

IS TRANSLATION AN AUTOPOIETIC SYSTEM?

Sergey Tyulenev

University of Cambridge

Abstract

Translation is analyzed from the standpoint of its systemic properties. Translation is shown to have the capacity to observe itself and its difference from the environment. Observation being a major autopoietic factor, translation may be considered as an autopoietic system. Doubts about this hypothesis arise because of the peculiarities of communicative properties of translation. Translation plays the role of the mediating party in complex translation communication events and its communicative behavior is 'defective' in that translation does not act upon source messages because its communicative function is passing messages on to the target party. As a system, translation may be studied against the background of its environment and be compared with other social systems. It may also be viewed as a subsystem within larger social formations. Although, as a mediator by nature, translation thrives on structural couplings and interpenetrations with other systems, thereby manifesting its exceptional interactional openness, it nonetheless constitutes an operational closure with its own first- and second-order observations.

Résumé

Dans cette article, la traduction est analysée du point de vue de ses propriétés systémiques. La traduction a la capacité de s'observer et d'observer sa différence par rapport à l'environnement. Etant donné que l'observation est un facteur autopoïétique majeur, la traduction peut donc être considérée comme un système autopoïétique. Les doutes concernant cette hypothèse peuvent être attribués aux particularités des propriétés communicatives de la traduction. La traduction joue le rôle de médiatrice, ou de partie médiatrice, dans une communication traductive aux manifestations complexes et son comportement communicatif est « défectueux » dans la mesure où elle n'agit pas sur les messages source, sa fonction communicative étant de faire passer les messages à la partie cible. En tant que système, la traduction peut être étudiée dans le cadre de son environnement et comparée à d'autres systèmes sociaux. Elle peut

être également envisagée comme un sous-système à l'intérieur de formations sociales plus larges. Bien que la traduction, soit-elle médiatrice par nature, soit portée par des couplages structurels et des interpénétrations avec d'autres systèmes, manifestant de ce fait son exceptionnelle ouverture interactionnelle, elle constitue une fermeture opérationnelle face à ses propres observations de premier et second ordre.

Keywords

Niklas Luhmann. Social systems theory. Autopoiesis. Sociology of translation.

Mots-clés

Niklas Luhmann. Théorie des systèmes sociaux. Autopoïèse. Sociologie de la traduction.

The decisive question is whether, and in what ways, other autopoietic systems, endowed with their own autonomy and their own operative¹ closure, can emerge within the autopoietic system of society [...]

Niklas Luhmann (2000a: 135)

1. Introduction

For more than a decade, a specter of Luhmann's social systems theory (SST) has been haunting Translation Studies (TS). After having made a sociological turn, or rather, one may argue, a turn towards sociology, TS seems to have got cold feet and, acting like a collectively conscious Hamlet, is pondering over Hamlet's existential dilemma: To be or not to be, i.e., to continue or not to continue? Translation students seem to share sociologists' doubts: Is it worth reading a couple of hundred arid, if not obfuscating, pages before one starts to understand anything, and who knows, what you can actually get out of this dense theory for your own research (Seidl and Becker 2005: 10, Sosoe 2001: xiv-xv)? This is how conscience makes us, as it made Hamlet, if for a moment, too cowardly and the native hue of resolution is sicklied over with the pale cast of thought and loses the name of action. As a result, apart from Andreas Poltermann's (1992) and Theo Hermans's (1997, 1999, 2007a, 2007b) attempts to apply Luhmann's SST to studying translation, not much has been done to continue and develop their initiatives, although the specter is still there, lurking, waiting to pounce.

TS turns out to be no exception to the rule, formulated by Jean Paul and quoted by Luhmann in one of his articles: "[I]n the realm of knowledge—different from the physical realm—sound always arrives earlier than light" (Seidl and Becker 2005: 54). The words 'social systems theory' and 'autopoiesis' are

1. In my own text below, I prefer the term 'operational' to the term 'operative' as well as the term 'functional (sub)system' to 'function (sub)system'. Yet, I leave the terms 'operative' and 'function (sub)system' in citations, treating them as interchangeable

familiar but discussions of them hardly go beyond what one reads in Hermans's works. Possibility of the application of Luhmann's ideas to the study of translation is still explored only superficially. In fact, translation students are not at all convinced if these allegedly antihumanist ideas (Moeller 2006: ix; Horster 1992: 10) are of any relevance at all when the crusade for *translator*, not *text* (of translation) is declared (Pym, Shlesinger and Jettmarová 2003: 2).

Systemic study of translation may be traced back to the Tel-Aviv–Leuven school which developed ideas of the Russian formalists who viewed national literature as a polysystem with its evolutionary dynamics and centre/periphery relations (Tynianov 1977: 255-81, Even-Zohar 1990). Translation was, however, primarily studied within a national literary system (or, in the exact terminology, “polysystem” since the literary system was seen as composed of a number of systems). Yet the literary system is but one social system amongst many others where translation is as actively practiced. No wonder, a broader social perspective of translational practice started to come into view of translation scholars and the role played by translation was considered not only within the national literary system, but in the overall social system (Tyulenev 2009: 156-8).

My aim in the present paper is to follow such broader view of social involvements of translation and to take the discussion of the applicability of SST to research in sociologically informed TS a step further. I will also problematize the epistemology of putting *translator* as the declared focus of scholarly efforts in TS.

2. Why Luhmann?

If there is no place like our present homelessness away from home, then it is Luhmann who can best guide us in this ever-expanding wilderness.

William Rasch (2000: 3)

Niklas Luhmann (1927-1998) is reputed to have been one of the leading sociologists of the twentieth century. His legacy is, amongst other things, in that he suggested a new way of describing not only modern society but also modernity itself. He courageously faced the growing rationalization and pluralization of our “disenchanted” world, picking up where Max Weber left (Rasch 2000: 2). This is where Luhmann and another giant figure of modern sociological thought, Jürgen Habermas, are drastically different. In contrast to Habermas, Luhmann does not hope to regain the lost unity of reason and, ultimately, the world. “Rather, in Weberian fashion, Luhmann participates

in the operations and mitosis-like self-divisions of modern rationality by describing how those operations function” (ibid.: 11).

Habermas’s mission is to find a unifying basis for the world which has had a great fall but which might, allegedly, be put together again; Luhmann paints a warts-and-all portrait of the de-centered and demystified world of modernity. In his SST, Luhmann presents the world as a multitude of equally unequal systems. Specifically, he is interested in self-(re)producing, or autopoietic, systems. Being a sociologist, he is primarily concerned with social systems, communication-based self-reproducing systems.

