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“Reflexionslogische Semiotik” Semiotics in the Logic of Reflection: A Non- classical extended Semiotics based on Gotthard Günther and Charles S. Peirce and its Application to Literary Theory

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"Reflexionslogische Semiotik" Semiotics in the Logic of Reflection: A Non- classical extended Semiotics based on Gotthard Günther and Charles S. Peirce and its Application to Literary Theory

Nina Ort

- 1 In this essay, I will try to summarize some ideas that I have developed in *Reflexionslogische Semiotik*¹ and to introduce them to a broader audience, beyond the institutional borders of my university. In particular, an introduction to the work of the German philosopher Gotthard Günther might be interesting since he seems to be almost unknown in France.
- 2 The starting point of my considerations is certain difficulties and an unsatisfactory situation in the design and development of literary theory. In literature, particularly in its modern and avant-garde forms, the critic can observe different strategies which refuse meaning and cut off comprehension. Nonetheless, something seems to "happen" in those creations that we cannot really access. I think it might be marked best by what Alain Badiou calls an incident, "l'événement", a sort of phenomenon that can hardly be discussed in terms of traditional hermeneutics.
- 3 The development of a *Reflexionslogische Semiotik* was initiated by the search for a theory that allows us to describe "processuality" and the creation of something "new", phenomena which have not yet turned into finalized results. The question was: would it be possible to design a logically consistent framework in which such phenomena can be examined? In recent discussions, various efforts have been made to leave the narrow restrictions of classical dualistic epistemology behind, and to invent a "third", in order to find adequate solutions to the depicted problems. In the German discussion, it is particularly Systems Theory as designed by Niklas Luhmann that tries to invent a "third" beyond the major binary distinctions that build the matrix of his theory, such as "system

and environment" or "communication and consciousness". But since Systems Theory operates with a strictly bivalent type of logic, this approach perpetually produces inconsistencies and paradoxes. Therefore I was looking for an alternative solution – and I believe I have found it in the combination of Gotthard Günther and Charles S. Peirce. In this struggle, I encountered abstract and formal questions concerning the design of a theory that deals with Peirce' "pan-semiotic" theory and extends it with Günther's "non-Aristotelian Logic". Thus questions originally based in the field of literature turned into the development of a trans-disciplinary theory.

- 4 Inconsistencies and paradoxes are inevitable consequences when non-classical problems, such as "processuality", are to be solved by classical methods. For the dualistic epistemology only features a framework capable for operating with problems in the logic of existence or identity. Epistemology is fixed on the subject of "being" and therefore it can only describe what exists as a finalized result, or as a completed process. Within epistemology, neither "processuality" or "becoming" can be grasped conceptually; nor can the "new" be described or created. The dualistic epistemology does nothing else but reflect what is.² What has to be done is to reconstruct the conjunctions between the dualistic epistemology and bivalent logics. This is necessary because epistemology is based on the axioms of classical logic, and the current problems cannot be solved simply by dismissing the basic assumptions of epistemology.
- 5 To this day, the possibility of a logically consistent alternative to classical epistemology has hardly been considered. Hence, I propose that, if dualistic epistemology is dismissed – and there are fully justified reasons to do that – then we might construct a non-dualistic epistemology. At present, there seems to be little interest in either sign theory or the theory of literature to consider a non-dualistic epistemology based on a consistent non-classical logic.
- 6 It was Gotthard Günther who initiated the development of such a non-classical, reflexion-logical, i.e. a polyvalent logic and epistemology.³ I have combined it with the Peircean Semiotics and enhanced the compilation in the *Reflexionslogische Semiotik*. It can be demonstrated that Peircean Semiotics may be reconstructed as logically and epistemologically trivalent, i.e. as a non-classical, reflexion-logical system that is formally consistent. With this "reflexion-logical Semiotics", it is possible to describe the "processuality" of sign processes and "incidents" in literature that do not appear as objectively existent data.
- 7 By connecting epistemological ideas with formal logic, Günther succeeds in some most striking and lucid demonstrations of the insufficiency in classical epistemology. Within the scope of the classical epistemology, there are only two components of reality that are discussed throughout the whole idealistic philosophy: "being" and "reflection" – *tertium non datur*. Günther considers this as a deficit, because it overlooks reflexion as a living process. Dualistic epistemology has no place for a second form of reflexivity that cannot be completely objectified. This deficit leads to untenable dilemmas. A failure to distinguish two forms of reflexion leads us to a problematic concept of objectivity:

Für beide [reflexive und irreflexive Motive des Denkens; N.O.] muß deshalb derselbe logische Objektbegriff verwandt werden – was zu der unsinnigen Konsequenz führt, daß ein Felsklotz und ein Reflexionsprozeß in dieser Logik dem gleichen Begriff von Existenz unterliegen.⁴

For both [reflexive and irreflexive motifs of thought; N.O.] we must then use the same logical concept of object – which leads to the nonsensical consequence that a

rock and a process of reflexion, in this logic, are subsumed under the same concept of existence.

- 8 In his book *Das Bewusstsein der Maschinen*, Günther distinguishes between cognitive and volitive systems, i.e. systems that only reflect their environment in a purely cognitive way, and systems that face their environment by making decisions in an active way. The latter means that volitive systems have a certain scope of freedom compared to their environment. In the first case, it is only the environment that can cause an incident in the system. In the second case, the system causes incidents in its environment. While this is of course only a thought experiment, I believe that it shows quite clearly the insufficiency of a passive cognitive system that only reflects its environment – such as in the case of the dualistic epistemology.
- 9 The dilemma becomes clear when we reconsider why we are interested in living systems that engage their environment in a volitive and creative way. We cannot demand of a contemplative, purely cognitive system anything else but that it reflects objects. But pure reflection means an endless iteration of the ever-same. The arising of something “new”, or any incident in the spirit of Badiou, is inconceivable; for these, dualistic epistemology provides no basis whatsoever. Moreover, this constructive conception of the mutual involvement of a living system and its environment points to the idea that – in a non-classical, polyvalent epistemology – the components of reality can no longer be thought of as nicely separated. Günther argues that the components of reality have to be conceptualized in a wider and more complex way:

Das Denken widerspricht sich nämlich selbst, wenn es versucht, seine eigene [sic!] Reflexionsprozesse als etwas objektiv vom Denken Unabhängiges zu thematisieren.⁵

For thought contradicts itself when it attempts to topicalize its own processes or reflexion as objective and independent of thought.
- 10 It is evident that reality is more than just the iteration of the two components “being” and “reflection”. Günther points out that classical epistemology cannot conceptualize processuality and evolution adequately – not least for reasons of formal logic. He does not doubt our comprehension of vivid reality, but he shows that vividness cannot be represented in the scope of dualistic epistemology based on bivalent logic.
- 11 From this idea of thought as a process irreducible to objective fact, Günther develops a “non-Aristotelian Logic” that exceeds the limits of classical logic⁶ and comprises a broader and less restrictive concept of reality. Günther does not abandon the axioms of classical logic, but formulates expanded reflexion-logical axioms. Within this larger and less restrictive system classical logic retains its (restricted) scope of application. Within the “non-Aristotelian Logic” classical logic remains as a limited special case.
- 12 In this, Günther turns away from the classical subject of “being”. In fact, he focuses vivid processuality. He develops a theory of “Polycontextuality” that enables him to operate with “potentiality”, i.e. “nonentities” that do not exist as objective data. His system is a vacancy system. In this vacancy system, objects are no longer identified, because the identification of objects would indicate a relapse into the dualistic epistemology of “being”. But by abandoning identification, we gain a scope for decisions and operations: Nothing will be reflected here, but rather “non-empirical” knowledge will be created. What will be “precipitated” as new data of reality, then depends upon decisions. For this, new, non-classical axioms must be developed. In particular the classical principle of the excluded third (the *tertium non datur*) is no longer of general validity.

