2006 Kierkegaard's four stages

A system-theoretical explanation of Kierkegaard's four stages

Gerben J. Stavenga
Faculty of Philosophy,
University of Groningen, The Netherlands

Dr. G.J. Stavenga,
Johan Frisostraat 15,
9285 TS Buitenpost,
Tel.: 00 31 511 54 2660.

Abstract
Kierkegaard distinguishes four stages or spheres of existence: the aesthetic, the ethical, the generally religious and the paradoxically religious sphere. The aim of the present paper is to explain, on the basis of general principles, why there should be four and why they should possess the characteristics described. In delineating the stages, Kierkegaard depicts the possible course of human development as man's increasing involvement in the reality outside him. Because this is always a matter of a relation between man and the other, I set out by analysing what relations can exist in general between two initially unspecified systems. From set-theoretical considerations it follows that two systems cannot possibly enter into more than four qualitatively different relations. The systems are either discrete, or linked, or they overlap partially, or the one is completely encompassed by the other. Next, I discuss what these relations imply in the case of complex cognitive systems. Comparing the implications with Kierkegaard's delineation of the spheres, all fundamental characteristics of the latter can be understood. The general theory of fundamental system relations developed here also proves fruitful in other fields of research, e.g. in understanding the stages in the development of the child.

I. Introduction

In the course of his development, a human being passes through several stages. This does not only hold true for the period preceding adulthood: a grown-up individual may go on developing, and in such further development various stages can be distinguished too, as was pointed out in the previous century by Kierkegaard. One of Kierkegaard's most important aims was to delineate the character of these fundamentally different stages and to indicate their mutual relationships. In this, his deepest motive was to set his reader in motion on the road to further development.

Our century has seen extensive study of and commentary on Kierkegaard's ideas, and his doctrine of stages in particular. However, we cannot content ourselves with describing Kierkegaard's stages and understanding them in themselves. After all, the aim of a discipline at its most fundamental level is not just to describe its subject matter, but to explain why it is the way it is. Kierkegaard's doctrine of stages is not truly understood until we can explain, on the basis of general principles, why there are precisely those stages

that Kierkegaard has described (no more, no less), and why they should possess the characteristics he has indicated. The present paper intends to offer the beginnings of such an explanation.

I shall set out by summarizing what Kierkegaard has said about these stages, from which it will soon appear that, even though he initially maintains that he distinguishes three of them, he actually distinguishes four.[1] This will be followed by a system-theoretical discussion, commencing with an examination of the relations generally possible between two systems. This approach will not only prove fruitful as regards the attempt to explain Kierkegaard's doctrine of stages, but will turn out to yield important insights in other fields of inquiry as well.

II. The four stages or spheres

Kierkegaard's analysis, based on observations of human behaviour, is at variance with the entire tradition of philosophy of earlier times in that it does not focus on consciousness, nor on the subject, but on the concrete existence of man in his relation to the world. The anthropology unfolded by Kierkegaard in this way is not an anthropology of being human, but of becoming human. He describes the different stages of development through which man becomes human, i.e. turns into the person that he already is in predisposition and potential.

In an early explication of this doctrine of stages, or rather of spheres,[2] in Stages on Life's Way (1845), Kierkegaard says that there are three spheres of existence: the aesthetic, the ethical, and the religious. A year after Stages, in 1846, Concluding Unscientific Postscript appears, in which the theory of the spheres is reformulated. Although it repeats that there are three spheres,[3] the summaries at the end of the book describe fourfundamentally distinct spheres: the aesthetic, the ethical, religiousness A and religiousness B.[4] Apparently, the sphere of religiousness had to be split up into two different spheres, which Kierkegaard labels religiousness A (general religiousness) and religiousness B (Christian or paradoxical religiousness). Although Kierkegaard initially saw the latter two as one sphere (that of religiousness), he now stresses that they are fundamentally different and that it is just as important to distinguish them as to distinguish the first two. Moreover, he emphasizes that of all boundaries between the spheres, the one between religiousness A and religiousness B is the most important and the most difficult to pass.[5] So, I find that in Kierkegaard we have in effect to do with four fundamentally different spheres or stages.

In his pseudonymous writings, Kierkegaard has extensively described these spheres, frequently in a literary shape.[6] In his first major work, Either/Or (1843), the first two spheres are depicted. He paints them in all their shades, but his main objective is to make clear the basic distinction between the two. The distinction between the last two is mainly treated in Philosophical Fragments (1844) and in Concluding Unscientific Postscript.

In the aesthetic sphere, man lives as an individual, having no intrinsic relation with the other nor with himself. In this sphere, man is a wholly independent being, unrelated to general interests; an aesthetic individual lives "immediately", from moment to moment.

In the ethical sphere, there is a genuine relationship with the other. Man has elected to be in the situation in which he finds himself and takes the responsibility for the general. This also leads to another attitude to time, the latter no longer being a succession of moments, but acquiring continuity and duration, turning into a history. The ethical attitude is based on the presupposition that man is capable of meeting universal demands. An ethical individual assumes that he is autonomously capable of realizing generally valid interests.

In the generally religious sphere (religiousness A), man senses his shortcomings and reaches an awareness of his own inadequacy. Yet in this sphere man is still capable of achieving knowledge of the general, of truth. The moment of insight, the point in time, is not relevant. In Kierkegaard's eyes, Socrates is the typical example of this form of religiousness.

In the paradoxically religious sphere (religiousness B), the previous supposition, that of being able to know the truth, is no longer fulfilled. Man lives in untruth, and that through his own fault. He is not capable of liberating himself; this can only be done by "the truth", so the "moment" at which this liberation takes place acquires a decisive importance.

The transition from one stage to the other is not gradual and does not come about of itself: a person can only reach a new stage by means of a jump. At the next stage the previous one is not totally discarded, and lapsing back always remains possible, so we are not dealing with a process of development that every human being must necessarily partly or wholly go through.

With these four stages Kierkegaard believes he has given a complete description of all stages of existence that should be fundamentally distinguished from each other, and to have presented a systematization of the possibilities of existence with his doctrine of the stages.[7]

The questions we are now facing are, how we should judge Kierkegaard's analysis and whether his final systematization is essentially correct and complete.

III. Analysis of the possible relations between two systems

In describing the stages, Kierkegaard depicts the possible course of human development as an increasing participation in reality. Man's relationship and intercourse with the other, and with reality outside himself, become ever more direct and drastic. So there are gradations in man's contact with reality, but they do not form a continuum. According to Kierkegaard, there are only a limited number of qualitatively different forms of relation.

Obviously, these different stages or spheres concern specific relations between two entities: the individual on one side, and on the other side the person or matter with whom or which the individual is in relation, in other words: "the dialectical other". The central

aim of this paper is to discover whether general principles offer a basis for understanding the number and nature of these relations. At the beginning of my investigation, I therefore disregard the nature of the entities between which these relations exist, and focus on initially unspecified systems. The question is, then: which fundamentally different relations can exist between two clearly distinct---i.e. conceptually clearly distinguishable---systems?

As the investigation focuses on systems in general, i.e. initially unspecified systems, in other words: systems only conceived of as (bounded) sets of things, we can concentrate on the possible relations between abstract sets. Set theory tells us that, according to what is known as the "fundamental relationships between sets", we have four possibilities: the two sets have no members in common, or one member, or some members so that they share a real subset, or (at least) one of them has all members in common with the other. These four possibilities can be illustrated by means of Venn diagrams (i.e. a set is represented by a simple plane area, usually bounded by a circle): either the two circles are completely discrete, or they touch, or there is a partial overlap, or one of the two circles is completely encompassed by the other.[8]

I conclude that as regards the fundamental structure of the relationship between two systems only four qualitatively different relations can exist: the systems are either discrete (R0), or linked (R1), or they overlap partially (R2), or the one is completely encompassed by the other (R3).[9]

In the present analysis we are not concerned with simple aggregates or collections of things between which these relations are relatively trivial and therefore not interesting. We are interested in genuine systems and the relations that can exist between them. A system can be defined, as it usually is in general systems theory, as a set of interrelated entities of which no subset is unrelated to any other subset.[10] So we focus our attention on systems as organized wholes. Moreover, I assume that at least one of the two systems between which the relations exist can be considered a cognitive system, i.e. that this system is of such complexity that it can absorb and record knowledge regarding another system. This assumption implies that the relations between the systems can also have cognitive aspects.