Throughout history, there have been different types of social systems’ self-organization. According to Luhmann, the following four such types may be singled out: segmentary differentiation (the system is composed of nearly identical self-sufficient subsystems); center/periphery differentiation; stratified (rank-based) differentiation; and functional differentiation of modern society (1998: 595-776; cf. Habermas 1989: 114, where the fundamental difference between segmentally and functionally differentiated societies is traced back to Durkheim). The last function-based type of social-systemic organization is exactly the Weberian rationalized and pluralized world of modernity. Although the leading social philosophers agree with such a vision of modern society, the difference between them, best exemplified by the controversy between Habermas and Luhmann, is in how they answer the questions: Is the social reality ‘out of joint’? and Shall we accept it as it is or try and change it to make it somehow better? (Bausch 2001: 61-7, 95-153) It should be noted, however, that to change the world of rationalization and pluralization may mean to do away with rationalization and pluralization and this is “in no way desirable” (Odo Marquard, quoted in Rasch 2000: 2). It is also quite possible that the programs of changing modernity into a post-modernity are no more than an anti-modernist and *au fond* pluralist slogan which “affirms an old and respectable modernist motif, for the modern world was always and still is rationalization and pluralization” (Marquard, ibid.). In the midst of this controversy and at least, optimistically (or naively?) speaking, until a consensus is reached, Luhmann, contemplating the reality with an unblinking eye, seems to be the best Virgil or Beatrice for us, depending on how we see the world—as *Inferno* or *Paradiso*. Let us follow him.

3. Autopoiesis and Self-Organization

3.1. Key Concepts of SST

Social systems are defined as systems, which produce themselves *qua* systems. This circular self-reproduction is called *autopoiesis* (from Greek *auto*—self, and *poiein*—to produce). Elements of *allopoietic* systems are supplied from outside, from the system's environment; autopoietic systems produce their elements themselves out of themselves and thereby constitute operational closures because no outside operation can penetrate them. Autopoietic systems are however interactionally open. They utilize energy and information of their environment (Luhmann 1995: 118, Schrödinger 1968, Foerster 1981: 2-22). In SST, interactions of the system with its environment are referred to as structural couplings.

On the level of its operations, the autopoietic system does not receive any inputs from the environment but only perturbations (or “irritations”), which then might trigger internal operations in the system. In other words, external events may trigger internal processes but cannot determine those processes. In this respect, Luhmann speaks of a “trigger-causality” [*Auslösekausalität*] instead of an “effect-causality” [*Durchgriffskausalität*]. (Seidl and Becker 2005: 23.)

Internally, autopoietic systems reproduce themselves by virtue of a particular structural mechanism—their self-organization. Self-organization, that is, the system's makeup, structures of which the autopoietic system is composed, is a result of the system's internal operations: the system's organization is “an interrelated network of components and component-producing processes” (Csanyi and Kampis, quoted in Bausch 2001: 32). Yet, the system evolves by growing in complexity as it observes and makes sense of its complex environment. Following George Spencer Brown (1969; see also Baecker 1999: 4-5), Luhmann interprets the term “observation” at its highest level of abstraction (1995: 36, 506). Observation is not reduced to its optical manifestation but is defined as any operation that is based on distinguishing between phenomena, e.g., in terms of their being intrinsic or extrinsic in relation to the observed system. Such observation may pose “reference problems,” i.e., obstacles jeopardizing communication, which are to be resolved. This leads to diagnosing new needs of the system that necessitate creating new functions and respective functional subsystems which focus on resolving identified problems (Luhmann 2000a: 138).

Thus, there are two principal features of autopoietic systems: autopoiesis, (re)production of the system's units, and the system's self-organization, its self-(re)structuring. The emphasis on autopoiesis and self-organization of the

system is laid because doubts, whether translation is a communication system or not, boil down to these two fundamental characteristics of the system.

3.2. *Ephemerality of Translation and Its Inferior Social Status*

Sparseness of the translation “mediation space” as compared to other social systemic phenomena casts doubts about systemic properties of translation (cf. in Bourdieusian terms in Wolf 2007: 110). Yet, ephemerality of translation as a systemic formation is hardly a criterion for deciding whether translational phenomena form a system or not. In fact, in communication systems theory, communication events are conceived of as fleeting phenomena disappearing as soon as they appear (Luhmann 1995: 49). Yet, this does not decrease their ability to self-organize as systems.

Social status of translation is also brought up as a reason why translation could not be viewed as a social systemic phenomenon (see an overview in Wolf 2007: 114-7). However, neither translators’ submissiveness and their invisibility in society, nor social ‘marginality’ of the translator’s profession or the lack of its institutionalization; nor the fact that translators’ products are the result of interplay of a number of disparate factors, that they are incapable of forming their own space, submitting to the target cultural space—neither of these hold up as impregnable arguments. Translation can be considered as a social systemic phenomenon based on its nature, which is mediation.

3.3. *‘Dehumanization’*

Another reason for denying that translation has a status of communication system is that the latter is defined in SST as composed of communication events—not of human beings. The essence of this reason, however, is not so much a denial of systemic properties of translation, as a misconstruction of Luhmann’s attempt to keep apart psychology and sociology and is a residue of the centuries-long humanist tradition in the humanities. It is important to understand that human beings, translators and interpreters, are not dispensed with; they constitute an important part of the environment for translation *qua* communication system. Luhmann states:

If one views human beings as part of the environment of society (instead of as part of society itself), this changes the premises of all the traditional questions, including those of classical humanism. It does not mean that the human being is estimated as less important than traditionally. Anyone who thinks so (and such an understanding either explicitly or implicitly underlies all polemics against this proposal) has not understood the paradigm change in systems theory (1995: 212).

No communication, including translation, would be possible in the society without physical and psychic systems (ibid.: 210-5).

What Luhmann suggests is a better focus: the social realm is what is communicated and made socially 'visible'. Thoughts, for instance, are not socially visible and should be studied in psychology. Translation as a socially 'visible' phenomenon cannot exist without the psychic systems. The term *translator*, however, lacks precision. The translator is a combination of three types of systems: physiological, psychic and social. Socially relevant translation research focuses on social facts, whereas psychology concentrates on intra-human phenomena. This does not exclude interdisciplinary studies, but requires a conscious interdisciplinary effort—not confusion because the student does not know better. By these lights, the terms such as *human being*, *translator*, turn out to be too fuzzy and necessitate further precision with regards to the three types of systems involved. Luhmann's SST provides us with the tools to handle this kind of challenges.

