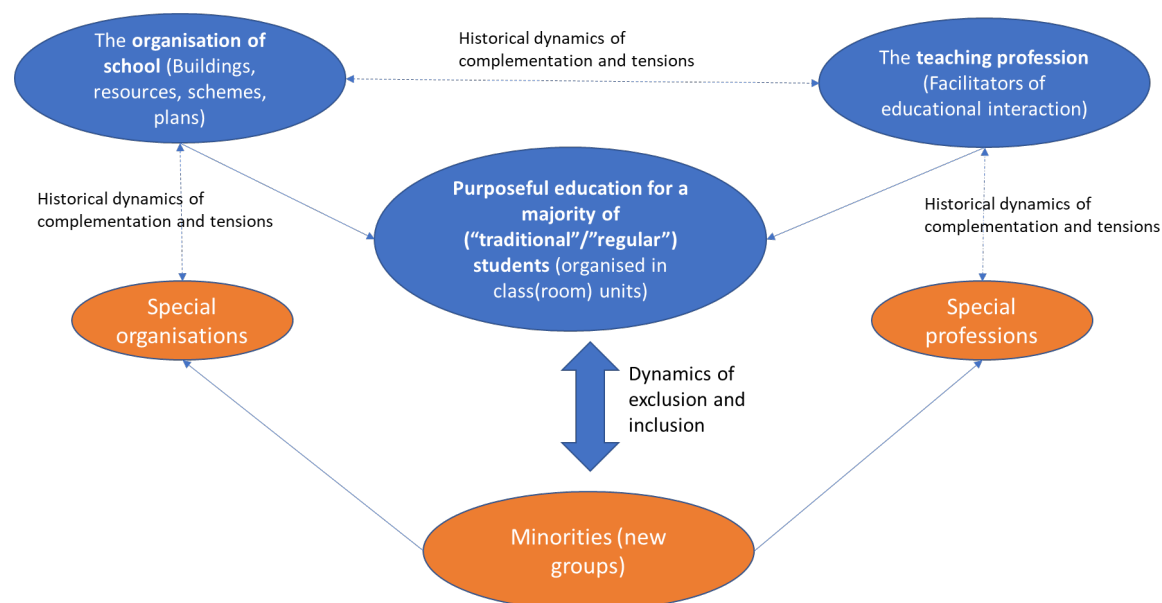
In this configuration of profession and organization, it not only produces a professional or machinery bureaucracy (Skrtic, 1991), but also different frictions (Wermke & Salokangas, 2021). Following the rationale of complexity coping, the education system has two strategies to include students in need of particular support: it can include all children, even the 'new' ones, into the regular solutions of schools and classrooms, or it can build a parallel school system which is part of the education system and exists next to the 'regular' schools. It might be illustrative to speak about a minority and majority school

system. Even if it follows somewhat different logics, e.g., having a bigger emphasis on care than on education (Berthén, 2007), it still builds on the two pillars, profession, a special one, and an organization, also special concerning the regular organizational solutions.

Figure 3, illustrates this configuration. Both systems must be related to each other through processes of exclusion and inclusion. Historically, the distance between both school systems has varied in different national contexts. The special school system will include the groups excluded from the regular system. Some groups can be included in the regular system in reverse. This oscillation can be illustrated with the history of the Swedish special schools for intellectually disabled pupils. According to Berthén (2007), since the 1960s, there has been a so-called integration process in which special schools are increasingly coming closer to regular schools. This involves, on the one hand, special schools shifting from being located in institutions with dormitories to day centres, and on the other hand, special schools are increasingly physically located under the same roof as regular schools. From the 1980s, special education was included in the Education Act, and the responsibility for special education was transferred to the Ministry of Education (*utbildningsdepartementet*) from the Ministry of Social Affairs (*Socialdepartementet*). With the decentralization (*kommunalisering*) of schools in the 1990s, special and mainstream schools were organized by the same administration. Moreover, with the state curriculum of 1994 (Lpo 94), the two types of schools were given the same curriculum (Göransson et al., 2021).

Figure 3

Parallel school systems constituted of (special) school organizations and (special) school professions.