The question now is what the four fundamental relations we have found imply for this class of systems. What is the consequence of each of those relations as regards the structure of the systems between which such a relation exists, and as regards the possibility that one of these systems should acquire knowledge about the other system? This is what we now have to clear up with the aid of abstract deductions, assuming for the present that there are cognitive systems between which these relations can exist.

In fact, at this stage of our analysis we do not know at all whether all four of these relations do actually occur in this highly special class of complex cognitive systems. Especially with regard to the relations R2 and R3 this seems doubtful at first sight. Can such a system, an organized whole and as such separated from its environment, participate, either partially or wholly, in another system? The following exposition will in

any case have to make clear what the structure of the systems must be for the relation R2 or R3 to exist between them.

R0. This is the relation we are dealing with if a system A can be regarded as existing as a completely separate entity, independent of other systems. This means that any relation to another system B is completely external to system A itself. There can be all kinds of contact with another such system, and such contacts are indeed necessary in order to acquire knowledge about other systems, but they can be broken without any problem. They are not of essential importance to the existence or nature of system A, nor to the knowledge acquired. It is precisely this complete dissociation and independence that make the acquisition of objective knowledge about another system possible.

R1. In this relation, systems share a single entity. This means that one system A is inextricably linked with another system B. As we are dealing with complex organized systems, this mutual contact is intrinsically part of and related to the entire system A as well as B. Hence system A exists in its own right, yet at the same time the entire system is affected by the relation, the link, with the other system.

Because the systems are indissolubly linked, the acquisition by A of knowledge about B necessarily takes place through their mutual 'external' contact. Hence the knowledge acquired is shaped by this mutual contact and therefore essentially relative to system A.

Relation R1 does not imply that the two systems are necessarily closely connected in space.[11] In the case of two systems separated in space and yet in relation R1, the common contact must take the shape of an intrinsic spatial link that they share. In the case of material systems this mutual contact may be a finite signal which links them inextricably.

R2. Two systems in relation R2 with each other share a subsystem. In other words, there is a partial overlap. Since we are dealing with complex organized systems, this relation implies that, as regards its internal structure, system A is partly determined by the (partial) internal contact with system B, so that the relation to the other system is no longer external to system A, as is the case in R0 in particular, but co-determines the structure of system A itself. Otherwise than in R0 and R1, these systems do not possess an autonomous existence; in part, they participate in the other system. Hence, both systems are involved in a common event.

Since (at least) one of the two systems is a cognitive system, the event in which both systems participate is a cognitive event. System A's acquisition of knowledge about B takes place through their internal interaction, and solely through this interaction. Because the two systems happen to be inextricably linked through their common subsystem, no external cognitive contacts are possible: the dissociation required for external cognitive contacts simply does not exist. Therefore, cognition in the sense of the objective acquisition by A of knowledge about B (as in R0) is impossible in relation R2. In all knowledge about B the common subsystem, and hence the cognizing system A, plays a decisive part. This holds for properties of B, but not for the system as a whole (after all,

the cognized system B is only partially part of A). In short, knowledge about a property or aspect of B is intrinsically co-determined by the cognizing system A.

R3. We are dealing with relation R3 between two conceptually distinct systems when we are faced with completeinclusion. On the one hand one of the two systems is a clearly distinct system from a conceptual point of view, on the other hand it is inextricably and completely a subsystem of the other one. Hence the whole of this system participates in the other system, and therefore the nature of this system and even its very existence are wholly determined by its relation to the other, encompassing system.

Because the required dissociation is now entirely absent, cognition in the sense of active acquisition by the one system of knowledge about the other is totally precluded. No cognitive act can be brought about. However, this relation R3 implies that there is close contact between the two systems, for as a subsystem one of the systems participates fully in the other one, and the latter, encompassing (complex) system is involved in the former too, in a single common event. Due to this close contact, and to the assumption that at least one of the two systems is a cognitive system, this single event is a cognitive event as well. So knowledge may be acquired after all, but solely through this event. The cognitive system cannot make the cognitive act come about autonomously, nor can it bring about a repetition of this cognition. In this sense, this cognitive event is intrinsically unique and unrepeatable.

Now there are two possibilities. If the cognizing system A is a subsystem of B, A is completely involved in this cognitive event. This implies that its knowledge about B cannot be represented in any other way than by the entire system A. As soon as system A manifests itself as such, in what it is it demonstrates its knowledge of B. In this sense system A is knowledge about B, and completely so.

The second possibility is that it is not the cognizing system A that is a subsystem of B, but the other way around: the cognized system B is a subsystem of the cognizing system A. This implies that now system B is completely involved in the cognitive event and in the effect of this event on A. Therefore this effect, i.e. the cognitive result (e.g. in the shape of a document), does not concern a property or aspect of the cognized system B, but the entire system as such. In that sense system B is what appears in this cognitive event and in its effect (the cognitive result produced by A).

So far these implications, resulting from the nature of the relations and the assumption that we are dealing with complex cognitive systems. I can now conclude that general principles lead to the following statements about these systems:

In principle there can be precisely four qualitatively different relations between any two systems. Closely connected with each relation is the basic structure of the systems concerned. This can be formulated as follows: concomitant with each of the four relations is one of the four fundamental structures, which I shall call S0, S1, S2 and S3. From R0 to R3, the relations increasingly determine the internal structure of the systems involved. The nature of the relation also determines the nature of the knowledge and of the possibility of cognition. In R1, the common contact plays a pivotal role in all knowledge. In R2, all

knowledge is stamped by the existence of a common subsystem, while in R3 the knowledge is completely expressed by the encompassed system itself.[12]

If the emphasis lies on the cognitive aspects of the relations, one of the two systems involved, viz. the cognitive system, may be regarded as the epistemic subject system. In that case the other system (either cognitive or not), to which it has a relation, is the object system. Thus, each of the four system relations is a specific subject-object relation as well, from which it follows that in principle there are four qualitatively different subject-object relations.

Setting out from these subject-object relations, we can understand that indeed each of the four relations corresponds with a single fundamental structure of the cognized system, because all our knowledge about the object system is acquired solely through a specific subject-object relation. This implies that as regards their basic structure all ontological categories will be effected by the character of that relation. For ontological categories possessing a 'dialectical' form (e.g. the relation between a substance and its attributes and the relation between the specific and the general) in particular, it can be shown that the relations concerned possess the same character as does the subject-object relation in question.[13]

Let us now direct our attention at systems going through a development, and more especially a development in which the relation to another system in particular undergoes a change. From the foregoing it follows that an essential change of the relation brings with it a change in the structure of the system itself as well. Slight alterations in the relation, e.g. in the measure of overlap between the two systems within R2, do not imply a change of structure. It is only with the transition to another fundamental relation that a structural ontological and epistemological change takes place, meaning that the developing system passes through a transitional phase to another stage. I conclude: since there are no more than four qualitatively different relations, the development of a system shows a maximum of four fundamental stages.

Up to now, we paid attention to the relations between two systems only, but of course we are never faced with two systems only: generally speaking, they will form part of a set of systems. Now, setting out from each of the four fundamental relations, what is the nature of a system's relations with the whole set of systems it belongs to?

R0. If the systems are in relation R0 to each other, the whole is a set of discrete systems. All kinds of contact may take place between these systems, but without encroaching on their discreteness. On the one hand any system forms part of the whole, but on the other hand it remains a wholly independent entity. Hence the relation of each system to the entire set (which can also be labelled as the 'dialectical' relation one to many) is a R0 relation as well.[14]

R1. If the systems are in relation R1 to each other, all systems together form a connected whole. Then each system is inextricably linked with the whole it forms part of. In short, the relation of the individual systems to the whole is an R1 relation as well.

R2. If the systems are in relation R2 to each other, each system (partially) participates in one other system as well as in the whole set. In that way, all the systems together form a unity, which implies that as regards internal structure each single system is partially determined by the whole as well. In this way R2 is also typical of the relation between the single system and the set it belongs to.