3.4. *Translation Communication Event and the Nature of Translation*

Autopoiesis of translation is ensured by the recursively reproduced nature of translation manifested in translational communication event (TCE). TCE is a special case of communication events. Despite their staggering variety through different human communities and different historical periods, TCEs have intrinsically invariable characteristics. It is this fact—existence of translation as a specific type of communication—that serves as the autopoietic guarantee of translation as a communication system. From the standpoint of this fundamental criterion, all communication events are either translations or not. Translation exists not because there are people who engage in translation or want to study those who engage in translation practice; rather, there is a social function fulfilled by a certain type of communication. This communication activity fulfills a specific function by virtue of being what it is. Its *raison d'être* is to fulfill this particular social function. Properties of translation allow it to be “differentiated according to a specific threshold problem” and to make what is improbable probable and realizable (Luhmann 1986: 20-1; also Luhmann 2000a: 138). Translation increases the likelihood of intrasystemic communication and intersystemic interaction. As to human beings participating in TCE, they exercise only the trigger-causality on the translation system.

As far as the self-organization of translation is concerned, an important question is: What is included into the translation system—only translational acts or translational acts plus the initial and final communications. Put differently, since TCE brings together three parties A, B, and C, where A and C

are source and target of communication and B is a translating agent, what should be included into the translation communication system: only B or all the three?²

To answer this question, it is important to understand that TCE is composed of two communication events (CEs). Each of the two CEs consists of three parts (selections)—utterance, information and understanding (Luhmann 1995: 139-44). CE₁ occurs between A and B (the source and translation):

$$CE_1 [A: Utterance_1 > Information_1 \cong B: Understanding_1].$$

Utterance is everything that is communicated by A. Information is only the communicative core of utterance. The information in CE₁ contains what A wants to be understood. Yet, rules governing semiosis force A to add other features to this communicative core; A expects the other communicating party to extract the communicative core from its semiotic packaging. That is why in the formula above, the initial utterance is shown to be 'larger' than its information. The final element of this communication is B's understanding. Inevitably, B's understanding is but an inference. Understanding is always conjectural and interpretative. This is why in the formula, I show the equivalence between A's information and B's understanding as approximate.

CE₂ unfolds between B and C:

$$CE_2 [B: Utterance_2 > Information_2 \cong C: Understanding_2].$$

The above description of CE₁ is *mutatis mutandis* applicable to CE₂.

In reality, the complexity of TCE is due to the fact that what we theoretically slice above into two separate formulae is spliced:

$$TCE: [A: Utterance_1 > Information_1 \cong B: (Understanding_1 = Utterance_2) > Information_2 \cong C: Understanding_2].$$

Although TCEs are complex events with two distinguishable CEs, CE₁ is communication-wise 'defective'. Normally, CE strives to reach a goal—to establish/reinforce communication. This is not so as regards CE₁. Understanding₁ is reached but it is not acted upon. The translating agent (B) understands

2. In the process of communication, both A and C become both source and target in turns. In the following discussion, for simplicity's sake, I will limit myself to only one direction of communication: A→(B)→C.

in order to pass its understanding to the other end of the communication chain. The translating agent mediates between communicating parties proper. Neither A nor C expect the full participation of B in the communication. Yet, the realization of dependency of the communication between A and C on B is there. The fuller translation manifests itself as a social subsystem, the fuller the system or interacting (sub)systems recognize translation as a factor to take into consideration. A and C exercise trigger-causality on TCE. TCE, however, cannot be generated without A and C and therefore the entire TCE should be considered as the unit of the translation system. In his book on mass media, Luhmann argues that, although with mass media, “no interaction [...] can take place between sender and receivers” because of the interposition of technology, reception should be included into the communicational unit, because

[c]ommunication only comes about when someone watches, listens, reads—and understands to the extent that further communication could follow on. The mere act of uttering something, then, does not, in and of itself, constitute communication. On the other hand, it is difficult in the case of the mass media (in contrast to interaction that occurs among those co-present) to determine the target group involved in each instance. To a large extent, therefore, obvious presence has to be substituted by assumptions. This is especially true if the process of turning comprehension/mis-comprehension into further communication within or outside the system of the mass media is also to be taken into account. (2000b: 2, 4)

In translation also, communication requires the mediated parties. Communication is also a recursive looping of one TCE on another. Therefore, although translation does not communicate with the mediated parties in the sense of acting upon the parties’ utterances, it would be logical to consider the operational boundary of the translation system as drawn by the entire TCE (A+B+C).

Intuitively, we feel that communication properties of translation as a mediator of communication are somehow different from communication properties of communicating parties proper. This intuitive feeling makes us think twice before categorizing translation as a communication system. Even when we do categorize translation as a communication system, we provide a caveat; for example, that translation may be described as a system within the constructionist paradigm (Hermans 2007a; 2007b). However, first of all, constructionism is inevitable to a lesser or greater degree (Weinberg 2009). Constructionism also helps discover new properties of studied phenomena and not only deploy a new conceptual apparatus. Constructionistically studied phenomena are not figments of imagination. If translation can be described as a system, it means translation is a system from a certain viewpoint.

Translation, then, is shown to be a system not only as a result of an epistemological exercise, but also in the ontological sense. If translation were not a system, it would be impossible to construct translation as a system. One cannot describe the frog as the mermaid because it is not the mermaid, but one can describe the frog as many things it is: a living organism, an amphibian, or a biological system. Saying that translation is a system does not exclude other possible ways of constructing translation; just as saying that the frog is an amphibian does not exclude the possibility of describing it as a biological system or an animal. That is why Luhmann opened his major book on social systems as follows:

The following considerations assume that there are systems. Thus they do not begin with epistemological doubt. They also do not advocate a “purely analytical relevance” for systems theory. The most narrow interpretation of systems theory as a mere method of analyzing reality is deliberately avoided. Of course, one must never confuse statements with their objects; one must realize that statements are only statements and that scientific statements are only scientific statements. But, at least in systems theory, they refer to the real world. Thus the concept of system refers to something that is in reality a system and thereby incurs the responsibility of testing its statements against reality (1995: 12).

To conclude this section, neither ephemerality of translation, nor its social status, nor its structural complexity and peculiarity of its communication properties prevent us from claiming that translation is a communication system.

4. Levels of Observation

To understand functioning of social systems and their subsystems, it is helpful to consider certain details of the concept of observation. Observing implies marking, or distinguishing one thing from another, for example differentiating between what belongs to the observing agent and what is alien to it (Spencer Brown 1969). Based on this distinction, some observed phenomena gain the status of ‘marked’ (intrinsic) as opposed to others—‘unmarked’ (extrinsic). Applied to the autopoietic system, some of the phenomena are considered to be part and parcel of the system’s communication whereas others—part of the system’s environment. In other words, some (‘marked’) phenomena are inside the system and *are* the system; the others (‘unmarked’) are outside the system and constitute the environment. The system observes constantly by distinguishing between itself as the ‘marked’ domain and the ‘unmarked’ environment. Autopoietic systems are, therefore, observing systems (Foerster 1981).