- 13 Since Günther assumes that reality is constituted by more than only two components ("being" and "reflection"), he develops the vacancy system as a system that is more capacious and less restrictive than classical epistemology. His system encloses classical epistemology as a limited special case, and only in this special case do the classical axioms, such as the principle of the excluded third, maintain validity. This expansion demands a complete rethinking. Any "found" third would necessarily prove to be a definite and identifiable third, i.e. a third that can be smoothly treated within the scope of classical epistemology, because it exists as an object. Maybe the invitation to abandon identification can help to develop an idea of what is meant. If one speaks of three components of reality, we should not figure this triad as consisting in the (well identified) "being", the (well identified) "reflection" plus some (well identified) third instance. It would be completely insufficient just to add a third to the two classical components of reality. Far from it! The three non-classical components of reality are not in opposition as the two classical components are. Rather, they build a dynamic constitution texture in which all components are dynamically distributed over three vacancies. Which component will occur in what "position" depends on the decision to take up a viewpoint.
- 14 Günther chooses several metaphors to explain this triadic constellation. One example is the constellation of "I – You – It". I think it is very intuitive that any "You" is something different to just another "It" for me – the "You" is not only an object, it is reflexivity, too; but this reflexivity is of another form than my own. It is impossible to reduce the "You" to a pure "It". But since I cannot know anything about the reflexivity of "You", i.e. because I cannot objectify and identify this reflexivity, this example makes it clear that Günther's triadic constellation constitutes two sorts of reflexivity, "I-reflexivity" and "You-reflexivity", which cannot be reduced to one. The example also demonstrates that this dynamic triad cannot be brought to a halt. In this manner, the triad acts as a dynamic and operative counter concept to classical dualistic epistemology.
- 15 The second form of reflexivity leads us into a deeper space of negativity. It does not reflect or negate a positive given object, but rather it negates correlations of reflexions. Therefore, Günther invents the notion of "Multinegationalität" ("multi-negationality"). The term indicates that we remove ourselves continuously from the subject of the "being" and travel deeper into this space of negativity. Only here, in this space of distributed reflexivity, volitive decisions can be made. Here, reflexivity is not "seinsgebunden", bound to being, as reflexions are not bound to any object. Reflexivity is unbound – and it is this very "unboundedness" that makes indeterminate and volitive decisions possible.
- 16 A comparison of the central ideas of both theories shows that it is exactly this triadic constellation that makes Günther's system attractive for a compilation with Peirce's triadic semiotics. Indeed, it is possible to transfer the semiotic system of categories into the triadic system of Günther's "non-Aristotelian Logic". Vice versa, it is possible to transfer the four non-classical axioms of Günther's system to Peircean semiotics. Indeed, the ease with which the central ideas of both theories harmonize does not fail to amaze. This is the crucial observation that warrants naming the compilation a "reflexion-logical Semiotics".
- 17 The Peircean categories of Firstness (quality), Secondness (relation) and Thirdness (representation) result from the reduction of the table of categories by Kant. The three categories lie between the two horizons of "being" (brought to pure unity) and "substance" (diversity).⁷ Anything that can ever become a matter of thought is given in

the mode of one of these categories, or rather in a certain combination of these three categories. All other components in Peircean Semiotics result from this definition. The categories have to be understood as a constitutive texture that resembles the triadic model of Günther closely. Since the categories never touch the two horizons of "being" and "substance", they can be interpreted in a constructivist way, so that there is no "objective being" in its classical opposition to "reflexion", but rather distributed forms of reflexivity that play a role in all categories. Based on these central ideas, other concepts of Peircean semiotics can be compared with Günther's ideas. Specifically, "abduction"⁸ as a mode of reasoning can now be interpreted as a process that generates the "new". This is possible by pointing out that reflexion-logical axioms provide a scope of indeterminacy, a scope of decision that makes volitive creativity possible. Both notions, volition and abduction, describe the distribution of reflexivity and its function. I will return to this point below.