R3. If the systems are in relation R3 to each other, each system is not only a member of the set, but as encompassed system also completely a participating subsystem of the whole set. So there is also a relation R3 between each system and the whole. As we have seen, in the case of R3 the encompassed system itself is the knowledge of the cognized system, so in this sense each system simultaneously is itself as well as the knowledge of the entire set.

Hence the four fundamental system relations also imply four fundamentally different ways in which a system may relate to the whole set to which it belongs.
So far for the beginnings of a general theory of system relations. As a matter of course, this is an abstract theory. What these relations, structures and forms of knowledge will look like in concrete situations is further dependent on the specific nature of the systems, i.e. on the specific domain of reality we are dealing with at a given moment. Naturally, we cannot know beforehand whether these relations actually exist, or could exist, in a particular domain of reality. Empirical examination of the systems, and of the kinds of cognition we find, will have to show.

I conclude: if there are complex cognitive systems between which the four qualitatively different relations can exist, the implications outlined above must necessarily apply. This also holds for the specific complex cognitive system we shall now focus on, viz. man---to wit, for man in relation to his dialectical opposite, another human being or more general realities outside himself.

IV. The four system relations and Kierkegaard's spheres

We are now ready to compare Kierkegaard's descriptions of the spheres or stages to the abstract descriptions of the relations and corresponding structures given above.

At the end of *Concluding Unscientific Postscript* Kierkegaard briefly sums up the spheres in such a way as to bring out their mutual differences very clearly.[15] Each of the spheres is described in terms of the extent to which man is involved in the other (which Kierkegaard calls his "dialectical opposite"), including the extent to which man carries the dialectical "in" himself. Kierkegaard formulates this as follows:

We are dealing with the aesthetic "if the individual is in himself undialectical and has his dialectic outside himself". "The aesthetic finds no contradiction in the fact of existing: to exist is one thing, and the contradiction is something else which comes from without", which is clearly Kierkegaard's way of saying that at this stage one system (the individual) is completely independent of its dialectical opposite. So, the dialectical other and the relation as such lie outside the system concerned, and that means that we are indeed dealing with relation R0 here.

"The ethical finds the contradiction, but within self-assertion", which is to say: "in such a way that the ultimate basis is not dialectic in itself [...]". In other words, the one system (the individual) is not dialectic in itself, so, as such, it is still independent of the dialectical other, but "the contradiction" now plays a crucial role: there is a genuine and continuous relationship with the other. Apparently, we are now dealing with relation R1 and therefore with the entire structure S1.

"Religiousness A comprehends the contradiction as suffering in self-annihilation, although within immanence [...]." Now apparently the individual is intrinsically determined by the dialectical relation, even in the sense of causing disruption and ignorance. In the previous section we have seen that relation R2 entails that the single system, the individual, has no autonomous existence. It is intrinsically (partially) affected by the dialectical other. So, although the individual is only partly determined by the relation with the dialectically other system, as a completely autonomous self it is annihilated. From the characterization given in section II, it is seen that, according to Kierkegaard, although the individual is still capable of achieving knowledge, within this sphere he senses his shortcomings and inadequacy. This is entirely in accordance with what we have seen in section III with reference to relation R2: on the one hand, the impossibility of acquiring knowledge in an objective sense is typical of this relation, since the cognizing system lacks the dissociation neccessary for such cognition. On the other hand, a certain measure of knowledge about the other system can be realized, and since such cognition can be repeated, the moment of insight is not relevant. I conclude that what is expressed in Kierkegaard's wording of religiousness A does indeed correspond with relation R2 and structure S2.

We are dealing with paradoxical religiousness (religiousness B), says Kierkegaard, *"if the individual is paradoxically dialectic, every vestige (remnant) of original immanence being annihilated and all connection cut off, the individual being brought to the verge of existence. [...] The paradoxical religiousness [...] makes the fact of existing the absolute contradiction"*. These words make clear that (contrary to the case of R2), no vestige of the system now has any autonomous existence whatsoever left. All autonomy has been completely "annihilated". This means that in this sphere the individual, even its very existence as such---in other words, that it is and what it is---is completely determined by the relation to the dialectical other. Moreover, as mentioned in section II, Kierkegaard emphasizes that in this sphere man cannot in any way know the truth autonomously. Precisely these features are typical of relation R3 and structure S3.

So each of the four relations, with its concomitant structure, plays a pivotal role in one of Kierkegaard's stages or spheres, and does so, moreover, in exactly the correct order. Therefore, Kierkegaard's four spheres or stages and their dialectical relations are to be regarded as specific manifestations of the four general fundamental relations R0, R1, R2 and R3 which can exist between two systems, and the four concomitant structures S0, S1, S2 and S3. Because, as we have seen in the previous section, the four fundamental

relations form a complete set, we may conclude that Kierkegaard's description of the fundamental stages is complete as well.

In his analysis of the possibilities of human existence Kierkegaard apparently discovered the four fundamental relations and structures. To the best of my knowledge he was the first to delineate them as well as possible, be it within the framework of human existence.

In spite of the obvious agreement between Kierkegaard's four spheres and the four fundamental structures, several aspects of his doctrine of stages remain unclear, such as what "self-assertion" means in the ethical sphere, or why Kierkegaard should label the sphere belonging to R2 as "general religiousness" and why relation R3 should be typical of Christianity. And is what Kierkegaard says correct in essence? This is what I shall examine in the following sections.

V. Kierkegaard's analysis of Christianity and of the self

It is the paradoxically religious sphere that Kierkegaard is especially interested in. I shall now concentrate on Kierkegaard's analysis of the structure of Christianity and of the self, to show more extensively that relation R3 does underlie the whole structure.

In the Philosophical Fragments Kierkegaard unfolds the structure of Christianity.[16] He does so by accepting as the only presupposition that the moment in time is of decisive importance. We shall therefore act, says Kierkegaard, as if we knew nothing of Christianity yet; we shall only take that single hypothesis as our starting-point and "assume that the whole thing is a curious notion of ours, which we are not willing to give up until we have carefully tested it".[17] He wants to find out if we can discover something new in this way, something new, that is, in comparison with Socrates, for whom the moment, the instant at which one achieves insight, is not of decisive importance. For Socrates that moment is merely the immediate cause of the insight.

Setting out from this starting-point---"The Moment in time must have a decisive significance"[18]---Kierkegaard proceeds in a strictly logical manner,[19] and in the process he links up whatever he derives from the Moment with well-known Christian terms, such as sin, saviour, faith, etc., always preceding them with the phrase "let us call it ...". In this way he derives the other structural elements from the Moment. The Moment is not only unique and nonrepeatable, the special and the general coincide in it. In Kierkegaard's terminology: it is not just a moment, it is that Moment in time that is filled with the eternal, it is "the Fullness of Time".[20] So, in Kierkegaard's notion of Moment a "paradoxical" dialectic is essential: there is at the same time a distinction between and an `identity' of the dialectical opposites (the special moment and time as such). This is called a paradoxical dialectic, because the two opposites in the relation apply simultaneously; they are distinguishable, yet at the same time coincide completely.

To what an extent this dialectic regarding the relation of the special to the general determines Kierkegaard's thought is also seen from another work, The Concept of Dread,

[21] which appeared almost simultaneously with the Fragments (in June 1844). The basis of his observations on (original) sin and on anxiety is formed by his statement that "the essential characteristic of human existence [is] that man is an individual and as such at once himself and the whole race, in such wise that the whole race has part in the individual, and the individual has part in the whole race".[22] This is at the opposite pole from the position of the aestheticist, for whom mankind consists of separate individuals. Kierkegaard stresses that at bottom "every individual is himself and the race".[23]

Let us return to Kierkegaard's notion of Moment. From the hypothesis that the Moment is truly of decisive importance, something that the person who experiences it will never again be able to forget, it follows, according to Kierkegaard, that at that Moment liberation takes place. It is a liberation from the total bondage and untruth from which man cannot liberate himself[24] (for could he do so, then the Moment would not be of decisive importance). Hence this liberation from total bondage is a transition from non-being to being.[25] This brings about the self, and, as Kierkegaard also stresses in The Sickness unto Death (1849), "the self is freedom".[26]

This brief outline of Kierkegaard's formal analysis of Christianity shows that from the one starting-point of *"the Moment"* the other structural elements of relation R3 and structure S3 follow.[27] Small wonder, we can now conclude, since Kierkegaard's notion of Moment already contains what completely determines the whole structure, viz. the *"paradoxical dialectic"*. Because it is a single coherent structure, the starting-point chosen for the deductions does not really matter anyway. It may be the Moment, as it is with Kierkegaard, but (as indicated in section III) one may also set out from the subject-object relation R3 and deduce the other structural elements from it, such as the nonrepeatability of the (cognitive) event, and that the special is the general.

