

# **The Concept of “Knowledge” in the Knowledge Society and Religion as 4<sup>th</sup> Order Knowledge<sup>1</sup>**

ISA conference, Sociocybernetic section 2006, Durban.

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## **Summary**

We are in a paradoxical situation.

On the one hand it is widely assumed that knowledge is a basic phenomenon of and an adequate basic concept for our current so-called knowledge society.

On the other hand we do not seem to know how knowledge should be defined within the context of a theory of society. Most of the current theories of knowledge society do not suggest an explicit concept of knowledge, and even if they do, the concept is a narrow one, restricting knowledge to certified knowledge.

My basic question is whether Luhmann’s theory of society – his “operative constructivism” – can help us solving this problem. Is it possible to construct a concept of knowledge informed by operative constructivism, which is adequate for a theory of the so-called knowledge society?

In the present paper I will first demonstrate that current theories of society – even if they call it “knowledge society” – do not have an adequate concept of knowledge. Then I will suggest a definition of knowledge and I will present four categories of knowledge. Finally I will look at what I call fourth order knowledge and relate that to St. Augustine’s analysis of the Trinitarian God (Augustinus 2001 [399-419]).

## **What Is the Basic Distinction of the “Knowledge Society”?**

It seems to be generally agreed upon that present-day society is rapidly moving away from being an industrial society, the basic function of which was to develop mechanical systems of production and organisation that could transform nature into industrial products, towards a knowledge society, the basic function of which is to handle complexity with the aid of knowledge, no matter whether this knowledge exists as a resource in the individual worker or as knowledge systems in companies and organisations.

150 years ago Karl Marx confronted a similar challenge: the capitalist society developing into its industrial phase. His answer to this challenge and to his aim of understanding the functional mechanisms of capitalism was to identify and to analyse the basic “atom” of that society: The commodity.

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<sup>1</sup> Parts of the present article is based on my forthcoming book *Knowledge, Education and Learning – E-Learning in the Knowledge Society*, cf. Qvortrup 2006.

The fundamental challenge of creating a theory of society is to choose an adequate starting point, or – in a post-ontological jargon – to make an adequate, initial distinction. For Karl Marx this starting point was: the commodity. For him this was the atom of capitalist society. Based on a post-metaphysical understanding and thus replacing identity – “atoms” – with differences – “distinctions” – we would call it the marked state of the initial distinction. Anyway, Marx created what became a normative distinction between a commoditised society versus a (utopian) non-commoditised society.

In *Soziale Systeme* (Luhmann 1984) Luhmann chose “system” as *his* initial distinction. He decided that “systems” defined through the concept of autopoiesis should be the starting point for developing his self-restricting system of concepts. Marx developed one set of restrictions for the observation of society, Luhmann developed another set. For both, the consequence was that some parts of reality could be better observed than others. Developing a theoretical paradigm, some phenomena will be enlightened, while others will be less clearly seen.

Similarly, in order to observe society as a knowledge society and to understand the functional mechanisms of an emerging knowledge society – or, as I would prefer: a knowing society (cf. Qvortrup 2004) – one should focus on the marked state of this society: knowledge, and thus implying that knowledge/non-knowledge is an adequate basic distinction.

But in order to test whether this initial distinction is adequate, the concept must be taken seriously. It must be defined in such a way that it is robust as the basis for further conceptual determinations. What is knowledge? Which knowledge categories can be identified?

