## Chapter 1 Why Luhmann Matters to Education

The present book introduces and explains the theory of education formulated by the German sociologist Niklas Luhmann. Luhmann is famous for his Social Systems Theory, which includes a theory of society. The choice of dealing specifically with his theory of education, which is part of his general sociological theory, requires some preliminary explanation.

Luhmann's theory is a 'multi-layered' theory. We use this term to indicate the combination of different layers of conceptualisation, which are used to analyse different and interlaced objects. The first layer of conceptualisation is the general definition of 'system', which is inspired by the developments of general system theory during the eighties, in particular the development of so-called 'second order cybernetics' formulated in physics and biology.

On these bases, the second layer is a more specific theory of *social* systems, which was originally inspired by the work of the famous American sociologist Talcott Parsons, from which however Luhmann's theory diverges for many important aspects, thus appearing as a completely new, and highly innovative, Social Systems Theory. Indeed, at present, Luhmann's theory is still the latest and most advanced example of systems theory in sociology.

The third layer is the conceptualisation of society as a particular type of social system and the description of its structure and its most important subsystems, among which the education system. Luhmann's effort of systematising a theory of society culminated in an important work published in two volumes at the end of his life (Chap. 2).

The last two layers consist in the inclusion, in his Social Systems Theory, of the concepts of interaction and organisation as specific types of social systems intertwined with, but distinguished from, society.

This multi-layered theory provides a very complex and rich background to explain and describe all the most important aspects of education, a background that may be of great value not only for sociology, but also for education theory. Luhmann's theory makes it possible to combine analyses that concern at least the following aspects of education: (1) the function and structures of education as a complex social system and the ways in which it is included in society; (2) the historical background of education, which explains when, why and how it became important in modern society, and how it has developed in the recent history of society; (3) the importance and structures of classroom interaction; (4) the meaning of teaching; (5) the impact of school organisation on the education system; (6) the ways in which education is conceptualised as a system, with particular reference to the pedagogical reflection on education and its reforms.

In addition, some details about the aspects that are particularly relevant in Luhmann's sociological theory of education should be mentioned. First, as regards the interconnections between classroom interaction, traditionally considered as a 'micro' social phenomenon, and the education system, traditionally considered as a 'macro' social phenomenon, Luhmann aims to overcome the traditional distinction (and contraposition) between micro and macro social realities, replacing it with a distinction between two different types of social system. These types of social system can either be explained separately or reconnected, as they are based on the same type of operation, i.e. communication. Moreover, the common reference to communication makes it possible to explain education as 'practice', not only at the level of interaction, where education can be autonomous, but also as a wider social system. This is not considered as an analytical abstraction, but as an empirical system of communication that has a function in society and is based on structures that allow the provision of education.

Second, Luhmann's theory can account for the importance of education in modern and contemporary society, in that it identifies its function and the developments of the ways of observing the specific achievements of this function. The inclusion of a theory of education in a theory of society is important to understand education in a broader context of analysis, thus explaining the social importance of education in an empirical way based on the evolution of society rather than on principles or values, i.e. as a social reality that has gained its importance historically. This also explains why the present society cannot renounce, underscore, or even 'menace' the existence of education, unless it changes its own structure.

Third, Luhmann's theory makes it possible to overcome the dichotomy between the organisation system of education and the education system. It does so by explaining how organisations such as schools and universities are autonomous in their own self-reproduction, as they are specific social systems, while at the same time being included in the wider social system of education and being necessarily dependent on the structural conditions of this system. Organisation is particularly important in the education system as it is the system in which change can be made without menacing the function of the education system and the autonomy of teaching in the interaction. However, organisation does not determine either the function of the education system or the way in which teaching is achieved in classroom interactions.

Fourth, Luhmann's theory explains the possibilities and limitations of connections between education on the one hand, and other social systems, such a families, economy and politics on the other. In particular, it makes it possible to explain the differentiation and connections between conveyance of knowledge and school selection on the one hand, and family socialisation, provision of jobs and careers, and political reforms on the other. Differentiation and connections are framed by these social systems' (education, families, economy and politics) belonging to society, specifically by the different functions that each of them fulfils within society.

Finally, Luhmann's theory makes it possible to understand the connections between educational 'structures' on the one hand and educational 'culture' (which Luhmann calls 'semantics') on the other, including the pedagogical description of education in the latter. This understanding is linked to a very important distinction that Luhmann draws concerning communication processes, i.e. the distinction between communication as the operational basis of education (creating social structures) and communication as an opportunity to observe education (creating 'culture' or semantics). In this perspective, in which semantics does not determine social structures, pedagogy cannot determine, but only orient the meaning of education and teaching.

Against this background, a strength of Luhmann's theory is that it allows both differentiation and reconnection between pedagogical reflection and sociological analysis. In his systemic perspective, pedagogy is a theory of reflection that is part of the education system, while sociology is part of the science system and provides an external observation of education. This differentiation creates the opportunity of a twofold perspective on education, which is not based on competition but on complementarity. On the empirical level, this complementarity concerns the pedagogical analysis of conditions of learning and the sociological analysis of conditions of communication. The combination of these different types of analysis can enrich the understanding of education and connect learning to communication. However, the combination of pedagogy and sociology can also be a challenge, as the two perspectives can diverge and become incompatible. This happens when sociological and pedagogical observations are not taken as a way of doubling reflection on education, but as a way of proposing mutually 'critical thinking'.

The complexity of Luhmann's theory is challenging for all readers, regardless of their background and level of expertise, but this challenge can open up great opportunities of analysis and reflection on education. Furthermore, the additional value of this challenge consists in the opportunity to project possible future developments of analysis and reflection, which is the most important (potential) legacy of Luhmann's theory. Further developments in the sociological theory of education were interrupted by Luhmann's death. Thus, the theory is awaiting completion through new contributions and advancements in many areas. We shall come back to this topic in Chap. 8.

The volume is organised in seven chapters. In Chap. 2, we deal with Luhmann's biography, which sheds light on his thought, and explains the importance of his theoretical background and production. Chapter 3 concerns the basic concepts of Luhmann's multi-layered theory, and sets the stage for the following, more focused chapters on education. Chapter 4 includes all the basic concepts that are necessary to understand the meaning of education, in particular dealing with the connections between learning, which is based on the interiority of individuals, and communication, which can include the problem of individual learning in education as a social system. The chapter also identifies the function and the basic features of education in modern society. Chapter 5 describes the differentiation within the education system and the connections between its structures, i.e. conveyance of knowledge and selection, teaching as an interaction system developed in the classroom, and school organisation contextualising teaching and reflecting the necessities of the education system. Chapter 6 deals with the pedagogical reflection on education and its main objects, including autonomy of education, educational technologies, and the recurrent necessity of reform. Chapter 7 deals with Luhmann's reception and legacy in sociology and pedagogy. Chapter 8 includes some final remarks on the contribution of Luhmann's theory to the theory of education.

When the English edition of Luhmann's books and papers is available, we have included both the German and the English editions in the reference citations. In case of quotations, we have systematically chosen the English edition, to facilitate the English speaking readers.