The system also reenters the division of phenomena as ‘marked’ and ‘unmarked’ into itself (Luhmann 1999: 17). As a result, its ‘marked’ homogeneity

is heterogenized. Over the course of history, social systems were heterogenized differently depending on what criteria were applied to their marked 'inside': segmentation of the society into identical (tribe-like) formations; rank-based stratification (classes, castes); territorial differentiation into center and periphery (the capital and provinces with respective political, economical, and cultural statuses); formation of functionally different subsystems (law, economy, art). All these difference schemata define different ways of how the system is divided into subsystems. Intrasystemically, the 'marked' state is juxtaposed with other 'marked' states. On the scale of the entire social system, these are subsystems and their respective relations are described as 'system vs. subsystem'; for each other, these subsystems are systems and, therefore, their relations are 'system vs. system'.

When dealing with system/environment relations, the system constitutes the internal [marked] side of the form, whereas the environment is its unmarked space. "The environment" is nothing else but an empty correlate of the system's self-reference; it provides no information. If, however, we are dealing with system/system relations [within an overall social system], then the other side can be marked and indicated. In this case [on the intrasystemic scale], art no longer deals with 'everything else' but with questions such as whether and to what extent the artist is motivated by political convenience or by wealthy customers (Luhmann 2000a: 135).

Thus, we see two levels of observation: 'system vs. environment' and 'system vs. system'.

In the latter case, (sub)systems form environment for each other but this environment is "marked and indicated," that is, it does provide information unlike the environment in the system/environment relations. Additionally, another level of observation—'system vs. subsystem'—is also to be considered if translation is to be studied in its societal involvements.

When we apply these different types of relations to translation, we see the following possibilities. Translation can be viewed as a subsystem within a system. To describe translation from this standpoint, one has to define the place it occupies in the overall social system and address the problem of its being 'diffused' amongst other subsystems.

When translation is studied as a subsystem in relation to other subsystems, the problem, if the translation subsystem is of equal status in the society with law, economy, art and the like or if it is somehow subordinate to these functional subsystems of the modern society, must be addressed. This scale of the observation is 'system vs. system'. The related question: What was the social place of translation before the modern function-based social systems assumed their present-day shape? — would be of a historical/diachronic

nature. For example, what was the social place of translation in the society of segmentary differentiation? To characterize the social role of translation within non-function-based societies would require theory of these societies. Luhmann's SST is focused on modern society. Therefore, I do not discuss the role of translation in other types of societies.

Finally, translation may be described as an autopoietic system distinguished from all other, autopoietic or allopoietic, systems without privileging its social characteristics. In this case, translation may be juxtaposed with any other type of autopoietic systems: for example, with legal or military operational closures, with biological or psychic autopoieses, etc. Translation may also be compared with allopoietic systems provided such a procedure is found worth an effort. This scale of observation is 'system vs. environment'.

5. System / Environment

5.1. *Could translation be described as a system?*

In the following three sections, I will consider translation from these different angles of observation and I will start with the last listed above because it is logical to start at the most fundamental level.

Translation seems to be too diffused in the society to form a distinct entity of the systemic status. This raises doubts if translation might be viewed as a systemic phenomenon. Linguistic categorization of certain types of activity as translation does not qualify as a full-blown proof that such types of activity are a system, an assemblage of interrelated and interacting units, let alone an autopoietic system.

We have seen that translation observes its distinction as an activity with its specific nature. It is by virtue of this nature that translation sets itself apart from any other type of activity. Moreover, this distinct nature of translation unfolds recursively over time and space, creating a memory of translation which is based on prior translational operations anticipating future translational operations. Thus, translation marks certain phenomena as belonging to itself and *being* itself rejecting all other, alien, phenomena. This process of observation creates an operational closure, which locks translation operations on themselves. This systemic circularity acquires an autopoiesis of its own because nothing else can operationally influence its distinct nature. All external influences exercise only trigger-causality on it. In this sense, translation is not like a conveyor which functions operationally as a system only as long as it is activated from outside.

As to translation's self-organization, the question is bound to arise: What is the structure of translation as a system? What are the elements that constitute it? To understand this, one has to see that translation is characterized by its social involvements and participates in social communication. Therefore, translation must belong to the category of social systems. As a social system, translation consists of communication events, but of a specific kind. These specific communication events are mediatory in that they involve mediation. As we have seen, translation involves at least three parties: A, B, and C, where A and C could not communicate without B. B mediates between A and C. Thus, the translation communication act is composed of the mediated part and the mediating part. Yet, strictly speaking, the element of the translation system is the section from Understanding₁ to Information₂, the 'B' part in the following formula (highlighted in bold):

$$A: \text{Utterance}_1 > \text{Information}_1 \cong \mathbf{B: (\text{Understanding}_1 = \text{Utterance}_2)} > \\ \mathbf{\text{Information}_2} \cong C: \text{Understanding}_2.$$

Utterance₁ and Information₁ are supplied from the environment; Understanding₂ is the result of the operation of the translation system. The boundary of the translation system is drawn by the operation of the transformation $A \rightarrow B \rightarrow C$. Luisi (1993: 24) supplies us with an example from the realm of biology. A minimal autopoietic system has a boundary and content composed of at least one component, B. One component (metabolite) A enters the system and a process $A \rightarrow B$ occurs in the system. This is the system's self-generating reaction which produces the system's element B necessary for the intrasystemic processes. Another type of reaction occurring within the system is $B \rightarrow C$. This is a process resulting from the system's internal operations. The operational processes producing elements are determined by the bounded system and take place only inside this boundary. Thus, the system produces its own elements as a result of its own operations. The metabolite A can enter the system only thanks to the system's interactional openness, yet no other system could handle A in the same fashion. This cannot fail to remind us of TCE: the party A's utterance is handled in a specific way—communication-wise deficient and intended for passing on—by the party B. The party B transforms the utterance of the party A so as to make this utterance communicable to the party C. Again, no other system could do the same. Just as the element B in Luisi's example, which makes the chain $A \rightarrow B \rightarrow C$ possible, is found only within the system B, translation communication event is generated only within the translation system.