- 18 It is of great importance that Peirce puts logic, semiotics and thinking as one.⁹This means, logical and epistemological problems have the same value in his semiotics. They are correlated in a very similar way as in Günther's system. In both theories logical (semiotic) and epistemological processes are universal, and these processes have a pragmatic dimension at the same time. This pragmatic dimension is expressed in Peirce' "pragmatic maxim": "Consider what effects, that might conceivably have practical bearings, we conceive the object of our conception to have. Then, our conception of these effects is the whole of our conception of the object."¹⁰ In the system of Günther, the pragmatic dimension consists in the possibility to design the environment by volitive decisions.
- 19 A first important consequence from these two concepts is to abandon any distinction between "reflection" or representation on the one hand, and "being" on the other hand. In fact, with regard to their pragmatic dimension reflexive operations have to be interpreted as "behaviour" toward the environment. This is the meaning of living systems in this context; it corresponds with the Peircean idea of the "endless semiosis" and his continuum theory. Specifically, one should avoid falling back to a view that tries to isolate the reflexive-emblematic level from the pragmatic-objective level, because this would just mean reinstalling the dualistic epistemology. It is precisely this "heterarchic" arrangement that provides the possibility to conceptualize indeterminacy, processuality, behaviour and volitive decisions. The triadic constellation corresponds to a very different form of correlation than the completely isomorphic opposition of classical epistemology. The triadic correlation allows "behaviour", i.e. a scope of volitive decisions. In an isomorphic opposition that only permits contemplative reflections, this is unimaginable.
11
- 20 When both theories, "non-Aristotelian logic" and Peircean semiotics, are correlated as proposed in this essay, Peircean Semiotics obtains a constructivist dimension. By now, it is common practice to say Peirce is more interested in sign processes, i.e. semioses, than in the sign *per se*. But now we can go farther and say that semiosis can be reconstructed as the behaviour of a living system. This processuality cannot be shown within a dualistic epistemology. Semiosis is much more than sign processes in a universe of signs. In fact, semiosis is the vivid process of "becoming", of creative designing and generating reality.
- 21 Peirce claims that thinking and being are the same. From the point of view of classical epistemology this statement is a contradiction, of course. From the point of view of a "reflexion-logical Semiotics", the dyad of "being" and "reflection" is rejected overall. By rejecting the whole classical alternative, a new sort of reflexion is made to appear that

does not oppose "being", but rather reflects the classical alternative as such. This new sort of reflexion is what Günther marks as "unbound to being" ("seinsthematisch ungebunden"). This reflexion is not targeted on identifying objects; rather, it ensures processuality as such. This is why "reflexion-logical Semiotics" is based on a non-classical, trivalent logic.

- 22 In Peircean semiotics, there are several concepts that focus processuality. One of them is the continuum theory that provides for evolutionary processes. Another idea is the Peircean observation that any premise finally will turn out to be a conclusion. All these ideas are based on the concept of abduction that leads to hypothetical assumptions. In the uncertain and tentative character of hypothetical assumption, processuality as continuous evolution is already implicit.

- 23 This new sort of reflexion that allows to "behave" is already given in Peirce's definition of sign from 1903. I will quote only the important passage of this definition:

A *Sign*, or *Representamen*, is a First which stands in such a genuine triadic relation to a Second, called its *Object*, as to be capable of determining a Third, called its Interpretant, to assume the same triadic relation to its Object in which it stands itself to the same Object. [...] The Third must indeed stand in such a relation, and thus must be capable of determining a Third of its own; but besides that, it must have a second triadic relation in which the Representamen, or rather the relation thereof to its Object, shall be its own (the Third's) Object, and must be capable of determining a Third to this relation.¹²

- 24 In this quotation, two differing aspects of the sign are shown, each of which can be expressed in the form of syllogisms. Most of the interpretations of this definition of the sign refer to the first part of this passage. It can be expressed by deduction: The representamen serves as a *rule* that is capable of determining an interpretant as a *case* to assume the same triadic relation to its object as a *result* in which it stands itself to the same object. There is nothing surprising about this object, it does not contain any new information. It only confirms the rule that was already known.