In his study *The Sickness unto Death* Kierkegaard concentrates his full attention on a fundamental sickness of man, viz. despair.[28] He concludes that in their behaviour people show---although often in a veiled manner---that they are suffering from this disease. Because the authentic form of this disease is *"wanting in despair to be oneself"* (p. 43), it is not something incidental, but something concerning man's self.

In order to be able to give a good description of this despair and the forms in which it can manifest itself, as well as an explanation of the fact that mankind is suffering from this sickness, Kierkegaard develops an abstract theory of the self. On the basis of the empirical data he concludes that the self must be composed of a set of three relations. The first concerns the oppositions present in the self, e.g. the opposition of the infinite and the finite. In the preceding sections we have seen that at the most fundamental level man has "the dialectics" inside himself. Here, Kierkegaard formulates this as follows: the self is a "Sammensaetning", a synthesis, a relation between two terms. This means that with regard to such oppositions there is such a synthesis. Yet, *"looked at in this way a human being is not yet a self"* (p. 43). To be able to speak of a self, a second kind of relation is necessary, viz. the relation to oneself. Only then is there a self. But even then we have not got there yet; there must be a third kind of relation, viz. a relation to something else.

That this third relation exists, follows from the fact of despair, viz. from wanting in despair to be oneself. *"If the human self were self-established, there would only be a question of one form: not wanting to be itself, wanting to be rid of itself. There could be no question of wanting in despair to be oneself"* (p. 43). The observation that the latter is the case, however, entails the necessary existence of a third constituent relation. The three relations together give shape to the structure of the self. There is 1. a set of relations between opposites, 2. a relation to itself, and 3. a relation to something else. So Kierkegaard is able to state as a summary: *"The self is a relation which relates to itself, and in relating to itself relates to something else"* (p. 43).

So the self is not a kind of imperturbable substance; on the contrary: *"A self, every moment it exists, is in a process of becoming"* (p. 60). With this structure of the self as a threefold relation the possibility of a fundamental disruption is given, for "an imbalance in a relation"[29] constituting the self necessarily means a disturbance of the self itself. The self as such is disordered then, which is also reflected in the relation to something else (see p. 44). In this way Kierkegaard can explain the fundamental disruption of the self, finding expression in wanting in despair to be oneself, from the structure of the self. Moreover, in this way all forms of this disruption can be derived "by reflecting on the factors which constitute the self as a synthesis" (p. 59). Thus, by reflecting on the structure of the self, he systematically describes the principal forms of despair.

Having given his abstract theory and psychological deliberations in part one, in part two Kierkegaard explains that Christianity labels this despair "sin".[30] Here Kierkegaard (under his pseudonym Anti-Climacus) is seen to work in a manner similar to that of the philosopher Johannes Climacus, who linked the Christian terminology to his formal-logical deductions from the Moment. The traditional term "faith" too is defined anew: faith is "that state in which there is no despair at all: in relating itself to itself and in wanting to be itself, the self is grounded transparently in the power which established it. Which formula in turn, as has frequently been remarked, is the definition of faith" (p. 165). In that state, the self is healthy and free from despair. And that means freedom, for the self is "a relation which, though derived, relates to itself, which is freedom. The self is freedom" (p. 59f.).

Kierkegaard has developed a theory of the human self in order thus to be able to explain actual behaviour of the self in the relation to the other.[31] This theory does not concern certain properties or aspects of man, but the "system" as such, the self. This self is related to, i.e. grounded in another system, *"the power which established it"*. So in this work too we find the structural characteristics of R3 and S3, and the "paradoxical dialectic" determining this whole structure, playing a pivotal role.

In his analyses and in unfolding his doctrine of the stages Kierkegaard shows himself an outstanding dialectical thinker. On the one hand he was schooled in dialectics by studying the works of Hegel, on the other hand he was a passionate opponent of Hegel's specific dialectic. But he does not oppose Hegel's dialectic with just one of his own, but

actually with four---for it should be clear from the summaries of Kierkegaard's doctrine of the stages that each stage possesses a characteristic dialectic of its own. About religiousness A for instance, Kierkegaard explicitly says: *"Religiousness A is by no means undialectic, but it is not paradoxically dialectic"*[32]. In other words, the dialectic of religiousness A is different from that of religiousness B. As we have seen before, the latter exhibits a "paradoxical" character, insofar as the dialectical opposites can be clearly distinguished on the one hand and coincide, i.e. apply simultaneously, on the other hand. From the correspondence of the four stages with the four fundamental structures it follows that these four forms of dialectic completely correspond with and are characterized by the four system relations R0, R1, R2 and R3.

So, I conclude that Kierkegaard did not pluck these dialectics, especially the one he termed the paradoxical dialectic, out of thin air. They find their rationale in the four system relations. Against this system-theoretical background, it becomes abundantly clear that the so-called paradoxical dialectic is indeed of a special nature, but that there is nothing irrational, and actually nothing even paradoxical, about it. Its structure permits a completely rational insight into it.

VI. The development of the child and of the grown-up

It is clear that, as regards their fundamental structure, the four stages of the adult human being described by Kierkegaard may be comprehended on the basis of the four fundamental relations. Yet, as I said before, there are things that remain unclear. We gain a deeper understanding once we become aware of the fact that till now we have been dealing with the development of the grown-up only, which is too much of a restriction---the more so since it turns out that in the development of the child we find the four fundamental relations and structures too. If we really want to gain insight into man, we shall have to consider his entire development. In any case, a comparison with the stages and relations in the development of the child can yield a better insight into man's later development as well.

It is a remarkable fact that Kierkegaard himself also closely studied the child and its development. However, he never systematically worked out these anthropological and psychological studies, with which he already began in his first years as a student. We only find scattered notes about them, e.g. in his journals. Here we encounter, among other things, the thought (already expressed by Condillac in the 18th century) that as a child every human being passes---in compression, as it were---through the development of mankind as a whole, and also the realization that in its earliest phase a child is not aware of itself as distinct from its surroundings.[33]

Of course the present paper can offer no more than an extremely succinct discussion of this development and the stages within it. We shall start by concentrating on the child's biological development, and its relation with the mother in particular.

In its development, a human being apparently passes through a number of clearly distinguishable stages. As an embryo, the child is completely non-autonomous and entirely

enveloped by the pregnant woman. Both systems are truly distinguishable as two distinct integrated systems, yet at the same time there is complete overlapping, and both participate in one single event. Once the child is born, we are faced with another structure, an essentially different relation between the two systems. Baby and mother partially overlap during feeding. During the next stage, the child is more self-reliant, but still dependent on the parent. Once the child is grown up, both systems are autonomous and may be regarded as completely discrete.

Here we evidently face a specific occurrence of the four fundamental relations and structures. That we are dealing with four qualitatively different stages is also seen when we pay notice to the fundamentally different forms of acquisition of nourishment: by way of bloodstream, suckling, handing over by the parent, independent acquisition. We see that the development of a human being runs from relation R3, which concerns the coming into being of the system as such, by way of R2 and R1 to R0, the situation of complete independence. And vice versa the theory of the fundamental system relations makes clear why we should be confronted by stages, and precisely these stages, in this development.