Neither sending nor reception, if we prefer this terminology (criticized, however, in Luhmann 1995: 139), should be included into the translation system. The latter's boundary cuts them off. Utterance₁, Information₁ and Understanding₂ are the mediated part of the translation communication event (TCE). Only the mediating (B) part belongs to the translation system. However, it should be taken into account that the nature of mediation requires considering the mediated parties. Such 'keeping an eye on the other side' of the marked state is typical of many observing systems, especially of those using meaning in constructing reality (Luhmann 2000a: 61, Rasch 2000: 175). That is why not infrequently, studying/analyzing TCE involves comparing the mediating (B) party with either or both of the mediated (A, C) parties. Yet, the mediated parties of TCE exercise only a trigger-causality on the mediating party. The mediated parties cannot translate; they can only voice their recommendations, preferences or warnings. Incidentally, thanks to this operational independence of translation, such trends as *Skopostheorie*, *Translatorisches Handeln* or radical types of feminist translation become thinkable and practicable. The mediated parties cannot penetrate the intrinsic operational closure of the translation system whose operational nature is to infer the information of the source utterance, re-utter it in another medium, inevitably endowing the resulting utterance with the information, which approximates the information of the source utterance, and pass the new utterance on for the final inferential understanding.

Elements of any system are characterized by attributes. Attributes of translation communication system's elements, that is, translational-mediatory mechanisms, are different depending on the type of semiosis that uses mediation. In the verbal semiosis, elements are described in terms of their linguistic properties, textual characteristics, size of concrete mediated/mediating units, the volume of mediating transactions per unit of time, etc. In the non-verbal semiosis, other attributes, characteristic of the involved media and specificities of their interaction, will be introduced.

Elements also have relations between themselves. Some relations are inert; some are active. Actively related elements of the translation system form thematic groups or subsystems (medical, economic, literary translation). There may be further subdivisions within these thematic groups: for example, different genres of literary translations.

As has been conclusively shown by the Russian formalists and by scholars of the Tel-Aviv–Leuven school, elements of the translation system enter relations with elements of other systems. For example, literary translations develop relations with literary system's elements. Translation also connects with

other systems, for example, with the political one, when translations take part in establishing or reinforcing idiolegemes (Brisset 1996).

5.2. *Translation as a system: allopoietic or autopoietic?*

If we agree that translation can be described as a system, the question of what kind of system it is—allo- or autopoietic—needs to be further elaborated on. Allopoietic systems rely on inputs from outside sources for their functioning. Autopoietic systems function out of themselves. Computer programs or assemblage lines are designed to perform certain functions and cannot reproduce themselves. Living cells perform certain functions, too, but they reproduce themselves.

Translation is an autopoietic system because translational operations reproduce themselves drawing on prior translational operations and anticipating future translational operations. Like any communication element, the translation system's elements are short-lived (if not preserved in a more durable medium). As communication elements interconnect to form a communication system, the translation system's elements interconnect to form their own system. Like any communication system, the translation system "is of course not a space which disappears without leaving a trace," as is rightly stated in Wolf (2007: 117). On the contrary, the translation system is a "mediation space" with "numerous continuities or tradition lines," which "is built up through new connections" (*ibid.*: 118). This is the way autopoietic observations function:

We speak of observations only when the indication of one side of a distinction [e.g., translation vs. non-translation] is motivated by recursive interconnections—partly by prior observations, hence memory, and partly through connectivity, that is, by anticipating what one can do with the distinction [...]. (Luhmann 2000a: 59)

One may question the translation system's autopoiesis based on the fact that the translation exists as long as other communication events are fed into it. Indeed, does this mean that translation as a system is allopoietic? The answer is an emphatic 'no'. Taking energy and information from the environment does not turn autopoiesis into allopoiesis. Autopoietic systems have their own operational closure; incoming energy and information play the role of trigger-causality and not effect-causality. In other words, despite the fact that there is an input from the outside (the mediated component of the translation communication event), translation keeps its operational closure intact. The mediated part only triggers a translation event but does not define its nature. At the same time, as there is no system without environment, there is no translation

with only the mediating component; even if the mediated component does not exist, it is still implied/referred to, albeit in reality the reference may be equal to 'zero' (cf. pseudo-translations).

To sum up, Gail R. Fleischaker formulated the following three basic questions which are to be positively answered before one can regard an entity as autopoietic (cited in Luisi 1993: 21):

- (1) Is the system self-bounded?
- (2) Is the system self-generating?
- (3) Is the system self-perpetuating?

As has been shown above, in the TCE chain $A \rightarrow B \rightarrow C$ neither A nor C operate in the fashion B does and it is this part B that is translation *per se*. Part B stands apart in terms of its operations and therefore it is self-bounded. Part B viewed as a bounded zone generates its own elements and therefore it is self-generating. In its recursive reproduction, it perpetuates itself. Thus, based on these criteria, translation can be said to be an autopoietic system.

5.3. *Mediation vs. Exchange*

The difference schema of translation as a system—mediation—should be kept apart from exchange. Exchange is a direct juxtaposition of one item with another and is, thus, a two-part interaction; whereas mediation is an indirect juxtaposition and a three-part interaction. In the situation when somebody explains a word or notion to another person thereby, in Roman Jakobson's terms, translating intralingually, A (source) is equal to B (mediator): the first person uses a word/notion and explains it (re-wording). Yet, there are still three parties in the communication: source—mediator—target.

5.4. *Actors and activity*

In section 5.3, we have seen that the same communicant may play different parts. In real life, the translator may play even more social roles: s/he may be a translator/interpreter, the editor, the commissioner (for instance, when somebody translates a literary work for his/her own interest or on his/her own initiative).

Translation as an activity is fully autopoietic in that it depends on its nature for its unfolding, not on actors. Actors are social beings and their actions are prompted by a society or one of its subsystems. Even if translators are reluctant to mediate something as required by one system (e.g., by political power), they automatically comply with another system (aesthetic or another

political force in the society or they express their own views, thus going beyond translation as mediation). In this sense, translation is not dependent on its actors: translation depends on itself as an activity with difference schema (mediation) practiced in and for a society (or rather, one of its ever competing parts). This is why the translator cannot be put in the centre of sociologically informed TS. This is why particular translators' decisions can and should be explained from the viewpoint of the nature of translation: what parties are mediated and how the mediation unfolds. To do a research on a translator or a translation product is to show what translation laws are applicable in this or that particular situation. The social action is always predetermined by the set of available choices, although the actor is free to choose amongst the offered options. The choice of the actor is an interplay of physiological, psychological and sociological factors. The sociological study of translation is focused on the sociological factors and social repercussions of choices made by translators.