## **The Missing Concept of Knowledge**

In most theories of the knowledge society, any explicit, sociologically relevant definition of knowledge is absent. As early as 1959, the English economist and organisation analyst Edith Penrose emphasised the growing importance of knowledge in economy, but in addition she admitted that the whole subject of knowledge is so “slippery” that it is impossible to get a firm grip of it (Penrose 1959 p. 77). In 1969 Peter Drucker announced that knowledge has become the central capital, cost centre and basic resource of the economy (Drucker 1969 p. ix). Still however he did not suggest how to appropriately define this basic resource. Approximately thirty years later, Luhmann correctly summarised: “...was is Wissen? Wenn man von der Gesellschaftstheorie ausgeht und selbst wenn man die moderne Gesellschaft als ‘Wissensgesellschaft’ bezeichnet, findet man keinen brauchbaren Begriff des Wissens.” (Luhmann 2002 p. 97)

However, in some of the theories subscribing to the knowledge society idea, definitions of knowledge have been suggested. Still, to my mind these definitions are not adequate.

Sometimes, often in relation to information and communication technologies (ICTs), knowledge is defined as an essence or substance, cf. for instance the OECD report from 2004, *Innovation in the Knowledge Economy*, which focuses on “implications for education and learning”. Here, it is emphasised that it is important to have a clear idea of “...what it is that is passing through the electronic pipelines: knowledge, information or data?” (OECD 2004 p. 18). However, the challenges of education and learning – why doesn’t teaching

automatically lead to adequate learning, if teaching is only a matter of transporting knowledge? – and of knowledge sharing – why is knowledge sharing actually most often *not* happening automatically? – cannot be answered if it is assumed that knowledge is a substance that can easily be transported from one person to the other. It is well known that this is *not* what happens in the classroom or in the knowledge-sharing organisation. Knowledge about something is a representation of something according to interpretation standards, which may change from person to person and from teacher to pupil. My knowledge is not equal to your knowledge, and it cannot be transported from me to you.

Also, ICT should not be subsumed under the general concept of technology as a tool for physical manipulation. As Joseph Weizenbaum demonstrated many years ago, ICT does not belong to the class of prosthetic technologies, but to the class of non-prosthetic technologies (Weizenbaum 1976). ICT should not be compared to hammers or spades or cars, with which you perform a physical manipulation or transportation of physical stuff. No, ICT is much closer related to sign technologies like books, images, posters or watches. A watch does not move time, it *represents* time. Similarly, ICT does not function as a transportation or manipulation machine, but as a sign medium.

In other contexts, knowledge has been defined in a restricted way as certified knowledge. In his classical book about the post-industrial society Daniel Bell defined knowledge as "...a set of organised statements of facts or ideas, presenting a reasoned judgment or an experimental result, which is transmitted to others through some communication medium in some systematic form" (Bell 1973 p. 175). In his book about the network society, Manuel Castells has, as he says, "no compelling reason to improve on" this definition (Castells 1996 p. 17). But certified knowledge is only one aspect of knowledge, as for instance Michael Polanyi has convincingly argued (cf. Polanyi 1983 [1966]). Also, tacit knowledge – the knowledge of e.g. how to ride a bike – is knowledge, although it cannot be written down or "proved" and certified in any traditional scientific way.

In the 2004 OECD report this is reflected upon by making a distinction between on the one hand certified (tested) and practical (uncertified) knowledge, or in French: between "savoir" and "connaissance", and on the other hand between codified and tacit knowledge (OECD 2004 p. 18ff), and although no systematic categorisation of knowledge forms is provided, at least it is made clear that the question of knowledge is complex.

Yet another systematisation has been suggested by Bengt-Aake Lundvall in the OECD 2000 report *Knowledge Management in the Learning Society*. Here he suggests a categorisation into four forms of knowledge:

- Know-what that refers to knowledge about facts;
- know-why that refers to knowledge about principles and laws governing facts;
- know-how that refers to skills, i.e. abilities to do something with one's factual knowledge;
- know-who that refers to the ability to trace knowledge providers across disciplines and specialisations (OECD 2000 p. 14f).

While I agree to some of these categories, I think the fourth knowledge form, "know-who" falls outside the paradigm hidden behind the categories.