In our century a great number of researchers have studied the psychological and cognitive development of the child. One of the best known in the field of developmental psychology is Piaget. The central thought of Piaget's theory of cognition is the notion that cognitive structures are shaped by interactive processes between child and environment. Piaget views the cognitive development as a self-organizing process, in which empirical research generally leads him to distinguish the following four stages[34]: the sensorimotor stage, the pre-operational stage, the stage of concrete operations, and the stage of formal operations. The second (pre-operational) stage is sometimes viewed as preliminary to the third, yielding a classification into three main periods. This development runs from the cognitive egocentrism of the newborn child to the eventual objectifying ability of the (approximately) fifteen-year-old.[35]

In their research, Piaget and other classical developmental psychologists set out from the situation of the newborn child, which they take to be the starting-point of the child's development. But recent studies argue that this is not correct: a child's psychological development does not start at birth, but much earlier. Many aspects of human behaviour already develop in the fetus, implying that behavioural research should extend from the prenatal period into adulthood.[36]

Once this prenatal period is added to Piaget's three main periods, we have four periods in total. Not only their number thus tallies precisely with the four structures belonging to the relations R3, R2, R1 and R0, but their content as well. The period immediately following birth may serve as a brief illustration. The world in which the very young child lives may be characterized as a 'magical world'.[37] At that age, children believe that thoughts and actions can cause changes in reality, even when a direct causal relation is lacking. They do not yet differentiate between self and other, between internal and external world; and their 'egocentrism' too is characteristic. Now this world of experience

can be comprehended through and through from the characteristics and implications of relation R2, for according to this relation all the child's actions do not only affect the child itself, but also all things surrounding it with which it is emotionally connected. And every 'action' of reality affects the child like a change of the child itself.

So the four fundamental relations turn out to play a pivotal role in the child's biological as well as in its psychological and cognitive development. Small wonder, this, because these different aspects of the relations between the child and the world surrounding it are closely connected, as Piaget has stressed too, even though biological and cultural factors may cause temporal disparities between the various developments.

For all its succinctness, this exposition will have to suffice in order to demonstrate that both the occurrence of stages in the development of the child and their fixed order of occurrence find their explanation in the system-theoretical discussion.

If we now compare the development of the child with that of the grown-up as outlined by Kierkegaard, we notice the following:

In the child, the development runs from R3 through R2 and R1 to R0. Apparently, this terminus is the starting-point of a possible second development, viz. that of the grown-up. Should such further development take place, it will run from R0 through R1 and R2, perhaps to R3.

Yet this is not the old order reversed, because as regards content there is no repetition of the earlier relations. Of course, such would be impossible in the adult human being. But should a way back be taken after all, one speaks of regression and of a developmental disturbance. As we have seen, in the further development as described by Kierkegaard the four fundamental relations are completely decisive, just as in the child, but they do acquire a new content.

Thus, one specific way in which the four relations may acquire content in grown-ups is sexuality.[38] Therefore, the man-woman relation plays an important role in Kierkegaard's descriptions of the spheres or stages (especially where he wants to demonstrate the difference between the aesthetic sphere and the ethical one, in Either/Or and in Stages on Life's Way).

It is a further intrinsic difference with the child that where usually the child's relation to the other is unreflected, this need not at all be true of the grown-up, who can take up a conscious position with regard to the relation. The grown-up can relate to himself, and therefore he can relate to the relation in which he participates too, which also implies that he may or may not acknowledge that relation. Obviously, the grown-up is such a complex system that this is possible. And this is why we are not faced with a development running a natural course in the adult human being, but with a possible further development.

So, if we take the stage of the adult, independent human being as our starting-point (i.e. the sphere of relation R0), several attitudes are possible. If one of the relations R1, R2 or R3 should in any way manifest itself in an individual's life, this person may block it out, may refuse to acknowledge the relation. Kierkegaard views this reaction as typical of the aesthetic individual, a person who wants to maintain complete independence.

But a person may also accept it and acknowledge that he finds himself in such a (fundamental) relation, and in that case he can react to it in different ways. One possible reaction is to adjust himself so completely to this relation that the individual's own autonomy and independence (in the sense of relation R0) is totally surrendered.

Another possibility is that an individual should retain his adult independence and yet acknowledge the reality of this fundamental relation. A conscious integration takes place, in which individuality is not surrendered, but actually intensified.

Obviously, it is the last-mentioned attitude that Kierkegaard is interested in as a real possibility. This is the further development he is envisaging, but in his delineation of the stages, the last-mentioned two attitudes are not always distinguished with equal clarity, as we find on examining these attitudes towards each of the three relations more closely.

R1. Suppose that a person realizes and acknowledges his involvement with another or several others. One possible attitude is that he adjusts himself entirely to that relation, surrendering his independence, or attempts to fit into the larger whole of R1 relations. A different possibility is that as an independent individual he opts for this involvement by consciously shouldering the responsibility for his relation to another and to the general. This implies that the person in question should first and foremost enter into a relation with himself. Therefore Kierkegaard stresses the fact (Either/Or, Vol. II) that (ethical) man first of all chooses himself as the person who is able to choose. In other words, in this sphere self-assertion is of the essence. An intermediate position between these two attitudes is taken up by the ironist, who does feel involved, to a certain extent, but who is not able to or does not wish to give up his old independence. In Kierkegaard's analysis, irony is "the confinium [border territory] between the aesthetic and the ethical".[39]

R2. An entirely different situation occurs if a person realizes that he is so deeply involved with persons and matters that these have an essential influence on what he is and does. He feels that he is facing powers to which he is subjected and which are only partially or not at all within his grasp. In this case too, a person can deal with his involvement in various ways. He may attempt to adapt completely to the R2 situation by allowing these bonds to play such a dominant role that there is no space left for his own independence. The world in which he then lives may be termed a religious world.[40] A different attitude is that of the tragic individual: it is typical of the tragic that two fundamental spheres, viz. those of R2 and R0, apply simultaneously, yet without integration, which causes the tragic tension between the bondage due to relation R2 on the one hand and the independence concomitant with R0 on the other. Many authors have described how the conflict and unbearability of this tension may lead to self-destruction.

[41] Tragedy may be considered an intermediate position between the preceding attitude and the one in which an individual integrates what relation R2 involves without surrendering his independence. This requires an internal relation to himself, in which he acknowledges the existence of fundamental bonds and dependences, realizes his shortcomings and accepts the limitations of his own knowledge and actions. It is remarkable that Kierkegaard should label this sphere of the adult human being the generally religious sphere, a choice of terms making it appear as if (contrary to the ethical

sphere, which precedes) he does not have the attitude of conscious choice and integration in mind at all. In any case, he fails to distinguish between these two different attitudes.

R3. Just as before, a number of quite different attitudes prove possible when a person realizes and acknowledges that relation R3 exists in his life. The first possibility in this case too is that out of an awareness of this relation he attempts to adapt to this relation and no other, which in this situation more than in any other implies the surrendering of his own independence and individuality. I believe that is what takes place in mysticism, or at least in certain forms of it. I consider gnosis as an intermediate position between this attitude and the next, since it is typical of gnosis on the one hand to acknowledge the reality of this fundamental relation (the being at one of man with the primal basis of his existence) and on the other hand simultaneously to be aware of its disruption, of man's alienation.

[42] The third and last possibility is that a person does not attempt to adapt to this relation, but sets out from its reality and consciously integrates it with his independent existence. It is obvious that this is the attitude envisaged by Kierkegaard, since he says about the healthy, free self: "In relating itself to itself and in wanting to be itself, the self is grounded transparently in the power which established it" (see section V, especially Kierkegaard's definition of faith). It is the last-mentioned attitude which Kierkegaard terms the genuinely Christian one.

In Kierkegaard's eyes, the possibility of a Christian existence should be sharply distinguished from all forms of general religiousness, including those within Christianity itself. He formulates this as follows: *"Religiousness A can exist in paganism, and in Christianity it can be the religiousness of everyone who is not decisively Christian"*; and: *"By me therefore religiousness A has never been called Christian or Christianity".*[43] On the basis of the preceding analyses, this sharp distinction can now be formulated and understood as follows: we are facing two different fundamental relations, viz. relation R2 in general religiousness and R3 in the Christian. Each of the two possibilities of existence or spheres is completely characterized by the relation concerned as regards basic structure, for the analyses in section III have shown that the nature of the cognition and the structure of the systems concerned is entirely determined by the operative fundamental relation.[44]

Surveying this analysis of the individual's various attitudes towards the fundamental relations and the structures accompanying them, four attitudes prove possible in principle.

I sum up:

1. The aesthetic individual lives solely according to relation R0. He blocks out other fundamental relations, and denies their existence as well as the possibility of entering into them.

2. The individual is aware of and acknowledges one of the relations R1, R2 or R3 and attempts to live according to it by adjusting himself to it to such an extent that his own independence (in the sense of relation R0) is given up.