5.5. Evolution of Translation System

From the system/environment perspective, the translation system's social differentiation is a reentry of the difference between system and environment into the overall social system. Only operations that differentiate system and environment are at the focus of our attention. As far as observations are concerned, the reentry of the system/environment relationship into the overall social system is needed for distinguishing between self-reference and hetero-reference. The system's effort to cope with the complexity of the environment forces the system to pinpoint those aspects of the environment that are to be mirrored in the system's own inner structure. The resulting complexification of the social system manifests itself in the creation of new subsystems whose function is to represent adequately the complexity of the environment and to render the system capable of mirroring what is 'out there'. The structures, newly appearing as subsystems, also help optimize the intrasystemic communication and the system/environment interaction. The case in point is translation. On the one hand, translation helps the social system address the problem of the system's interaction with its environment. On the other hand, translation facilitates interaction between various subsystems within the system: translation (not necessarily only verbal and not necessarily intra- or interlingual) is found to be an efficient means to mediate between different subsystems.

The translation system claims to be the only one capable of addressing the problem of improbability of interaction between the overall social system

with its environment. Mediation is the ‘reference problem’ that translation solves by marking it (Luhmann 2000a: 138). The translation system takes the responsibility of mediating between subsystems within the system: for example, legal, political or art terms are translated into common parlance intralingually. Translation marks mediatory problems that occur both on the scale of intra- and intersystemic interaction. Hence, translation has a social function which allows it to evolve into a social subsystem in the function-based social system.

The above-said does not mean that translation did not exist in the pre-function-based society. But its partial differentiation in earlier types of social organization was still not established as an autopoietic, operationally closed subsystem within society at large. Only at the period of functional differentiation do subsystems, the translation subsystem included, establish themselves as operationally autonomous entities, because no other subsystem could play the role functional subsystems assume within the given social system. The subsystem’s dependency on other subsystems for certain functions is the condition of the autonomy of social functional subsystems. Higher degrees of social specialization create the situation described by Luhmann in his characteristically paradoxical fashion: “Specific independence depends on a considerable degree of specific dependency” (2000a: 350). Concrete time references for the evolution of translation into a subsystem, however, vary over time and space and are subject to area- and period-specific studies.

6. System vs. System

Translation may be viewed as a social subsystem amongst other social subsystems. When translation is considered as a subsystem amongst subsystems, we will refer to it as a system. Under such circumstances, as has been explained above, the marked homogeneity of the system is heterogenized, and subsystems appear as systems to each other.

The translation system is “equally unequal” with any other functional system. Functional systems have different characteristics (codes, programs, media). Yet, all functional systems are part of a de-centered system with no unilateral control: “There may be hierarchies, asymmetries, or differences in influence, but no part of the system can control others without itself being subject to control” (Luhmann 1995: 36). Systems are, thus, equal with regard to their inequality. “The function systems are what they are by being ‘equally’ distinct from one another” (Moeller 2006: 46).

Function-systemically speaking, translation is equal with other social systems—law, economy, art, etc. How, then, do we explain the fact that translation

seems to be “subservient” and “submissive” to other systems? In discussing relations of translation with other social systems, one should keep two things apart—respect for the profession and understanding its functional nature. By nature, translation mediates what it is commissioned for mediating. In this sense, it is at the service of other social functional systems; hence, it follows directions and satisfies requirements of commissioning parties. This, however, does not mean that translation compromises its nature or stoops to behave obsequiously. As to the translator’s low social status, the translator is not the only profession that does not enjoy the respect it deserves. This, however, hardly can be accepted as a reason for translation not to be considered as a full-blown social ‘field’ or ‘system’.

Intrasystemically, the place, which translation takes amongst other systems, is further clarified by a “form of differentiation”. “A system’s type of differentiation informs the system of the other systems it must expect in its environment” (Luhmann 2000a: 135). In the case of the function-based system, subsystems view each other as both similar and different systems. As we have seen, they are similar in being different, and, to return to Luhmann’s idea quoted above, being independent in one respect makes them dependent in all other respects. According to this principle, translation is independent in the sense that only translation can deal with the problem of growing individualization of social functional systems by mediating between them and between the overall social system and the latter’s environment; no one can change the translation system’s operational closure. Yet, in all other respects, the translation system depends on all the other systems for solving specific problems it encounters. *Mutatis mutandis*, one may apply to translation as a social system what Luhmann wrote about the art system:

[From the standpoint of the systems theory, there is no need to] advocate the defensive attitude that the autonomy of art ought to be upheld and protected. Modern art is autonomous in an operative sense. No one else does what it does. [...] The societal nature of modern art consists in its operative closure and autonomy, provided that society imposes this form on all functional systems, one of which is art (2000a: 134-5).

7. System vs. Subsystem

The third type of observation is translation as a subsystem within the overall social system. Although there are no hierarchically organized relations between functional subsystems, their places differ in terms of directions their functions are exercised along the system/environment axis. Some of them are intrasystemically focused. They contribute to the inner communication of the

system. Others make the system sensitive to its environment (Luhmann 1995: 197). Although translation is used within the social system, its most prominent location is on the boundary of the system. Translation and similar social subsystems may be compared to ears or eyes. Translation informs the system of what is happening in the environment. As a boundary phenomenon, translation opens the system to the environment and the environment to the system. Yet, translation does not carry things from inside outside and vice versa indiscriminately. Rather, translation always filtrates: it renders certain things and does not render or change other things. In such cases, translation closes, if partially, the system for the environment or the environment for the system.

In contrast to other social subsystems, translation may seem not well formed or compactly located in the social system. The elusive, protean nature of translation, which is described in different ways—as translation’s evanescent nature, as translation’s being less organized than other subsystems—results in diffuseness of translation as a social structure. However, this diffuseness is hardly surprising if we take into account the mediating nature of translation. Translation is, as it were, hidden behind interacting parties. Translation may contribute to creating new social formations (or Bourdieusian fields), remaining seemingly shapeless. However, even in such elusiveness, one may well notice what inevitably characterizes translation: it is always located at the borderline of the interacting systems. This is its operational hallmark. Therefore, diffuseness of translation should not distract us from the important social-systemic characteristic of translation: it is a boundary phenomenon.

Different subsystems within the system develop different relations with one another. The system develops different relations with the environment in different periods of its history. Certain relations may require catalytically involved agents (a process is optimized when a catalytic element is present); certain relations cannot take place unless a certain agent is at work. As a boundary phenomenon, translation often becomes such catalytic agent influencing social processes. Translation may introduce new ideas into the inner communication of the system and activate what is there in the society but not fully manifested or developed. Sometimes, translation may become the only means of influencing a relation between interacting social structures. In such cases, translation becomes a *conditio sine qua non* of unfolding social processes.

