Chapter 7
Reception and Legacy

7.1 The Reception of Luhmann's Theory

Luhmann's research focused on all the subsystems of modern society with the double intent to develop a general theory of social systems, which could be applied to the analysis of modernity, and to 'irritate' the subsystems of society, in particular their reflection theories. Some disciplines, such as political science and theory of law, have been influenced by Luhmann's theory. It is also possible to find many references to this theory in many publications on art and aesthetics. Scholars in organisation science have recently discovered Luhmann's theory, and a number of publications in this field have imported, more or less successfully, some of its concepts. Other disciplines show a limited interest (e.g. theology) or almost no interest (economic theory) in Luhmann's contribution. One obstacle that is hard to overcome is the German language in which most of Luhmann's books and papers were published. Luhmann's most important books have been translated into English only in recent years (see Chap. 2), although some translations in English appeared at the end of the eighties. In fact, the interest of the English-speaking world for Luhmann's theory has just started.

Luhmann's works on education are a special case, as Luhmann decided to organise a series of seminars and publications with the explicit intention to provoke, i.e. to 'irritate', pedagogy. These publications were edited together with the German pedagogist Karl-Eberhard Schorr and are entitled *Fragen an die Pädagogik* (*Questions to Pedagogy*). This series of edited volumes address important issues in education, such as educational technologies, curriculum design, teacher/pupil interaction, and classroom communicative structures—all issues that we have extensively discussed in the previous chapters. These volumes involved both sociologists and pedagogists, who over a period of fifteen years (1982–1996), tried to understand whether and how the perspective of Social Systems Theory could contribute to pedagogical reflection and perhaps also to educational practices.

The collaboration between Luhmann and Schorr had begun with some articles (in 1976 and 1979b) and with the book *Reflection Problems in the system of*

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education (1979a:2000). As we have seen in the previous chapters, this volume summarises and reorganises the observation of education based on the Social Systems Theory as conducted in that period. It identifies three main pedagogical problems which can also be studied by sociology, i.e. autonomy of education, social selection, and educational technologies. The two authors argue that pedagogy addresses these problems by 'hiding' rather than solving them. Sociology can see this difficulty of pedagogy but cannot offer direct help to education, let alone 'practical' help to teachers that work in the classroom. Sociology can however irritate the educational system and see how it reacts, a well-known approach in Luhmann's theory.

The reactions of pedagogists to these publications were of different types. On the one hand, the analysis of Luhmann and Schorr was seen as a contribution that pedagogy should take into account (Tenorth 1983, p. 355) and respond to. However, it was also argued that pedagogy should claim its status of autonomous discipline (Derbolav 1981, p. 363). On the other hand, some authors stated that it was difficult to understand how and to what extent such a complex and articulated theory could contribute to 'educational sciences' (Groothoff 1987), in particular considering its radical position against humanism as opposed to the traditional pedagogical concept of 'subject' or 'human being' as the centre of the educational process (Groothoff 1985). Moreover, Luhmann and Schorr's provoking assertion that education does not adequately reflect its responsibilities in the process of social selection was considered with suspicion, or even rejected, with the counter-argument that selection is a central issue not just for pedagogy but also for schools and teachers.

This discussion led to the publication in 1987 of a book edited by the two educators Oelkers and Tenorth. The book, which had special resonance, was an in-depth treatment of the topics mentioned above. In particular, it asked the following questions: is it possible to think that education, and pedagogy, can renounce moral, values and humanism? And to what extent is sociology able to observe these 'latencies' of the education system? The answers still oscillated between a self-critical approach and doubts about the scientific consistency of Social Systems Theory.