The academic discipline of special education as reflection theory for special education professionals

From a system theoretical perspective, we can also understand the emergence and dynamics of academic disciplines concerning functional differentiation processes. This aspect relates to the roles and persons in the social systems and professions. A profession's knowledge base combines scientific knowledge and experiences. Concerning scientific knowledge, a scientific discipline has a significant role in a functional system. This includes self-description of the system, formulation (remembering) of norms and, with this, the constitution of an ethos (e.g., of special education) (Luhmann, 2002). A disciplinary

body of knowledge manifests what the knowledge of special education is, how it can be distinguished from other bodies of knowledge (such as education or medicine), and which epistemological foundation it has (Moser, 2023). Disciplinary knowledge is also necessary for planning professional actions. Here, the existence of scientific theory is of utter importance. Differentiation of functional systems needs reflection theory to cope with the complexity of the functional system's autonomy (all the different choices). Reflection theory is necessary for the (re)descriptions and (re)assurance of the system (also concerning other functional systems). Reflection theories are a significant part of self-organization of professions and also organisations. They provide guidance in decision-making when various possibilities are given (Luhmann, 2002).

Another Luhmann-inspired researcher, Jürgen Schriewer (2003), proposes a dichotomy that distinguishes between action sciences or reflection sciences, on the one hand, and fundamental research (*Grundforschung*) on the other. His distinction is helpful for the understanding of the nature of special education as a discipline. The first category refers to scientific disciplines that do not aim to elaborate on theoretical problems, i.e., to produce scientific explanation knowledge, such as the second group. Instead, it first of all aims to provide knowledge for professional action and orientation. Reflection science disciplines address mainly, in a system theoretical understanding, other functional systems, such as education, economy, law, or religion. Reflection sciences consult, first and foremost, the professionals active there. The knowledge produced is part of those education and problem-solving strategies. Schriewer (2003) argues that, in other words, it is about disciplines that historically had their vantage point in theories on the 'good life', and related to this reflection, sciences have per se a normative setup. Due to this, reflective science, such as (special) education, *must* first and foremost provide normative and professional guidance. That is why it is also very context-dependent in time and space. What is seen as appropriate learning or intervention strategies can differ between national contexts and historical settings. This peculiar science nature (as expressed in Luhmannian system theory) can also explain why certain academic thoughts can trend, disappear, or emerge again.

From this vantage point, disciplinary knowledge of special education is tightly connected to the profession of educators and special educators, and to organisations, which structured their work. It has emerged from the need to reflect various diversity grades in an education system. The discipline is a dynamic phenomenon. Referring to Moser (2023) and Hjärne & Säljö (2009), special education knowledge has historically been collected through the lens of the abnormality of the clientele. In the first step, from a pedagogical perspective, it had to be defined what should be the least common denominator of blindness, deafness, mal-educated, language development, and speech problems, as well as slow learners by the end of the 19th century, where the Swedish language did not have for a word for disability until the 1960s. In continental and Nordic countries, special categories were related to moral deficiencies, such as 'weakness of the soul,' based on the 19th-century psychological capacity model, which served as an overarching paradigm and lasted until the 1970s (Börjesson & Palmblad, 2003). This theoretical foundation perfectly fitted into the pedagogical era of moral education. Consequently, it could be connected to a specific professional ethos. This aspect is today additionally highlighted through the perspective of advocacy for their clients – a significant indicator of their professionalism put forward in special education. On the other hand, we can see today a renaissance in medical explanation models and intervention methodology. I write renaissance because the significance of such a knowledge body in special education is nothing new. It was only toned down in the 1990's and early 2000's (Wermke et al., 2024).

In a study on more contemporary changes in academic special education in Sweden (Wimmer et al., 2023), we have investigated dynamics in the education of special education teachers in Sweden. By comparing what special education teacher (SET) students are required to read in their academic education over different periods in Sweden's largest SNE teaching program, we were able to show how the discipline has changed over time. An interesting movement can be discerned in the modes of knowledge within the field of special education, explained by the appearance of the term 'perspective,' which can be understood as a way of handling competing and overlapping paradigms. For Sweden, we can track the nature of SET education as shifting from having a medical but very explicit character in

the 1980s to a much more educational but more ‘blurry’ nature. This ambiguity affects both the profession’s mode and body of knowledge and makes it difficult to determine the object of the Special education profession. In other words, the special educators’ academic identity has shifted from that of a medically oriented specialist with a certain literacy in disability and students at risk to that of a generalist in all risks that might occur in regular schooling, particularly regarding the issue of academic goal achievement. Moreover, SETs are expected to work with their professional body of knowledge in a way that is determined by the scientific method.