8. Structural Couplings and Interpenetration

Translation as a social subsystem is in the relationship of structural coupling with other social subsystems when it mediates between them. For example,

when a legal document is translated from one language into another, translation mediates (1) between two linguistic systems and (2) two social systems. These two types of systemic interactions are structural couplings. When translation is carried out, certain legal responsibilities on the part of the translator(s) are imposed. Translation enters structural coupling with the legal subsystem. These are different types of interactions: linguistic and thematic. The latter is the irritation of the translation subsystem by the legal system's code (legal/non-legal). Both, however, are temporary.

Structural couplings are different from another type of intersystemic involvements of translation. When we consider the psychic system's involvement with translation, we deal with an interaction of permanent nature. The legal system may or may not influence translation; the translator's psychology influences translation all the time. The permanent and inevitable interaction of translation with other systems is interpenetration. To emphasize, neither structural couplings, nor interpenetration exercise effect-causality on translation.

9. Observation: Further considerations

In the de-centered modern society with no unilateral control, social systems have to have another mechanism of keeping themselves together. They do this by means of observation. In SST, the concept of observation is defined as handling distinctions in order to indicate one side of the form and not the other (Spencer Brown 1969; Luhmann 1995: 36; 2000a: 59). The form is thus divided into 'marked' and 'unmarked' states—system and environment. The marking is carried out according to a distinction by which the system distinguishes itself from 'everything else'. By distinguishing itself, the system indicates itself. Observing distinctions and indicating them is crucial for the system's autopoiesis. Observation occurs at every level of the autopoietic system: at the level of the overall system and at the level of subsystems. In this section I will concentrate on aspects of the translation subsystem's observation and examine which of them help us show translation as an autopoietic system.

9.1. *Self-Observation*

The self-observation of social systems does not necessarily presuppose a conscious effort. Self-observation may introduce the system/environment distinction into the system at the basic level. Self-observation enables the system to constitute itself through distinguishing itself from the environment. "Self-observation is thus the operational factor in autopoiesis, because for elements

to be reproduced, it must be guaranteed that they are reproduced as elements of the system and not as anything else” (Luhmann 1995: 37).

In application to translation, the ‘marked’ state will be translation itself as opposed to anything else. For example, translation can be “profiled against its original,” “against non-translated texts” or “against other translations” (Hermans 2007a: 120). Translation in a broader semiotic sense may be juxtaposed with other forms of semiosis. Thus, translation reproduces itself as a certain type of system with particular distinctions.

9.2. First- and Second-Order Observations

Self-observation of the system may be a complex, ‘double-decked’ procedure: direct or an observation of observations. The first type of observation is aimed at *what* is observed; whereas the second—at *how* what is observed is observed. The second type of observation may be replicated *ad infinitum*: a second-order observation observes a first-order observation, at the same time the first second-order observation may be observed by a third-order observation, the latter by yet another and so on. Does it mean that we deal not only with the first- and second-order observations, but also with third- and fourth-order observations? No, because what at stake is whether a *what* or a *how* is observed. The first-order observation observes the *what*; the second-, third-, fourth-order observations observe other observations and, thus, they observe the *how* of observation. Therefore, there are two types of observation.

The first-order observation is the practice of translating. For example, any translational communication manifests its meditating nature in contrast to the mediated nature of other parties involved in TCE. “In this kind of observation, the distinction between distinction and indication is not thematized. The gaze remains fixed on the object” (Luhmann 2000a: 61). The first-order observation focuses on what it observes, experiences. It is satisfied with minimal information. Only exceptionally, when puzzled by some things, the first-order observation may look for explanations, but its capacity to process this extra information is still limited. “The first-order observer lives in a world that seems both probable and true [*wahr-scheinlich*]” (ibid.: 62). Did not Luhmann perfectly portrait practice-oriented translators or students sometimes waging a veritable war against translation theory?

Such limited worldview broadens considerably at the level of second-order observation when “the observation indicates that the observation occurs as observation, that it must use a distinction, and perhaps even what kind of distinction it must use. [...T]he second-order observer notices the improbability [*Unwahrscheinlichkeit*] of first-order observation” (ibid.: 61-2).

Eventually, such an approach leads to creating a field of study trying to explain how the observed improbability, however, happens to be probable and even normal. William Rasch summarized Luhmann's view on this problem as follows:

[A] discipline can be defined not by what it studies but by the constitutive question it asks, and that question [...] creates its field of study by positing a given, the improbability of which it is assigned to investigate. The social scientist asks, "How is social order possible?" The form of the question, according to Luhmann, is naive, not skeptical, so that it may point to the real world, which has concretized possibilities. In other words, it suppresses the moment of skepticism in order to constitute an entity, called social order, capable of being investigated. At the same time, it expresses a moment of wonder. It is framed as a question of the form "How is—order possible?" precisely to presuppose the obvious in order to register the "miraculous" nature of the obvious. (2000: 48-9.)

It is in this type of "disciplinary question" that the origin of the translation theory should be looked for, because *au fond* translation theory is a second-order observation. (There is another aspect of the second-order observation as far as translation is concerned. Translation is intrinsically a second-order observer because, as the mediator, it observes observations of the mediated parties. This aspect is explained in Hermans 2007a: 126-30.)

A brief comment on the level of abstractness of the concept 'observation' would not be amiss in connection with the question posed in the title of this article. In an interview, when asked what the advantage of widening the concept of observation to an extent surpassing consciousness was, Luhmann answered that this allowed him to theorize society as a self-observing system (Rasch 2000: 175-6). Social system devoid of consciousness is also capable of observing, hence, it can be described as an autopoietic system. This is true about any social system, including translation.

Observation has two major characteristics: "the simultaneity of distinction and indication (keeping an eye on the other side) and their recursive networking with prior and subsequent observations, which, for their part, must also be distinguishing indications" (Luhmann 2000a: 61). Both characteristics are seen in translation described as a social system. Translation distinguishes itself as the 'marked' state from everything 'unmarked' (Hermans 2007a: 119-20). It also recursively interconnects communication events which can be defined as translational.

9.3. *Evolution: from First-Order Observation to Second-Order Observation*

Now that we have considered the concept of observation in detail, yet another point may be added about the evolution of the translation system. The evolution may be presented as a move from first-order observation to second-order observation as was noted by Hermans (2007a: 130-6). Indeed, the translation system's emancipation from other social subsystems' influence started with formulating laws of translation, which are nothing less than a development of observations of how translation handles its distinctions as compared to other social activities. Hermans focused on verbal translation. Yet, this principle may be applied not only to verbal translation. Itamar Even-Zohar broadened the scope of studying translation to embrace other types of transfer (1990: 73-4). The translation system was viewed by him as belonging to a larger class of phenomena. This insight has contributed to the evolution of the translation system because it has added yet another facet of the second-order observation of translation.