Since then it has been quite normal to find references to Luhmann's theory in pedagogical publications (see Lenzen 2004, explicitly devoted to the reception of Luhmann's theory in education science), although often limited to specific aspects that can be adapted to the pedagogical reflection. Among the pedagogical contributions, a few deserve to be mentioned here. Kade (1997), in another text edited by Luhmann with the pedagogist Dieter Lenzen, identified the code of the education system in the distinction conveyable/not conveyable (*vermittelbar/unvermittelbar*), which was taken up by Luhmann in his late publications on education (see Sect. 5.1). Jürgen Schriewer focused on comparative historical studies and on the educational institutions that involve other subsystems, such as universities, which operate both in education and in science, or vocational schools, which operate as well in the economy. Schriewer observed these institutions as areas of intersection

(*Überschneidsungsbereiche*), which enable the symbiosis of different functions. According to Schriewer (1987), this type of institution makes the modern form of differentiation compatible with the needs of different subsystems for mutual performance.

In his historical-comparative research, Schriewer (1983) published important studies on French and German school and high-school organisations. He observed an important difference between the French and German situations. He argued that in France the pedagogical reflection was based on the central role of the organisations, and therefore the development of a theoretical reflection was relatively marginal. On the contrary, in Germany, Humboldt's idea of *Bildung*, which was based on science, led to an enormous interest in theoretical abstraction. Therefore, he observed a radical difference between the two educational systems. The influence of the Social Systems Theory on Schriewer's research emerged in the following quotation, which explains the reference to second-order observation: 'comparison does not consist in relating observable facts but in relating relationships or even patterns of relationships to each other' (1988, pp. 33–34, see also Schriewer and Holmes 1988).

In the English-speaking academic world this debate was almost unknown, due to both language barriers and the theoretical and abstract way of dealing with these problems, which was unusual in the English and American debate on education. In the literature in English, the lack of knowledge of Luhmann's theory is shared by pedagogical studies on education and sociology of education alike.

An exception is the work of the Belgian sociologist Raf Vanderstraeten, who has tried to disseminate Social Systems Theory by publishing in English, and acquiring a certain international reputation. His papers apply the systemic concepts to education. For instance, he points out the differences between the pedagogical and the sociological observation of educational accomplishments, emphasizing that they are incongruent perspectives. He also claims that 'a theory of education requires a radical reconsideration of classical conceptual distinctions and determinations' (2000, p. 23). Vanderstraeten argues that the concept of double contingency (Sect. 3.2.3) can play a central role in this reconsideration, defining double contingency as the *conditio socialis* of education, which is 'recognized by both sides, teacher and pupil: both know, and both know that they both know, that each of them could also act differently' (Vanderstraeten 2003, p. 31). Given this influence of double contingency, education cannot develop a reliable technology based on causality. The education system is based on the circularity of the different perspectives, and education cannot, therefore, be controlled (Vanderstraeten 2001). According to Vanderstraeten, the question is whether instruction and education can start from these assumptions without abandoning the bulk of their conceptual tradition.

Another important aspect of Vanderstraeten's contribution concerns social selection. Vanderstraeten emphasizes Luhmann's idea that the differences that are produced by education are genuine educational products and not the effects of 'social inequalities' generated outside education, in particular in the economic

system. He states, 'the school first of all socializes for the school, not for society—because it produces its own differences and creates its own reality' (Vanderstraeten 2004, p. 268). For this reason, 'concretizations of pedagogical behaviour are laden with difference; they indicate lines of success and thereby establish the possibility of failure. Despite good intentions, pedagogical means transform equality into inequality. They motivate and discourage' (Vanderstraeten 2001, p. 274). The project of education reforms, for instance to face unemployment problems, should take into account that the variety of degree programmes, and the corresponding need for selection, are circularly linked with the demand for employment. Possibilities of training determine the requirements of the labour market and vice versa (Vanderstraeten 1997). The education system influences the other subsystems through the code of selection, rather than the opposite (Sects. 5.3 and 5.4). Probably, among Luhmann's ideas, this is one of the most difficult to accept for pedagogy.

Apart from the work of Vanderstraeten, the interest in, and the resonance of, the work of Luhmann in the English-speaking world have been very limited. In what follows, we shall suggest some possible areas of interest for pedagogy, which can be developed on the basis of Luhmann's theory.