3. The individual is aware of and acknowledges one of the relations R1, R2 or R3, but at the same time, and without integration, goes on experiencing the reality of relation R0, and so his own dissociation. Contemporary phenomena like post-modern irony, tragic consciousness and recent forms of gnosis (certain trends in the so-called New Age movement) may be comprehended in this way.

4. Setting out from R0, an integration takes place of one of the other three fundamental relations, implying, first and foremost, the coming into being of a new conscious relation of the individual to himself, by means of which personal individuality is not given up, but actually intensified.

Such an integration was what Kierkegaard was obviously after. The ethical stage, for instance, cannot simply be equated with relation R1 and structure S1 as such, but is their conscious integration, which is why we are not dealing with a development running a natural course, as with the child. Moreover, as Kierkegaard also indicates, relapsing always remains possible.

From the point of view of an insight into the fundamental relations and structures, Kierkegaard's doctrine of the stages may now be summarized as follows: what takes place in the stages is an integration or awareness of those relations and structures which Kierkegaard holds to be of fundamental importance for man's existence.

VII. The reality of the four relations and structures

In the deductions in section III and in discussing Kierkegaard's stages in section IV I left the question of the reality of the relations, i.e. the question of whether all four fundamental relations can really be encountered, out of the discussion. Following the preceding sections' structural analyses, this question still has to be explicitly dealt with.

As we have seen, the development of the child, especially that of the relation between child and mother, offers a clear example of the four relations, so there are indeed cognitive systems not only exhibiting R0 and R1, but also the special relations R2 and R3. Moreover, these relations are not rare or of minor importance; on the contrary: they are of fundamental importance for all mammals. Furthermore, this example shows that relation R3 requires an exceptional structure of the systems involved.[45]

A second example may be found in quite a different field. The existence of the four fundamental relations cannot only be demonstrated in man, and in biological systems in general, but also in physical systems, as is found by analysing the relation between measuring instrument and object system, a relation crucial to physical research. As a matter of course I shall have to be extremely succinct in outlining the results of this analysis.[46]

In science it is by means of measuring instruments that we get the primary information concerning the object systems. Therefore, it is the instrument which has to be considered the real epistemological subject. The relation between this special system (the instrument) and an object system also brings to light the nature of the relation in general between the systems observed. In classical physics the object observed can consistently be said to exist

independently of the instrument and to be separate from it, in which case we have relation R0. Relativity theorymeans a first break with this instrument-object dualism. Due to the finite velocity of light, in this theory the signal is a key concept. The signal intrinsically connects the instrument and the object system, so that we have relation R1 here, because instrument and object are indissolubly linked. In quantum theory the quantum of action is pivotal. In quantum measurements, the results of measuring partly depend on the experimental conditions, implying that instrument and object system partly overlap during the interaction. Heisenberg's indeterminacy relations express the extent to which they overlap. So we are dealing with a new instrument-object relation, in fact R2. At the most fundamental level of elementary particles research, analysis of the basic structure of the specific experimental results, the particle tracks formed e.g. in a bubble chamber, reveals a new instrument-object relation again. From the exceptional structure of such a track we must conclude that all we know about the object system observed is provided by the single nonrepeatable event[47] and contained in the single track resulting from this event. So, the track does not just reveal some property or other, but the system itself, and completely so. As we have seen in section III, this kind of cognition is typical of relation R3.[48]

So in the development of physics we find the four instrument-object (or subject-object) relations. If this analysis is correct, the main stages in the development of physics may in their turn be understood as the bringing to light, one by one, of the four fundamental relations and their concomitant structures in the domain of material systems.

It is remarkable that Piaget should have pointed out structural resemblances between the nature of the young child's cognition and the epistemological lessons of modern physics.[49] Piaget thought that he could explain this resemblance on the basis of the constructivist view of human knowledge he had developed, but the analyses of both domains given above make clear that the background of this structural resemblance pointed out by Piaget and others[50] should not be looked for in the structures of human action, since modern physics is not primarily concerned with human action, but with different instrument-object relations, and the latter are based on the four fundamental relations with their cognitive aspects. We have seen that this is also true of the cognitive structures found in children: that they have the same background explains the fact that modes of cognition in widely varying fields of research should exhibit structural resemblances.

I have paid so much attention to these examples in the first place in order to show that the four fundamental system relations and the concomitant systems are indeed real and occur universally, in the second place in order to demonstrate that the general theory formulated in section III applies in different fields, and in the third place in order to give an impression of the importance of the four subject-object relations and of their implications.

If it was rather simple to make out that the systems dealt with above could stand in four different relations to each other and that all four of these relations do occur in reality, this is not at all simple for the relations involved in Kierkegaard's stages. In sections IV

and following I have shown that the number and nature of those relations are completely comprehensible, if we assume that a human being is capable of each of those relations. But the question remains: are these relations and spheres only possible in principle, or do they also exist in reality? Are relations R2 and R3 really so important for human existence as Kierkegaard believes, and is it therefore necessary for a person to be aware of them? What empirical facts point in that direction?

That there are religions, and that Christianity exists, says relatively little and is in no way decisive. Analysis of the experiences involved does indicate that people are aware of the fundamental relations, but it remains unclear what the reality is of what one feels oneself to stand in relation to. And the possible mode of existence of these relations is not at all evident.

In the course of his analyses of despair and of the self Kierkegaard points out human behaviour which he cannot understand in any other way than on the basis of the reality of the most fundamental relation (R3). He also argues that an awareness and integration of that relation means freedom for man and is of crucial importance for his behaviour towards another.

Even then, the question remains in what way relation R3 may obtain in the adult human being. In what way can an independent complex cognitive system relate to itself as well as---or perhaps precisely due to that relation---have a fundamental relation (R3) to another system? What does that imply for the structure of the cognitive system?

These questions require further examination, for which the analyses offered in the present study may serve as preliminary research. In any case, for each specific relation we now know what the fundamental structure of the systems, the cognition and the observable effects have to be.

VIII. Concluding remarks on the system-theoretical approach

The system-theoretical approach in the present paper is clearly different from the one usually applied in order to obtain insight into Kierkegaard's doctrine of stages. The prevailing approach, consisting of studying and analysing his work, is complicated by various factors, due to the fact that Kierkegaard described the stages or spheres in pseudonymous works of widely varying character. Moreover, his oeuvre is shot through with numerous personal considerations and with the religious and philosophical problems of his day and age.[51] Add to this the observation that Kierkegaard developed his doctrine of stages in the course of his writing, as is especially seen from the fact that initially he does not distinguish four stages or spheres, but three. The crucial division into religiousness A and B is not put forward with clarity until the end of his Concluding Unscientific Postscript in 1846. All these factors necessarily entail obscurities and a certain conceptual vagueness, complicating his theory, and the understanding of it, the more.

The abstract approach put forward in the present study is not affected by those complications and enables us to comprehend the fundamental structure of Kierkegaard's doctrine of stages. For that matter, an abstract approach was not alien to Kierkegaard: in section V we have seen that in his analysis of the human system, the self and its

disruption he too starts with an abstract theory and then links Christian terminology to his formal-logical deductions.

In fact, as usual in scientific research, and as put into practice in the present study too, both approaches are needed. This entails a critical interaction between the explanatory theory and what has to be explained, so that the latter is not forced into some fixed scheme or other; at the same time, the explanation goes beyond a careful analysis of the material to be elucidated---for the ultimate aim of all research on Kierkegaard cannot be merely to analyse Kierkegaard's thought, but must be to comprehend what is the real objective of his doctrine of stages itself: to understand man in his fundamental relationships. From a good theory it may be expected, moreover, that it does not only explain and offer insight into the empirical material for which it was developed in the first place, but also sheds light on new matters.

Such a theory of human relations, which can show connections with other domains of reality too, demands an approach of a general and abstract nature. Such an approach is found in general systems theory, but the prevailing studies in the field are not suited to our purpose: although they do deal with systems in contact and communication with their environment, insight into the existence of the fundamental, qualitatively different system relations is lacking. It is true that recent studies have strongly stressed the notion that the most essential fact about systems is that a system is a being-in-relation, on which basis they have attempted to comprehend the development of systems and the enormous variety in patterns and relations,[52] but they remain focussed on a single conceptual relational frame, no differentiation with regard to the fundamental relations taking place.