- 25 The second part of the quotation seems to suggest another correlation that is much more interesting in the present context. Here the interpretant reflects *the relation* between representamen and object. This relation is no "classical" object. Its constellation resembles the triad of "non-Aristotelian Logic", where a new form of reflexion rejects the "classical" dyad. That means the interpretant *behaves* in a certain way toward a relation. The notion of behaviour is used here to indicate that the relation toward a relation cannot be a passive, contemplative reflection, because a relation is no classical object. Therefore, we have to assume a certain scope for decisions or a certain grade of indeterminacy in this constellation. Not least, this scope for decisions results from the degenerative state of the sign in this constellation that needs re-completion.¹³ Thus, we recognize Günther's definition of a contemplative, cognitive and a living, volitive system in these two components of sign definition.

- 26 On closer inspection it becomes apparent that the second part of this sign definition can be expressed by abduction, i.e. the form of reasoning Peirce had invented to describe how new ideas can be generated. In abduction, we are confronted with a completely inexplicable object (result). Therefore, a hypothetical explanation (representamen/rule) must be found or invented to describe the phenomenon (interpretant) as a reasonable case of this rule.

- 27 The *relation* of object to representamen is no classical object: it is neither self-identical nor unequivocal. In fact, it is an equivocal object, i.e. a completely inexplicable object. That is why it evokes abductive inference. In abductive inference, two ideas (rule and result) must be associated, but here is no hint to this association, at all. That is the reason why Peirce says the abductive inference "comes to us like a flash".¹⁴ Abductive inference is not about well balanced criteria, it is rather about deciding without the help of any criteria. It is in this spirit that Heinz von Foerster says:
- Nur die Fragen, die prinzipiell unentscheidbar sind, können wir entscheiden.¹⁵
We can only decide *those* questions that are undecidable by principle.
- 28 But this means nothing less than that abductive inference generates new, non-empirical knowledge. And this again expresses the creative, volitive, vivid and active aspect of abductive inference. Abductive inference does not reflect existant knowledge or existant objectivity, it rather brings them to existence.
- 29 These considerations convert the conventional notion of sign processes. In the context of "reflexion-logical Semiotics", semiosis does not mean "processing reflexion" that reflects process-like existing data, but rather an evolving form of semiosis that generates new reality data by processing. Hence, Peircean semiotics and Günther's "non-Aristotelian Logic" are not focused on truth, being and identity. They are operational theories with the focus on future, evolution and "becoming".
- 30 I will try to illustrate these ideas by referring to *Josefine, die Sängerin oder Das Volk der Mäuse* ("Josephine the Singer, or The Mouse Folk") and *Das Urteil* ("The Judgement") by Kafka.
- 31 *Josephine the Singer* is the description of a slowly escalating discussion about the status of the productions of Josephine: is she singing or is she just whistling? The whole discussion is quite curious. Josephine is the only singer in the mouse folk; they do not know singing. Therefore, it is questionable how the mouse folk could be able to judge singing or whistling at all. However, the debate over singing vs. whistling slowly escalates. Since Josephine is a singer, she is a misfit among the mice. The initial discussion about singing slowly turns into a discussion of Josephine's status as a member of the mouse folk. In the end of the unsettling story Josephine disappears – it is uncertain if she has been exiled or even murdered by the mice.
- 32 Singing and whistling are not characterized any more precisely. We do not find out how singing differs from whistling. Since the mice do not know song, they are unable to specify singing. Therefore the distinction is as exclusive as it is empty. Of course the question cannot be clarified. It seems like Kafka is playing here with the classical alternative by inflating both terms to the constellation of a classical binary distinction. But he refuses any solution. The discussion about Josephine's status in the mouse folk is about building an opposition, too. These oppositions are complementary. It is either singing or whistling, *tertium non datur*; Josephine is either a regular member of the mouse folk or she is a misfit, *tertium non datur*. Both questions are *iterated* across the whole story.
- 33 For all these reasons both questions seem to be quite unimportant, meaningless and vain. The mouse folk does not know singing and it even does not care about singing. Even the question if Josephine belongs to the mouse folk seems to be not worth mentioning. The story starts with the clear declaration that "Our singer is called Josephine". Therefore, it is all the more striking and unsettling that the discussion escalates in such a fatal way. Behind the iterated questions, something seems to be *happening*. But we do not get any

hint as to why this harmless opposition gradually effects a situation in which it finally becomes a matter of life and death.