7.2 The Legcy of Luhmann's Theory

7.2.1 Social Selection

The first area concerns social selection, which is probably also the greatest misunderstanding between Social Systems Theory and pedagogy. Pedagogy firmly states that the differences in educational outcomes are the consequences or effects of social inequalities, such as economic inequalities or 'cultural' inequalities arising from socialisation to 'taste' or 'habits' (see Bourdieu 1979:1984). This idea is supported by statistical evidence produced by sociological research. The critical question about this idea is the following: assuming that all the inequalities generated by other subsystems disappeared and that, therefore, all pupils were considered 'equal', could we draw the conclusion that all pupils would be educated in the best way and that there would not be differences among them? A positive answer to this question would mean accepting the suppression of one of the most important freedoms of the pupil (and of the human being), i.e. the freedom to reject *what* is taught (for lack of interest, boredom, aversion, or for any other reason), and/or the *intention* of teaching. It would mean accepting that the pupil cannot refuse to be educated. No perspective on teaching and no pedagogical reflection would deny pupils' freedom of rejection, regardless of their ideological orientation. Denying this freedom would be seen as absurd. However, the theories of external inequalities indirectly claim this pedagogical absurdity.

At the general theoretical level, the problem is clear (Sect. 5.3): the pedagogical intention generates the difference between acceptable and unacceptable

behaviours, i.e. between better and worse performances, which are not differences coming from the outside. If selection is the exclusive responsibility of education, however, a series of problems arise. One problem concerns where selection 'filters' should be placed. This question may be rephrased as follows: is it better to be selective during the school time and less severe at the end (diploma, degree, etc.) or vice versa? Does it make sense not to select during the first educational cycle (primary, perhaps even secondary school) and then 'cream off' in the last years of secondary school or at the university? Is it better to leave to the university or even to the labour market the unpleasant task of selection? From a sociological point of view, we could say that each preference creates both opportunities and risks. Can pedagogy gain such a degree of 'transparency'? This topic could be of great interest not only in terms of teaching and assessment, but also in terms of policies and reforms.

7.2.2 Educational Technology

A second area of potential pedagogical interest is educational technology. The divergences between Social Systems Theory and pedagogy in this regard are wide but not as extreme as in the case of selection. In recent years, many teaching methods have been developed that seek to exploit the potential of communication media, including social media, together with the potential of classroom interaction. The passage is from blackboards and chalk to interactive whiteboards, from the row of desks ordered in front of the teacher to dedicated rooms with no fixed positions for the pupils. There is no doubt that these innovations create new potentials for the education system, in particular by considerably broadening the teachers' room for manoeuvre. Luhmann's argument in this regard, however, is compelling.

On the one hand, pupils are not trivial machines and no technology can solve the problem of the unpredictability of their actions. On the other hand, teachers cannot work without causal assumptions about their actions. Against this background, teachers can exploit the potential of socialisation in classroom interaction, but in any case they need to distinguish between socialisation and intentional education. In the kindergarten, or perhaps even in the primary school, the lack of distinction between socialisation and education may not be a problem.

An interesting, and internationally well-known case is that of the Reggio Approach to kindergartners, in which the importance of socialisation, and its prevailing role over teaching, has been clearly theorised by the pedagogists who have worked in these schools and their numerous followers in the world (see Edwards et al. 1993; Thornton and Brunton 2009). This pedagogical theory is based on the observation of children's autonomy, which, being a natural feature of human beings, is conceived as a guiding principle for education. This leads to reject teaching as a form of interaction and to consider education as the promotion of children's self-socialisation. However, does that apply to higher level of

education? To what extent can teachers take advantage from the uncertainty generated by double contingency, i.e. by the fact that pupils are autonomous observers and decide based on their autonomy?

7.2.3 Classroom Interaction

The problems of selection and technology can be considered within a more general problem. Teachers and pedagogists aim to educate pupils to autonomy and freedom, but this leads to two important questions. First, how can the teacher educate to freedom without being blocked by the paradox implied in the formula 'education to freedom'? Second, how can the teacher react when the pupils become indeed free and autonomous and behave in both acceptable *and* unacceptable ways? These questions lead to a third area of pedagogical interest concerning teaching as interaction in the classroom. This area has been largely explored in the last forty years; therefore, it deserves some attention and it is interesting to see how Luhmann's theory can improve reflection and reorient sociological, pedagogical and linguistic studies on classroom interactions.