My conclusion on this brief review of existing sociological knowledge theories is that we must leave the model of knowledge as an essence, which can be transported from place to place, i.e. from the research laboratory to the enterprise. Similarly, we must give up the idea that knowledge as suggested by Bell and Castells can be defined only as certified knowledge.

A different theory of knowledge and knowledge categories has been developed by Max H. Boisot (1995 and 1998). In a way that can be compared with the one that I am proposing, Boisot conceptualizes knowledge as "...a set of probability distributions held by an agent and orienting his or her actions." (Boisot 1998 p. 12). Compare this with my definition of the function of knowledge in the next section. Boisot suggests a typology of knowledge depending on whether it is diffused/undiffused and codified/uncodified. This leads into four categories of knowledge: Personal knowledge (undiffused and uncodified), common-sense knowledge (diffused and uncodified), proprietary knowledge (undiffused and codified), and public knowledge (diffused and codified) (Boisot 1995 p. 145-149). Based on these categories and adding a third dimension, i.e. abstraction, Boisot has suggested a description of the use and distribution of knowledge in organisations within the so-called Information-Space or just I-Space. In particular, a social learning cycle can be identified as a movement of knowledge – or information – within the I-Space (cf. Boisot 1995 p. 184ff).

Going into an other direction, Claus Otto Scharmer has suggested that within knowledge management theories in addition to talking about explicit knowledge, which equals certified knowledge, one should include two additional categories: "processual" knowledge and "emerging" knowledge (Scharmer 2001). Furthermore, the French philosopher Michel Serres had argued that it is not sufficient just to develop a categorisation of knowledge dimensions. No, the very "nature" of knowledge should be reconsidered. Knowledge cannot be understood as a fixed, centripetal field, such as it is assumed in the encyclopaedic tradition, in which one aimed at creating a finite, universal and all-inclusive file of knowledge. No, knowledge has to be understood as an unlimited, growing and dynamic polycentric system (cf. Serres 1997 [1991]).

## **Knowledge – a Definition**

What is knowledge? The question sounds simple, but the answer is difficult. It has occupied people's minds ever since the first philosophical questions were formulated.

Right now, I am looking out of the window at the snow melting and at the fir trees with their dripping branches. But how do I know that what I am looking at is trees, and that what covers the ground is snow?

If one asks the snow, it does not know that it is snow, and the tree hardly has sufficient self-awareness to observe itself as something with a name. It does not stretch up tall, even though I am sitting inside here praising its tree-ness. The knowledge we have of the world is thus a knowledge that we have created.

For me, a very simple, yet practical and applicable sociological definition of knowledge is that knowledge is confirmed observations. Observations may be confirmed over time or in society. When I observe something and then repeat my observation with the same result it

becomes a confirmed observation and thus: personal knowledge. Similarly, when I observe something and another person can confirm this observation it becomes social knowledge.

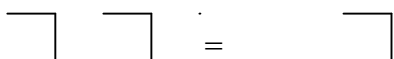
This implies that knowledge is not a quality of the world, but a quality of observing the world. Knowledge isn't something that we find "out there", but something that is created by observing the world and by comparing world observations over time and among different observers, bearing in mind, of course, that the observer is part of the observed world (cf. von Foerster 1984). Thus, knowledge isn't created and re-created from moment to moment, but is always a matter of confirmation of observations through repeated self-observations and through communication of others' observations. Thus, knowledge systems are always relatively stable, yet dynamic, and different mechanisms have been created to establish such stable, but dynamic systems.

Consequently, knowledge may change over time or between social systems: Knowledge of one society or organisation may be different from the knowledge of another society or organisation. Thus, knowledge is contextual, which explains why knowledge sharing is not just a question of transmitting facts, but is also a question about the negotiation of a shared knowledge context.