Thanks to its abstract character, the general theory of system relations developed in section III enables us to clarify fundamental relations and structures in different fields. [53] Moreover, all kinds of stages in development theories may be understood in this way, and with reference to epistemological problems the theory makes it clear that we may be dealing with four different subject-object relations. Because the fundamental structure of systems is determined by the nature of the fundamental relations in which they participate, the theory can also yield insight into these structures, especially into the extremely complex structure of a special cognitive system, viz. Man.

Notes:

[1]. This has also been observed by other authors, for instance by A. Hannay in his book Kierkegaard (London: Routledge, 1991), as the following quotation proves: "[...] we must introduce a further element in Kierkegaard's philosophy, namely his account of the three (in effect four) stages or 'spheres' of life or existence." (p. 36).

[2]. In Kierkegaard, they are spheres, and, as such, possible stages in human development. Therefore I will use the terms `stage' and `sphere' interchangeably. For a discussion of these terms and their interchangeability, see also H. Liehu, Sören Kierkegaard's Theory of Stages and its Relation to Hegel (Helsinki: Hakapaino Og, 1990) pp. 14-16.

[3]. *Concluding Unscientific Postscript* (transl. D.F. Swenson, Princeton: Princeton University Press, 1968) p. 448; (transl. H.V. and E.H. Hong, Princeton: Princeton University Press, 1992) Vol. I, pp. 501f. *Intermediate between the three spheres lie the two boundary zones of irony and humour*. In (1968) p. 473, (1992) p. 531 Kierkegaard says that the spheres are related as follows: aesthetics, irony, ethics, humour, religiousness, "and then finally the Christian religiousness".
[4]. Op. cit. (1968) pp. 506-508; (1992) pp. 571-573.
[5]. See G. Malantschuk, *Kierkegaard's Thought* (Princeton: Princeton University Press, 1971) p. 132: "The most important boundary line for him comes between the purely human life-sphere and Christianity." See also B. Meerpohl, *Die Verzweiflung als metaphysisches Phänomen in der Philosophie Sören Kierkegaards* (Würzburg: Becker, 1934) p. 42.
[6]. The manner in which Kierkegaard describes the spheres is of course strongly stamped by the general Christian character of his times and by his personal problems.
[7]. This does not conflict with the fact that Kierkegaard criticizes thinkers like Hegel who create a "System". See Malantschuk, op. cit. p. 359: "Although the idea that Kierkegaard has created a 'system' must be rejected, one should be continually aware that [he] does give us a coherent survey of existence." Cf. also M. Theunissen and W. Greve, Materialien zur Philosophie Sören Kierkegaards (Frankfurt am Main: Suhrkamp, 1979) pp. 34-37: "[...] es zeigte sich, daß er [Climacus] selbst mit der Stadienlehre ein philosophisches System der Daseinsmöglichkeiten vollendet" (p. 37).
[8]. It should be noted that these diagrams here serve to visualize relations between systems, not, as with Euler, Gergonne and Venn, to illustrate relations between classes or the truth-conditions of propositions. See W. and M. Kneale, The Development of Logic (Oxford: Clarendon Press, 1968) pp. 349f., 420f.
[9]. For reasons of convenience I prefer this numbering, but the relations might also have been numbered e.g. R1, R2, R3 and R4. See also note 13.
[10]. One may also call these entities the elements of the system. An entity or element is that unit of the system that cannot be further reduced within the system. Depending on the kind of system, entities (or elements) can be mathematical quantities, atoms, cells, signs, individuals, and so on.
[11]. This is what one might think on the basis of the Venn diagram of R1. The other way round, from the situation of two systems in direct contact it does not at all necessarily follow that we are dealing with relation R1. They may be two wholly independent systems happening to make a merely temporary spatial contact. In that case, they do not share a part of their boundaries and the relation between them is R0.
[12]. Hence we are dealing with a different kind of cognition in each of the relations R1, R2 and R3. These different kinds or aspects of cognition may be labelled A1, A2 and A3. In discrete systems, no single aspect of cognition plays a crucial role; a situation which may be termed A0. That is why I find the numbering 0, 1, 2, 3 (and not 1, 2, 3, 4, for instance) for the relations and structures the most convenient one.
[13]. It would lead too far to demonstrate this for every ontological category and every relation; a brief indication will have to do. As I have argued before, in an R3 situation

cognition does not concern properties the system can have, but the system as such. This system manifests itself completely, so the properties observed characterize it in full. In that sense the system is its properties.
[14]. In order to avoid misunderstandings I should like to point out that forming part of a larger whole need not at all imply the situation of R3. In the case of R0 the single system may be separated from the whole without any problem, something which is impossible in the case of R3.
[15]. In fact, Kierkegaard gives three recapitulations. The first: "All interpretations of existence rank in accordance with the degree of the individual's dialectical apprehension of inwardness." The second: "Again, the various existence-communications rank in accordance with the interpretation of what it is to exist." The third recapitulates some ideas from the Fragments concerning teaching the truth and the role of the moment in time. Op. cit. (1968) pp. 506-508; (1992) pp. 571-573.
[16]. This work, written by Kierkegaard under the pseudonym of the philosopher Johannes Climacus, has as its central theme Christianity as a project of thought. Cf. S. Holm, Sören Kierkegaards Geschichtsphilosophie (Stuttgart: W. Kohlhammer Verlag, 1956) p. 54: "Kierkegaards Wesensbestimmung des Christentums ist also nicht historisch-empirisch, sondern begrifflich-apriorisch, und infolgedessen auch rein formal."
[17]. My translation; for the Danish original, see P.A. Heiberg and V. Kuhr (eds.), Sören Kierkegaards Papirer(Copenhagen 1909-1948) V B 70, 4.
[18]. Philosophical Fragments (Princeton: Princeton University Press, 1971), p. 16.
[19]. For a logical reconstruction of Kierkegaard's reasoning, see H.G. Hubbeling, Principles of the Philosophy of Religion (Assen: Van Gorcum, 1987) pp. 217-219, Appendix 7, "Logical reconstruction of Kierkegaard's argument from the decisive moment in time."
[20]. Fragments p. 22. See also The Concept of Dread (Princeton: Princeton University Press, 1973) p. 81: "The concept around which everything turns in Christianity, the concept which makes all things new, is the fullness of time, is the instant as eternity, and yet this eternity is at once the future and the past." In the series of pamphlets in which, shortly before his death, Kierkegaard executes a fierce assault on existing Christianity, and which he entitles The Moment, he characterizes this Moment anew. It is not something transient; at the same time, it is what is totally new and incalculable.
[21]. Also translated as The Concept of Anxiety (transl. R. Thomte, Princeton 1980).
[22]. The Concept of Dread Ch. I.1, p. 26. The translation "race" may cause misunderstandings. In this passage Kierkegaard consistently uses the word "Slaegten" (see Samlede Vaerker Bind 6 [Copenhagen: Gyldendal, 1963] pp. 124ff.), which links up with the usage of German philosophers of the period, who speak of "das (menschliche) Geschlecht", meaning "the human race", i.e. mankind.
[23]. Concept of Dread pp. 26, 42. It is clear that there is a deep affinity here with the biblical concept of "corporate personality". Hence De Fraine was right to give his monograph on the corporate personality in the Old Testament and the New this quotation from Kierkegaard as a motto: "Adam ist zugleich er selbst und das Geschlecht" ("Adam is at once himself and the race"). J. De Fraine, Adam und seine Nachkommen, Der Begriff