10. Conclusion

In the present article, I have attempted to answer the question if translation could be described as a system. Translation has its autopoiesis and self-organization. I have pointed out that despite the fact that translation is a diffused social phenomenon and is often neglected as a second-rank activity, it does manifest itself as a phenomenon endowed with the capacity to observe, that is, to handle distinctions. Therefore, translation may be said to be an autopoietic system with its own nature—mediation. Translation communication events are complex events composed of the mediated and mediating parties. Not infrequently, such specificity of TCEs raises doubts if translation should be regarded as a social system in its own right. I have tried to show that such doubts have little ground.

As a system, translation may be observed on different scales: (1) as a system vs. environment; (2) as a social system amongst other social systems; and (3) as a subsystem within the social system. Translation forms structural couplings and interpenetrations with other systems, yet in this interactional openness, it remains an operational closure with its own first- and second-order observations. Thus, translation has all the characteristics of an autopoietic social system.

The present article is but a cursory outline of a complex problem which, no doubt, deserves a much more detailed consideration. My goal has by no

means been to exhaust the subject; rather I have shown a rich potential of SST for translation students.

References

- BAECKER, Dirk (ed.) (1999) *Problems of Form*. Trans. Michael Irmscher, with Leah Edwards. Stanford, California: Stanford University Press.
- BAUSCH, Kenneth C. (2001) *The Emerging Consensus in Social Systems Theory*. New York: Kluwer Academic/Plenum Publishers.
- BRISSET, Annie. (1996) *A sociocritique of translation*. Trans. Rosalind Gill and Roger Gannon. Toronto: Toronto University Press.
- EVEN-ZOHAR, Itamar (ed.) (1990) "Polysystem studies". *Poetics Today* 11:1.
- FOERSTER, Heinz von. (1981) *Observing Systems*. Seaside, California: Intersystems Publications.
- HABERMAS, Jürgen. (1989) *The Theory of Communicative Action*. Vol. 2. Trans. Thomas McCarthy. Boston: Beacon Press.
- HERMANS, Theo. (1997) "Translation as institution". In: Snell-Hornby, Mary; Zuzana Jettmarová & Klaus Kaindl (eds.) 1997. *Translation as intercultural communication. Selected papers from the EST conference – Prague 1995*. Amsterdam: John Benjamins. pp. 3-20.
- HERMANS, Theo. (1999) *Translation in systems. Descriptive and system-oriented approaches explained*. Manchester: St. Jerome.
- HERMANS, Theo. (2007a) *The conference of the tongues*. Manchester: St. Jerome.
- HERMANS, Theo. (2007b) "Translation, irritation and resonance". In: Wolf, Michaela & Alexandra Fukari (eds.) 2007. *Constructing a sociology of translation*. Amsterdam: John Benjamins. pp. 57-75.
- HORSTER, Detlef. (1992) *Habermas: An Introduction*. Trans. Heidl Thomsson. Philadelphia: Pennbridge.
- LUHMANN, Niklas. (1986) *Love as Passion*. Trans. Jeremy Gaines and Doris L. Jones. Oxford: Polity Press.
- LUHMANN, Niklas. (1995) *Social systems*. Trans. John Bednarz, Jr., with Dirk Baecker. Stanford, California: Stanford University Press.
- LUHMANN, Niklas. (1998) *Die Gesellschaft der Gesellschaft*. Frankfurt am Main: Suhrkamp.
- LUHMANN, Niklas. (1999) "The Paradox of Form". In: Baecker, Dirk (ed.) 1999. *Problems of Form*. Trans. Michael Irmscher, with Leah Edwards. Stanford, California: Stanford University Press. pp. 15-26.
- LUHMANN, Niklas. (2000a) *Art as a social system*. Trans. Eva M. Knodt. Stanford, California: Stanford University Press.
- LUHMANN, Niklas. (2000b) *The Reality of the Mass Media*. Trans. Kathleen Cross. Stanford, California: Stanford University Press.

- LUIZI, Pier Luigi. (1993) "Defining the Transition to Life: Self-Replicating Bounded Structures and Chemical Autopoiesis". In: Stein, Wilfred and Francisco J. Varela (eds.) 1993. *Thinking about Biology: An Invitation to Current Theoretical Biology*. Reading, Mass.: Addison-Wesley. pp. 17-39.
- MOELLER, Hans-Georg. (2006) *Luhmann explained: From souls to systems*. Chicago: Open Court.
- POLTERMANN, Andreas. (1992) "Normen des literarischen Übersetzens im System der Literatur". In: Kittel, Harald (ed.) 1992. *Geschichte, System, Literarische Übersetzung/Histories, Systems, Literary Translations*. Berlin: E. Schmidt. pp. 5-31.
- PYM, Anthony; Miriam Shlesinger & Zuzana Jettmarová (eds.) (2003) *Sociocultural Aspects of Translating and Interpreting*. Amsterdam/Philadelphia: John Benjamins.
- RASCH, William. (2000) *Niklas Luhmann's Modernity: The Paradoxes of Differentiation*. Stanford, California: Stanford University Press.
- SCHRÖDINGER, Erwin. (1968) "Order, Disorder, and Entropy". In: Buckley, Walter (ed.) 1968. *Modern Systems Research for the Behavioral Scientist*. Chicago: Aldine Publishing Company. pp. 143-6.
- SEIDL, David & Kai Helge Becker (eds.) (2005) *Niklas Luhmann and Organization Studies*. Liber: Liber & Copenhagen Business School Press.
- SOSOE, Lukas K. (2001) "Préface à l'édition française". In: Luhmann, Niklas. 2001. *La Légitimation par la procédure*. Saint-Nicolas, Québec: Les Presses de l'Université Laval.
- SPENCER BROWN, George. (1969) *Laws of Form*. London: George Allen & Unwin Ltd.
- TYNIANOV, Iurii. (1977) *Poetika. Istoriia literatury. Kino*. [Poetics. Literary History. Cinema.]. Moscow: Nauka.
- TYULENEV, Sergey. (2009) "Why (not) Luhmann? On the applicability of social systems theory to translation studies". *Translation Studies* 2:2. pp. 147-62.
- WEINBERG, Darin. (2009) "Social Constructionism". In: Turner, Bryan S. (ed.) 2009. *The New Blackwell Companion to Social Theory*. Chichester, UK, Malden, MA: Wiley-Blackwell. pp. 281-299.
- WOLF, Michaela. (2007) "The Location of the 'Translation Field'". In: Wolf, Michaela & Alexandra Fukari (eds.) 2007. *Constructing a Sociology of Translation*. Amsterdam/Philadelphia: John Benjamins. pp. 109-19.