From a phenomenological point of view, knowledge is a concept for confirmed observations. If I say, that "I know" that the plant outside my window is a fir tree, this implies that it has been confirmed through earlier observations or through communication with others that the denotation of the thing outside the window that has precisely that shape and those colours is: Fir tree. Similarly, I can say that "I know" that hotplates can indeed be hot, and that doors are hard if one does not open them before passing through. I know that the neighbour buys breakfast rolls at the baker's every day at 7am. Those who believe know that God created the world. Well, maybe they have not made that observation themselves, but they trust others who say that that is the way it is. A workman knows how to use an electric screwdriver and a saw. In the 15<sup>th</sup> century, people knew that the earth was the centre of the universe. And my bank adviser knows how to stretch money.

Based on the above, I would define knowledge as *observations that have been condensed over time*. That is also how Niklas Luhmann defines knowledge: "...als Kondensierung von Beobachtungen..." (*Die Wissenschaft der Gesellschaft* p. 123). Or: "Wissen ist (...) in einem extrem allgemeinen (und nicht kulturspezifischen) Sinne kondensiertes Beobachten..." (Ibid: 145)

According to Spencer Brown the form of condensation is:



This means that knowledge and true knowledge represent two different phenomena. True knowledge is a special case of knowledge. The general concept of knowledge "...bezieht auch und vor allem alltägliches Verhalten ein, das nicht im Hinblick auf Wissenschaftlichkeit, ja nicht einmal im Hinblick auf wahr und unwahr beobachtet wird." (Ibid.) And: "Ein Objektwissen ist schon Wissen" (ibid: 124)

How does knowledge develop? Referring once more to Luhmann, knowledge is the result of structural irritations of meaning-based systems, i.e. of psychic and social systems. “Wissen entsteht erst dadurch, daß das System auf Irritationen reagiert, indem es die vorhandenen Ressourcen rekursiv aktiviert, um dem Problem die Form “Wissen” zu geben.” (ibid: 165). Luhmann refers directly and explicitly to Piaget’s psychological concept of “accommodation”. According to Piaget, in order to learn a psychic system has to accommodate to the external irritation. For me it is obvious that Luhmann generalises this idea to meaning-based systems in general.

## Forms of Knowledge

One of the results of the development of a modern society – a concept which is particularly related to the development of European societies – is, however, that various forms of knowledge have developed – forms each of which is connected to a specific function system. Scientific knowledge has developed into being *cognitively* stylised meaning with very high and highly formalised demands concerning the condensation of observations, i.e. into knowledge of the relation between true and non-true knowledge, while legal knowledge is the result of *normatively* stylised knowledge of the relation between right and wrong (ibid: 138). In comparison, religious knowledge can be defined as theologically stylised and highly ritualised knowledge of the relation between immanence and transcendence.

This implies that in a functionally differentiated society second order observation of knowledge must be a social fact.

We have already seen that:

1. Knowledge can be defined as “...condensation of observations”.
2. Knowledge emerges as the way in which meaning-based systems manage irritations.

But now we can add that in order to separate for instance legal knowledge from scientific knowledge – and, again, from everyday life knowledge – one has to make second order observations: “Will man prüfen, ob (...) Wissen wahres Wissen ist, muß man es aus Distanz beobachten, und zwar mit Hilfe der Unterscheidung wahr/unwahr.

Thus, my third point from the reading of Luhmann’s concept of knowledge is that

3. A distinction can be made between first and second order knowledge – knowledge as such and knowledge of knowledge.

My fourth point is that this leads to the conclusion that we can make a distinction between true and non-true knowledge, and between knowledge and non-knowledge.