Studies on classroom interaction and teaching developed in the same period in which Luhmann produced his first theoretical effort, i.e. in the seventies, although without any explicit or intentional connection with this effort. The first important contributions to the analysis of classroom interaction (Sinclair and Coulthard 1975; MacHoul 1978; Mehan 1979) focused on what was considered a typical structure consisting of teacher's initiation, i.e. a question, students' 'exam' answers (Heritage and Clayman 2010, p. 28) and finally teacher's feedback, typically based on the distinction between better and worse performance. Mehan (1979) defined this sequence as a combination of Initiation, Response and Evaluation (IRE), indicating it as the basic structure of teacher-students interaction in the classroom.

These studies did not deal with conveyance of knowledge. They focused on the teacher's activities of questioning and evaluating, and therefore on the ways in which the distinction between better and worse is stressed in the interaction. Moreover, by focusing exclusively on interaction, they did no deal with its consequences for selection. Against this backdrop, the relevance of the systemic dimension of education was not recognised. The interaction was interpreted as a sequence of actions based on a local structure that determines teachers' initiatives, students' responses and teachers' feedback. These studies were able to identify and analyse the hierarchical structure of this interaction, but they were not able to observe the education system in which the interaction takes place, in particular the operational importance of coding. They observed teaching as a business between the single pupil and the teacher, and the involvement of the classroom in terms of seriality of single interactions, ignoring the problem of expectations.

In the following years, this approach was further developed by Conversation Analysis (see Heritage and Clayman 2010; Walsh 2011), leading to a widening gap between very accurate analyses of classroom interactions and lack of

observation of the education system and its structures. Conversation Analysis shares with Luhmann's theory two relevant presuppositions (see Chap. 5): (1) the structure of interaction arises independently from individual participants, and makes a difference in the social dimension; (2) the interaction system is reproduced through a retrospective observation of what has just happened, so that foreseeing its future is impossible. However, Conversation Analysis ignores the inclusion of the interaction in the wider education system, as it is based on the presupposition that 'institutions' are exclusively made relevant in the interaction. Moreover, institutional interactions, including educational interactions, are considered variants of a mundane structure that is typical of everyday interactions, which is seen as the basic form of sociality. Institutional forms of interaction show systematic variations and restrictions of activities when compared to mundane conversation (Drew and Heritage 1992), and their specificity depends on the fact that they are 'task-related' and involve participants who represent organisations, i.e. who have a professional identity.

Conversation Analysis has provided insightful knowledge on the structure of the interaction based on the evaluation of better and worse performances linking teaching to selection. This knowledge includes, among other aspects, the detailed analyses of: (1) the different types of teachers' questions (e.g. Margutti 2010); (2) the ways in which questions can be asked at different moments of the interaction (e.g. Lee 2008); (3) the distinction between correcting mistakes and repairing misunderstandings (Macbeth 2004), thus identifying ways in which the negative value of the code is protected against possible injustice; (4) so-called 'scaffolding' (Seedhouse 2004), i.e. the ways in which teachers pursue the positive value of the code until they can. In particular, scaffolding is designed in such a way as to both reduce the impact of selection, favouring the reproduction of the positive value (better performance), and unfold the paradox of the double level of interaction, thus increasing sensitivity for students. Conversation analytical studies applied to classroom interaction facilitate a better understanding of the structure of interaction in the education system. They are coherent with Luhmann's idea that the interaction is the system in which education can be autonomous. However, they would benefit from the observation of the education system, its coding, and the distinction between education and selection. Moreover, they would benefit from observing the self-generated uncertainty of the educational interaction, as they tend to observe regularities, rather than variability (e.g. students' rejections or interruptions).