- 34 Of course, we may be aware of the fatal changes. But we cannot conceptualize them in any theory that adheres to dualistic epistemology. With those theories, we might conceptualize the iteration of the oppositions. And we could say that there are inconsistencies and paradoxes. But these observations would miss the intrinsic esprit of the story. "Reflexion-logical Semiotics", on the other hand, offers a new possibility to point out certain incidents and how they generate processuality.
- 35 Josephine's sound production can be interpreted as the second form of reflexivity; it is not "existence-bound" ("seins-gebunden"), not bound to any object. It is not self-identical and cannot be identified.¹⁶ The un-identifiable sound rejects the whole classical alternative. It is this excess of reflexivity, the reflexive activity, that drives the plot. The un-identifiable sound is the unexplainable phenomenon. There are no premises (hints, attributes) that suggest an explanation (rule). Therefore, something "non-empirical" and "new" arises here. The escalation during the story that ends with the disappearance of Josephine is due to this un-identifiable and unexplainable reflexivity.
- 36 In *The Judgement*, a likewise unsettling story, a controversy arises between Georg and his father. Both are quarrelling about Georg's friend, who lives abroad. Georg has written a letter to his friend and tells his father so; it seems to be a completely unimportant matter. It is a sunny day; father and son are living together in harmony. Nothing seems to compromise this peaceful situation. But once the friend becomes the subject of their conversation, the whole situation changes in a quite horrific way. For inexplicable reasons, the quarrel escalates, until the father sentences Georg to death by drowning.
- 37 During the whole story we do not find out anything about this friend. No description of the friend is given. His only attribute seems to be being Georg's friend. And the argument is just about this attribute. Is he really a friend? Is he Georg's friend or his father's? This controversy escalates even more when the father doubts if there really is a friend at all. Usual interpretations of the story end up with these questions: Who is the friend? Is he possibly the *alter ego* of Georg? Does he possibly not exist at all? However, all these interpretations formulate their questions within the logic of being: They try to identify the friend.
- 38 In "reflexion-logical Semiotics", we have a device that allows us to abandon identifying "nonentities". In a certain respect it seems futile to try and come to a conclusion on whether the friend exists or not. I would propose to conceptualize him as the excess of reflexivity.
- 39 Thus, the friend resembles "Schrödinger's cat". As long as the cat is in the box, it is both alive and dead. This is a paradox from the point of view of classical epistemology. From the point of view of "reflexion-logical Semiotics", the friend can be reconstructed as a *hypothesis*, in the spirit of Peirce. As a hypothesis he is vague, ambiguous and inconsistent. In particular, he cannot be identified. In the terms of Günther he is not self-identical. We can reconstruct the discussion between Georg and his father as a classical dualistic situation. Both represent positions that contradict each other. The friend represents the rejection of this dyadic relation as a whole. Thus the friend drives the story. Since we have no premises that give us any hints to infer how the story might develop, the friend generates an abductive situation in which the conclusion appears as something "new".

40 Of course this brief essay may only suggest the advantages of a "reflexion-logical Semiotics" in the fields of sign theory and literature. Let me summarize the central idea as an invitation to consider the value of this theory: Classical, bivalent theories based on a dyadic logic can only deal with that section of reality that exists as completed processes. "Reflexion-logical Semiotics" is an attempt to add a method that can describe and generate vivid processuality. Such a method is needed to describe a vivid and evolving reality as Peirce proposed:

What is reality? Perhaps there isn't any such thing at all. [...] But if there is any reality, then, so far as there is any reality, what that reality consists in is this: that there is in the being of things something which corresponds to the process of reasoning, that the world *lives, and moves, and has its being*, in [a] logic of events.¹⁷