4. Knowledge is different from true knowledge, and non-true knowledge is different from non-knowledge.

My fifth and last point is that although one can make a distinction between knowledge and true knowledge, which means that the concept of knowledge is broader than the concept of true knowledge or formally certified knowledge, these two definitions are often mixed together. Luhmann writes it in the following way:

5. only "...Für den unmittelbaren Beobachter ist Wissen immer wahres Wissen, oder andererseits kein Wissen. Er kennt nur eine Art von Wissen. Für ihn (und nur für ihn) sind die Aussagen "x ist" und "es ist wahr, daß x ist" logisch äquivalent, das heißt redundant." (Luhmann 1990: 169)

## Categories of Knowledge

Based on this definition of knowledge, knowledge can be categorised into four forms: 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> order knowledge, depending on the order to reflexivity. First order knowledge is simple knowledge: Knowledge about something. Second order knowledge is knowledge about knowledge, i.e. reflexive or situative knowledge. This category corresponds to Ryle's "knowing-how". Third order knowledge is knowledge about knowledge about knowledge, i.e. knowledge about the preconditions for reflexive knowledge. Finally, one can identify a fourth category of knowledge, which represents the social evolution of knowledge, i.e. the collective and perhaps unconscious knowledge process and the total knowledge potential. This is closely related to what Edmund Husserl called the meaning horizon of society.

Expanding on these categories, they are based on the assertion that an adequate concept of knowledge is based on knowledge being able to be defined as observations that are confirmed. I know that the tree outside my window is a birch tree, because I can compare my observation of the tree with former or with others' observations. The singular observation is confirmed by forming part of a series of corresponding observations.

However, in addition to observing phenomena in the world and condensing these observations into knowledge of these objects – "Objektwissen", according to Niklas Luhmann (Luhmann 1990) – we can observe our own knowledge and our knowledge of knowledge.

This enables us to develop a reflection-based system of forms of knowledge:

1. Knowledge phenomena in the world, e.g. so-called factual knowledge or finger-tip knowledge
2. Knowledge of knowledge, e.g. how knowledge is used: competences.
3. Knowledge of the criteria for knowledge, i.e. how our knowledge-of-knowledge comes about: Paradigmatic knowledge, e.g. artistic or epistemological knowledge.
4. Knowledge of the boundaries of possible knowledge: knowledge that we do not know what we do not know.

Each of these knowledge categories can be analysed within a knowledge-sociological context.

1. Knowledge of the world: The search for sure knowledge. The core example here is the development of rational knowledge that started in the 17th and 18th century, culminating in logical positivism at the beginning of the 20th century.
2. Knowledge of knowledge: Competences: The attempt to describe and document so-called practical or applied knowledge. These attempts have roots stretching back to the portfolios of the Renaissance (where artists, architects, etc. documented their competences), but culminate in the competence descriptions and accounts of current years.

3. Knowledge of the criteria for knowledge: Here the focus lies on efforts to develop a theory of art and philosophy as a medium for revealing (the normally self-evidenced) criteria for world-knowledge. In this connection, one also speaks of ‘true’ creativity, i.e. the ability to rethink our normal knowledge.
4. Knowledge of the boundaries of possible knowledge. Here the focus lies on an analysis of religion as a medium for the revealing of non-knowledge and of ‘God’ as the concept of the non-accessible knowledge of the boundary between knowledge and non-knowledge. Special emphasis is placed on the development and discussion of the Trinitarian formula, which took place in the first centuries AD and culminated in St. Augustine (Augustinus 2001 [399-419]).