Another set of studies in social pedagogy tries to observe the ways in which sensitivity for pupils' participation in educational interactions can be increased (see Sect. 5.3). To this purpose, they show how the paradox of the trivial machine (see Sect. 4.6) can be unfolded, observing learners as active constructors of knowledge who can express their views, challenge different ones, and explore different options (Mercer 2000; Mercer and Littleton 2007). According to this pedagogical approach, learning can be promoted through 'dialogic teaching', which is defined as 'that in which both teachers and pupils make substantial and significant contributions and through which children's thinking on a given idea or theme

is helped to move forward', and through which 'teachers can encourage students to participate actively' (Mercer and Littleton 2007, p. 41). In this view, teachers should 'orchestrate' pupils' participation (Erickson 1996; O'Connor and Michaels 1996). The value of pupils' experience is affected by the extent to which dialogue 'enables them to appreciate the purpose of the activities they do, and how these activities fit together into a meaningful sequence of events' (Mercer and Littleton 2007, p. 55). Dialogic teaching is therefore a way of stressing sensitivity as a primary mission of education, which increases the opportunities of learning. This pedagogical approach does not only try to observe if education can be separated from selection, but it also shifts the attention from hierarchical teaching to dialogic teaching, with the intent of showing the ways in which the hierarchical structure of roles in the education system can be mitigated (and probably concealed). Luhmann's theory may be useful to clarify how the system can deal with evaluations and selection, as well as discuss the possible bifurcation of the communication system in the direction of either trust or distrust (Sect. 5.3).

A different way of observing the importance of sensitivity is based on the differentiation between education and facilitation of students' participation. Facilitation is considered 'educational', but it is pursued in noncurricular activities, for instance contrasting bullying and violence, or introducing 'relational' competences (Hendry 2009). In this way, two separate types of education are introduced in the classroom, in the attempt to avoid interferences between sensitivity and evaluation/selection and the corresponding bifurcation. Following Luhmann, this attempt should move from the analysis of the reaction of pupils who can compare teaching and facilitation. Two questions should find an answer in this respect. The former is how seriously the students will consider facilitation activities that are not evaluated. The latter is what happens to conveyance of knowledge if students take the method of facilitation seriously.

A way to avoid this type of problems in the classroom could be by differentiating facilitation and education as different types of interaction systems and avoiding interferences between them (Baraldi 2014). On the one hand, this solution seems to guarantee the reproduction of the education system; on the other, it seems to ensure that students are exposed to sensitivity in areas in which education is not considered effective or relevant. How far this differentiation can be pursued in the classroom, to what extent it rather requires different settings, and what its consequences are for a functional system operating based on persons, motives and memory (Sect. 4.2) are still open questions, which Luhmann's theory can help answering.

7.2.4 Relationship Between Education and Economy

A fourth area of potential pedagogical interest concerns the relationship between the education system and other subsystems of society, in particular economy. The outcomes of education become visible at two levels, i.e. as (1) qualifications

issued by schools and universities, and (2) skills applied in the workplace or in life. The observation and evaluation of the application of the learned skills takes time, e.g. it is only possible to see if an engineer knows how to do her/his job when s/he starts working. The observation and selection of qualifications, on the other hand, are immediate, e.g. it is easy to certify that an engineer is not an accountant, and a welder is not a lawyer.

For this reason, educational policies prefer to focus on homogenisation and standardisation, based on qualifications, for instance in the well-known case of the Bologna process enhanced by the European Union. Against this background, the debate on reforms concerning the relationship between education and economy, and the adaptation of education to the requirements of employment, seems rather confused and often alarmist. If we start from Luhmann's idea that there cannot be an exact match between the performances of a system (e.g. the education system) and the needs of another system (e.g. the economic system), we are likely to understand the limits of these reforms. Universities, high schools, and vocational training institutions cannot be synchronized with the labour market. Therefore, university, in particular, should teach skills that people cannot learn while they are working.

This finding could reduce the political pressure on improving adaptation of higher education, and could grant both educators and employers greater freedom to manage educational outcomes, without imagining an impossible overlap and thus being systematically dissatisfied or disappointed.