Paraphrasing Moser (2023): Over time, there have been dynamics in understanding special education, special educators, and special schools. The dynamics have been resulted from negotiations of several actors. Moreover, the relationship between practical expertise, its organizational framing and academic knowledge is essential. Here, academic knowledge must not at all be superior or a matter of truth or fact. It must be understood in relation to scientific facts seen valid just at this time. Due to the nature of reflection sciences, educational organizations and professions often trigger developments in the education discipline. It is not the discipline that triggers developments in professions and organizations. Therefore, the history of the special education discipline can be seen as a pendulum between paradigms (e.g., medical or educational), depending on which particular approaches special educators deem important.

Discussion

In this paper, I have presented the system theoretical concept of functional differentiation to understand and explain the particular form of special education as an organizational, professional, and academic phenomenon. Regarding this theoretical approach, the social world is characterized by the emergence of functional (sub)systems concerning handling various significant societal issues, such as justice, power, health, and education. In the systems, various structures develop to cope with the particular problem. Coping always follows a certain system-related rationale. For example, all structures organizing the health system are about health, and all of the education system is about education. This analytical approach has the potential to explain the character of special education. This tension is in its system DNA.

A shift towards inclusion in terms of a school for all challenges a traditional education system (including a special education sub-system) built around the idea of instructional lessons within the organizational frame of school buildings. The will of a school to provide equitable learning opportunities for all, but all children, cannot be discussed because it builds on the political idea that all people are equal. Yet, the education system's relationship between equality and equity becomes challenging. Adjusting to this ‘new’ reality will have high transaction costs. New structures are needed to include children in the education system who were previously excluded and included in a health system (Berthén, 2007). Moreover, the education system needs the help of the political system. The inclusion of children needing special support at scale was accompanied by a shift in the knowledge base of special education professions pushed by political reforms. As illustrated in our example (and valid in other Western school systems), in Sweden in the 1990s and before, special education was constantly re-arranged as part of the education system. It became a negotiation between medical and pedagogical means. From this perspective, it is unsurprising that special education professions have to deal with various logics, including medical ones, including means of treatment and diagnoses, and educational ones, comprising means such as instructional planning, delivery, and assessment, or more sophisticated, *didactics*. The inclusion project generated an inherent dilemma for special educators. To remind us, a dilemma has no real solution, only various more or less favorable stages of consent.

Indeed, the science special education discipline, our special education professions, and special education discipline are part of the educational system today. The education system has built structures to ‘solve’ the issue of children having, at times, very varying learning conditions. The first and still dominating strategy has been building parallel tracks for children in need: special schools and special professions. What has been fluid is where the ‘border’ between a regular school solution and a special

one is. Concerning negotiations of the boarders, what teachers and special teachers need to learn in their professional and academic training has been discussed. Therefore, special education as an academic discipline has such a dynamic nature. It has also been discussed when students need special support. In the Swedish case today, special support is operationalized by goal achievement. When a student is at risk of not achieving particular learning outcomes, they have the right to receive support.

Here, again, the relation to the health system can be discussed. The right to special education support has been attributed to particular diagnoses in other national contexts. The shift in Sweden to educational assessment (learning outcome) from medical assessment (diagnoses) manifests consequently the peculiar relations of an educational system and a health system when it comes to coping with children's special needs. On the other hand, a strong focus on the neuropsychiatric description of various children (such as children with ADHD or autism) is an illustration that the line to the health system is not cut at all. Instead, I think that the travel in this paper shows how medical and pedagogical bargaining is a very important part of the profession and will never disappear.

The paper's foremost ambition was educational. I wanted to 'teach' about the use of a grand theory to explain the fragmented nature of special education as professional practice in educational organizations and as an academic discipline. The question remains: what value does this 're-imaging special education' endeavor have for practitioners in special education? My answer is that this analytical approach is first of all deradicalizing and providing solace for all the practitioners, who feel torn between ideological loaded visions and an apparent messy, at time hostile climate in the classrooms. A knowledge that the tension experienced is rooted in individual deficiencies but in the fragmented nature of special education might support the daily dilemmas met and provide high-quality practice within the frames given. However, an awareness that special education in organizations, as professional practices or academic disciplines are dynamic phenomena that can change and have changed might also support the re-imagine practice by challenging it.

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