### Categories of Knowledge – a Distinction Theoretical Approach

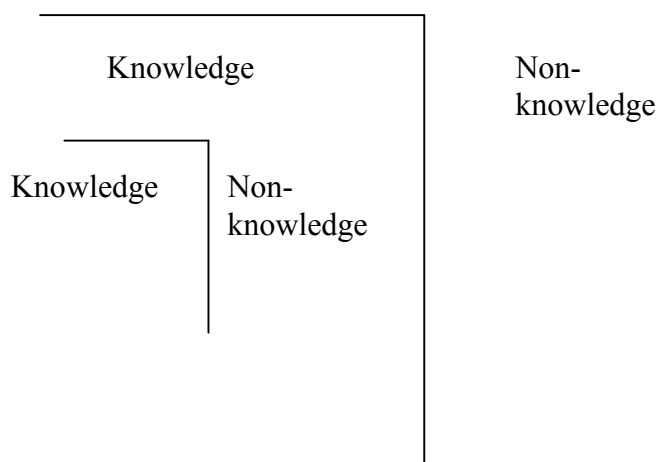
In the introduction to his *Tractatus logico-philosophicus* from 1921, Ludwig Wittgenstein writes that to be able to create an image of what our human knowledge comprises, it must be possible to raise oneself above this knowledge. In other words, one must be able to see its boundaries. Wittgenstein’s goal was to draw up boundaries for knowledge: What do we know, and what do we not know? The point, however, is that in order to be able to see where the boundary for possible knowledge goes, one must be able to imagine this boundary both from the inside and from the outside. “... [U]m den Denken eine Grenze zu ziehen, müßten wir beide Seiten dieser Grenze denken können...” (Wittgenstein 1969 [1921]: p. 7)

To be able to talk about what we know, it is, then, necessary to imagine that there is something beyond what we know. That alongside or over and above our knowledge there is non-knowledge – and not just non-knowledge as what we still-do-not-know, but non-knowledge as absolute non-knowledge: As that which we can-not-know.

But what do we know about what we can-not-know? And what can we know? Nothing, says Wittgenstein. About what we cannot speak, we must remain silent, Wittgenstein states in the famous final paragraph of *Tractatus*. But the fact is, of course, that the converse holds good: What we can-not-know is that about which we incessantly attempt to speak.

Instead of remaining silent about what we cannot speak, another possibility is to re-enter the distinction of knowledge and non-knowledge into itself.

I have already said that one of the facts about knowledge is that it can be applied to itself. If I try to translate it into the language of cybernetics, one would talk about the re-entry of the output as input in the same system. In the language of distinction theory one would talk about the re-entry of the form in the form.





## 4<sup>th</sup> Order Knowledge

Finally, I will say a few words about what I call fourth order knowledge or religious knowledge.

What I will say is inspired by Jean Clam, who on the last page of the de-ontological book refers to Ricarda Pfeiffer, who says that while art answers the world problem with an “Anregung zum Beobachten”, religion confronts “das Unbeobachtbare als solches”.

Inspired by e.g. Jean Clam I will particularly focus on 4<sup>th</sup> order knowledge and discuss whether 4<sup>th</sup> order knowledge can inform our understanding of religion. In order to do so the paper will compare St. Augustine’s classical Trinitarian formula with the category of 4<sup>th</sup> order knowledge (Augustinus 2001 [399-419]).

According to Niklas Luhmann, the religious code of observation and communication can be characterised as the one that is based on the relation between immanence and transcendence. His definition is as follows: “...daß eine Kommunikation immer dann religiös ist, wenn sie Immanentes unter dem Gesichtspunkt der Transzendenz betrachtet.” (Luhmann 2000: 77)

This relation between immanence and transcendence has always been a characteristic of religious observation and communication, unlike other forms of observation and communication. At the same time, though, it has also represented a problem in terms of observation, communication and epistemology. For how does one make the non-observable observable? How does one communicate about the non-communicable? How can one know anything about what one can know nothing about?

The classic answer, of which I have already provided numerous examples, is that one reintroduces the distinction between immanence and transcendence into the immanent. In that way, one pulls the abstract – yes, even the inaccessible – down into the sphere of the concrete and accessible. This can be done by introducing God, or whatever transcendental powers one happens to deal in, into the immanent sphere. ‘God’ is transformed from being absolute non-knowledge into being an ontological creator and communicator.

Unless one applauds an ontological conception of God (i.e. claims that God is a person with an address), one thereby commits an error. For was God not precisely characterised by being unobservable? One cannot simply solve the problem of transcendence by making the transcendent tangible.