NOTES

1. Nina Ort, *Reflexionslogische Semiotik. Zu einer nicht-klassischen und reflexionslogisch erweiterten Semiotik im Ausgang von Gotthard Günther und Charles S. Peirce*. Velbrück Wissenschaft: Weilerswist, 2007.
2. In this paper I will use "reflection" to mean "mirroring", while "reflexion" will be used in the context of "reflexion-logical Semiotics".
3. See especially his main philosophical work: Günther, Gotthard, *Idee und Grundriß einer nicht-Aristotelischen Logik*. Felix Meiner Verlag, Hamburg, 1959.
4. Günther, Gotthard, *Die aristotelische Logik des Seins und die nicht-aristotelische Logik der Reflexion*. In: Günther: *Beiträge zu einer operationsfähigen Dialektik*. Bd. 1. Hamburg: Meiner, p. 141-188, here p. 161., 1976.
5. Günther, *Idee und Grundriß einer nicht-Aristotelischen Logik*, p. 254, 1991.
6. Such attempts have been made in several theories: The "third" is conceptualized as a "medium" or a kind of "hybrid" or even as the "paradox of the unity of difference" as defined in Systems Theory. But throughout these approaches, the "third" is identified and thus conceptualized very much within the logic of identity.
7. See Peirce, *CP* 1.555. Kant uses different terms than Günther. Nevertheless, in both cases dualistic epistemology is the reference.
8. Abduction is the inference from result and rule to a case (hypothesis).
9. "Logic, in its general sense, is, as I believe I have shown, only another name for *semiotic* [...], the quasi-necessary, or formal, doctrine of signs." Peirce, *CP* 2.227.
10. Peirce, *CP* 5.2.
11. I think it might be most interesting to compare "reflexion-logical Semiotics" with the Lacanian triad of the imaginary, the symbolic and the real. These three orders are correlated in a very similar way. Especially the difference between the narcissistic reflections of the *ego* in the field of the imaginary and the linguistic dimension in the field of the symbolic can easily compare to the difference between classical epistemology and "reflexion-logical Semiotics".
12. Peirce, *CP* 2.274.
13. The sign is in a degenerative state, because the relation consists of object and representamen, "its own (the Third's) Object", i.e. there are only two components. Therefore, the sign triad has to be completed once more.

14. Peirce, CP 5.181.
 15. Foerster, Heinz von, *Wahrnehmen wahrnehmen. In: Ars Electronica (Hg.): Philosophien der neuen Technologie. Berlin: Merve. p. 27-40, here p. 30, 1989.*
 16. To identify the sounds either as singing or as whistling is a task that can be performed within the scope of dualistic epistemology. But just such an identification is impossible in this story.
 17. Peirce, *The New Elements of Mathematics by Charles S. Peirce Vol. IV. Ed.: Carolyn Eisele. Den Haag: Mouton, p. 343f, 1976.*
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ABSTRACTS

The development of a *Reflexionslogische Semiotik* was developed through the search for a theory that allows us to describe "processuality" —a heuristic method that has not yet rendered conclusive results. The question was: would it be possible to design a logically consistent framework in which such phenomena can be examined? A solution can be found in combining elements of Gotthard Günther's "non-Aristotelian Logic" and Charles S. Peirce's "pan-semiotic" theory. It can be demonstrated that Peircean Semiotics may be reconstructed as logically and epistemologically trivalent, i.e. as a non-classical, formally consistent, reflexion-logical system.

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PD Dr. Nina Ort, born in 1966 in Munich, Germany, studied German language and literature, linguistics and comparative literature. She defended her Ph.D thesis in 1997, "Objektkonstitution als Zeichenprozeß. Jacques Lacans Psychosemiotik und Systemtheorie". She obtained her research habilitation in 2005 with "Reflexionslogische Semiotik. Zu einer nicht-klassischen und reflexionslogisch erweiterten Semiotik im Ausgang von Gotthard Günther und Charles S. Peirce.". Research interest: Semiotics, Cybernetics, Systems Theory, Lacanian Psychoanalysis. Presently private lecturer at the Ludwig-Maximilians-Universität München