der 'Korporativen Persönlichkeit' in der Heiligen Schrift (Cologne: J.P. Bachem Verlag, 1962).
[24]. Fragments pp. 19-21.
[25]. Fragments p. 23: "This transition from non-being to being is the transition we call birth."
[26]. *The Sickness unto Death* (London: Penguin Books, 1989) p. 59. For this book too, which he considered one of his most important, Kierkegaard chose a pseudonym, viz. Anti-Climacus. Kierkegaard mentions himself only as the book's publisher.
[27]. The subject-object relation is extensively dealt with by Kierkegaard as well, especially in the sequel to the Fragments, viz. the Postscript. It would lead too far here to outline his elaboration of the matter; see Postscript Part Two, Chapter II, 'The subjective truth, inwardness; truth is subjectivity'; Chapter III, 'The subjective thinker'. As we have seen in section III, subject-object relation R3 implies that the truth belonging to structure S3 cannot be known except in complete subjective involvement.
[28]. In the original Danish: *"Fortvivlelse"*.
[29]. The Sickness unto Death p. 44. In Danish: *"et Misforhold i et Forhold"*, Samlede Vaerker Bind 15 (Copenhagen: Gyldendal, 1963) p. 74. So "Misforhold" is translated here as "imbalance"; "disproportion" would be another possible translation.
[30]. The Sickness unto Death part two, 'Despair is sin', pp. 109-165.
[31]. Dunning is right in remarking: "The dialectic of despair shows that the fundamental self/other relation is that between the individual and God, but that this relation is not to be divorced from the relation between the self and other human beings." S.N. Dunning, Kierkegaard's Dialectic of Inwardness: A Structural Analysis of the Theory of Stages (Princeton: Princeton University Press, 1985) p. 249.
[32]. Postscript (1968), p. 494; (1992), p. 556.
[33]. Notes from 1836 and 1837; see Papirer I A 248 en I C 126. I have taken this from G. Kjaer, Barndommens ulykkelige Elsker - Kierkegaard om Barnet og Barndommen (Copenhagen: C.A. Reitzels Forlag, 1986; Dutch translation 1995), esp. Chapter III. See also Liehu pp. 31-35, particularly with reference to the question in how far these studies by Kierkegaard, and his doctrine of stages, were influenced by Hegel's Phenomenology of Spirit.
[34]. Somtetimes Piaget distinguishes three, at other times even five stages. See e.g. J.H. Flavell, The Developmental Psychology of Jean Piaget (Princeton: Van Nostrand, 1963) and R. Vuyk, Overview and Critique of Piaget's Genetic Epistemology, 1965-1980, Vols. I and II (London: Academic Press, 1981), esp. p. 192.
[35]. Of course I cannot enter into all sorts of differentiations (also concerning sub-stages and decalages) by Piaget here, nor into the critiques of and attacks on his theory of stages.
[36]. See e.g. A. Piontelli, From Fetus to Child (London: Tavistock, 1992), esp. pp. 18-19; and J.G. Bremner, Infancy(Oxford: Basil Blackwell, 1994), esp. p. 25.
[37]. See e.g. S.H. Fraiberg, The Magic Years (New York: Charles Scribner's Sons, 1959), about the 'magic world' in which, according to the author, children pass the first five to six years of their lives. Contrary to Piaget, who describes the child's magical thinking rather

negatively as a passing phenomenon, Werner views it rather as belonging to a specific 'sphere of reality' that is of importance for the entire development. See H. Werner, Comparative Psychology of Mental Development (Chicago: Follett Publishing Company, 1948).

[38]. It can easily be seen that in a biological sense as well we find the four fundamental relations in sexual partners. Sexual intercourse, for instance, is relation R2 between the two systems.

[39]. Postscript (1992), p. 501f.; (1968), p. 448.

[40]. Religion is here defined as the experiental world of the adult human being who knows that he is dependent on groups and powers, and at the same time experiences these bonds as the sense of his life.

[41]. The difference in this respect between the Greek tragedians and Ibsen can be formulated as follows: the Greeks derive from an era in which sphere R2/S2 was predominant. In a certain sense they were still living in it, but at the same time they expressed a new awareness of human independence and freedom. Ibsen, on the contrary, writing at the end of an era dominated by sphere R0/S0, also expresses his insight into the reality and effect of sphere R2/S2. Summed up: in the Greek tragedies R2 plus R0, in Ibsen R0 plus R2. Kierkegaard deals with "the reflection of the ancient tragic in the modern tragic" in the aesthetic part of Either/Or, vol. I, where he also discusses Aristotle's and Hegel's ideas on tragedy.

[42]. This placing of mysticism and gnosis I formulate as a conjecture. Naturally it demands more elaborate analysis and argumentation than is possible here.

[43]. Postscript (1968) pp. 495, 498; (1992) pp. 557, 561.

[44]. What is Christian is entirely characterized by relation R3, as in fact is also seen from the works of one of our century's most influential Christian theologians, Karl Barth (who was, for that matter, strongly influenced by Kierkegaard in his youth). He starts his principal work, Church Dogmatics (1932-1968) (ChD), with an analysis of the cognition taking place in the biblical documents (tradionally called revelation). Barth concludes that what manifests itself in the cognitive event "is identical with its act of revelation, identical also with its effect" (ChD I/1, Chapter 2, p. 340). Accordingly, he develops his concept of knowledge and of reality (ChD II/1, Chapters 5 and 6). Barth's analyses turn out to yield precisely all basic characteristics of relation R3, and all it implies with regard to the knowledge and nature of the systems (as I have abstractly analysed in section III). Barth also stresses a fundamental difference with religion, because all religion lacks this kind of cognition and lacks faith ("Alle Religion ist Unglaube") (ChD I/2, pp. 297-325). See my paper entitled `*Wissenschaft von der Offenbarungswirklichkeit*', Zeitschrift für dialektische Theologie 2 (1986) pp. 267-282, and particularly Ch. III: `A rational reconstruction of Karl Barth's research programme' in my book Science and Liberation (Amsterdam: Thesis Publishers, 1991).

[45]. A special feature of pregnancy is the mother's immune tolerance for the fetus, i.e. for a system foreign to the mother. See e.g. P.W. Nathanielsz, *Life before Birth and a Time to be Born* (New York: Prometheus Press, 1992).

[46]. For a complete analysis and argumentation, see my article `*The Fourth Structure of Physical Reality', Journal for General Philosophy of Science* (Zeitschrift für allgemeine Wissenschaftstheorie) XIV/2 (1983), pp. 354-367; also Chapter IV: `Records of elementary particles and the development of physics' in my book Science and Liberation(1991).
[47]. This nonrepeatability concerns the specific particle measured by that track. In a different sense repetitions are of course possible, but these can only concern similar particles.
[48]. A physical theory adequately describing this structure is still lacking. Quantum theory and its extensions (the so-called standard model of elementary particles) can explain many properties and interactions of particles, but the most fundamental questions (especially those concerning the existence of these particles and their mass) are still unanswered.
[49]. This can be found in particular in the three volumes of J. Piaget, *Introduction à l'Épistémologie Génétique* (Paris: Presses Univ. de France, 1950); esp. Vol. II, *La Pensée Physique*, Ch. VII: "*Les enseignements épistémologiques de la microphysique*", pp. 224ff. Piaget's interest in these resemblances was due to the fact that one of the ultimate goals of his genetic epistemology was the understanding of knowledge in general. See e.g. R.F. Kitchener, `Genetic epistemology and cognitive psychology of science', in W. O'Donohue and R.F. Kitchener (eds.), *The Philosophy of Psychology* (London: Sage, 1996) Ch. 5, pp. 66-77.
[50]. See D. Bohm, *The Special Theory of Relativity* (New York: Benjamin, 1965). In the Appendix on "physics and perception" (pp. 185-230) Bohm---basing himself on Piaget's work---points out striking resemblances between the strucure of perception in relativity theory and quantum theory on the one hand and the mode of perception of the world in infants and young children on the other.
[51]. About the vagueness and complicatedness of Kierkegaard's concepts, particularly due to his reaction to Hegel's dialectics and Hegel's conception of the development of consciousness, see Liehu (1990) pp. 14-18.
[52]. See e.g. A. Fogel, *Developing through Relationships, Origins of Communications, Self, and Culture* (New York: Harvester Wheatsheaf, 1993).
[53]. Some people may have qualms about this approach, in which human beings and even God are talked about in terms of systems, but the use of the term system is entirely abstract and neutral here, as is usual in the general theory of systems, and does not at all have the a priori connotation of material system. Cf. D.H. Ford, Humans as Self-constructing Living Systems (Hillsdale: Lawrence Erlbaum Ass., 1987), pp. 31-34, concerning the use of systems thinking in psychology; Ford argues the reverse view: not machines but humans represent the general case and machines the special.