How, then, is the problem to be solved? My assertion – one that I have busied myself with for some time, but which I was encouraged and assisted in formulating more precisely by the PhD thesis written by Kirsten Lundager Knudsen on Trinitarian communication (cf.

Lundager Knudsen 2005), is that trinitarity represents an interesting proposal for solving the religion's problem of observation and communication.

“There is (...) one good, which alone is simple and for that reason alone unchangeable, namely God. From this good all good things have been created, but they are not simple, and therefore they are changeable. (...) The two we call Father and Son, and both these with their Spirit are one God. This Spirit of the Father and Son is called, with a special meaning of the word, the Holy Spirit. (...) We believe and maintain and faithfully declare that the Father bore the Son, that one father bore a Son, an eternal and correspondingly eternal, a supremely good and equally good; that the Holy Spirit is at one and the same time the Spirit of both the Father and the Sun and itself is consubstantial with and eternally as those two; and that this unity is both a Trinity on the basis of the individuality of the persons and one God on the basis of the indivisible deity...”

What is this? Medieval mysticism taken from Umberto Eco's novels? One of the coded documents from the da Vinci mystery? Hocuspocus and abracadabra? No, the quotation, written by St. Augustine in 426 AD, is in my opinion a tremendously advanced proposition for solving a fundamentally epistemological problem (Augustinus 2002 [413-426]).

How does one make a transcendental God visible?

The solution proposed by Christianity is: Incarnation. A person is created who is both God and man, namely Jesus Christ. This double figure solves the paradox problem of religion by itself being a paradoxical figure: Both man and the Son of God. Jesus Christ is the example *par excellence* of what Spencer Brown calls 're-entry'. That a distinction is inserted into its own inside. The relation between world and God is one between immanence and transcendence. How does one go beyond the distinction that this relationship involves? How does one get from world to God? This is done by inserting the relation between immanence and transcendence, between the world and God, into a person that belongs to the immanence, i.e. into a human. This human is Jesus, who therefore becomes a Doppelgänger: Jesus Christ, and who therefore is admittedly born of the Virgin Mary, but conceived by the Holy Ghost. Jesus Christ is the re-entry Proto-figure of Christian civilisation.

Even so, there is still a problem: According to this solution God is unambiguously transcendent. He is what we are *not*. We are evil, he is good. If we are humans, he is non-human. This is difficult to reconcile with the idea of incarnation, which claims that God is both human and non-human.

The problem we would like to overcome is, then, that God is both on the one side and the other side of the distinction.

This brings us to the point of departure: The apparently mystic and inaccessible text of St. Augustine. The solution – and here we are dealing, as mentioned, with a solution that is epistemologically particularly advanced and sophisticated – is to move God out of the binarity of the distinction, i.e. out of either/or and into a both/and position. This brings us to the Trinitarian proposal: Instead of operating in a binary fashion with the world/God and with

Jesus Christ as the one that transcends the distinction, we must operate with a solution where we move God out into a fourth position, as the presupposed 'space' which, to use Spencer Brown's previously mentioned formulation, is severed and becomes a universe when a distinction is made: "A universe comes into being when a space is severed or taken apart." (Spencer Brown 1971). The solution, in other words, is to insert the Son in the position of the immanent, the Father in that of the transcendent, the Holy Spirit in that of the distinction – and make God the presupposed space. This is precisely why the Athanasians are forced as they are to emphasise that the persons of the Father, Son and Holy Spirit are on the one hand different (for they occupy different aspects of the distinction) but that 'their divinity', as it says, is, on the other hand, one and the same.

At the same time, it must naturally be maintained that Jesus is a Doppelgänger: That he by virtue of his paradoxical uniting of Son and Father can cross the distinction by – in Spencer Brown's formulation – being the result of a 're-entry' of the distinction on the distinction's immanent side<sup>2</sup>.

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<sup>2</sup> See also Inger Lundager Knudsen's detailed analysis of trinitarian communication in Lundager Knudsen 2005.

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