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***THE LOGIC OF PARADOX  
KIERKEGAARD ON TIME AND TEMPORALITY***

*Publ. "Religionsvidensk. Tidsskr.10, 1987, rev. 2011*

Despite the fact that Kierkegaard did not systematically investigate it, the notion of time as a fundamental characteristic of human existence assumes a privileged status within his thinking. Just as the notion of time constitutes an important angle of approach to Kierkegaard's authorship, so does a study of Kierkegaard contribute significantly to a renewed evaluation of the notion of time. In the present paper I will offer a cursory glimpse into Kierkegaard's huge world of thought as seen from a definite vantage point. My intention is to outline some of the main points in his thinking about time, based primarily on his *Philosophical Fragments* and *The Concept of Dread*. In connection with this review, I will hold two theses up for a more detailed discussion. With respect to the relationship between Kierkegaard and his pseudonyms, see M.C. Taylor (1975): *Kierkegaard's Pseudonymous Authorship. A Study of Time and the Self*.

***1. THE NOTION OF TIME***

According to Kierkegaard, man should be described as a synthesis of body and soul where the unifying third is spirit, i.e., divine consciousness, or consciousness of the self. In the immediate, or sensual, human being spirit is not actualized, but manifests itself solely as potentiality and assignment. This manifestation of the spirit, which expresses itself in an obscure and disturbing way to the unenlightened human soul, is called: *dread*. In contradistinction to *fear*, which is always directed toward something definite, dread has no object or, more accurately, its object is the indefinite. This accounts for the opacity of its nature.

Dread is the expression of freedom prior to the breakthrough of the will, which is decision, or choice. In dread, freedom is enslaved, only not by something external, but by itself. The spirit, which is freedom, is entrapped in its own being, and closed within its own self. Nothing can force it out against its own will. Dread is overcome when man, in the courage of despair, chooses himself in daring to become a free being. By virtue of its own free decision, it takes possession of itself in the light of eternity, and is thereby changed into spirit. It is first in the decision of the will in and for freedom that spirit breaks through and completes the synthesis.

But is this relevant to the question of time? Yes, indeed, to a considerable extent. The point is that the determination of man as a synthesis in spirit of body and soul, sensory perception and rational thinking, can also be adequately expressed by means of some other concepts. In fact, man can just as validly be described as a synthesis of *temporality* and *eternity* where the unifying third is the *moment*, or "an eye's twinkle". Now, what does Kierkegaard mean by this?

All existence is bound to time which is, as well, the basic condition of human life. However, that time which is common to everything in existence is merely the vacuous succession of a multitude of indifferent moments. In and by itself, time is nothing but an empty series of accidental events which succeed each other at different instants. Eternity, by contrast, is synonymous with *presence* which, by its breakthrough into time as suddenness, is able to suspend chronology and arrest its advancement.

Kierkegaard described the moment or instant as "eternity's first reflex in time" or "the atom of eternity". This is the significance of the moment if considered abstractly. The assignment of the existing thinker, however, is to consider the moment concretely. The importance of this mission is emphasized in the designation of the moment as the crucial Christian category. When considered concretely, the moment is comprehended as immediate or instantaneous presence.

In his explanation of the instant as "suddenness", which is depicted as ambiguous, Kierkegaard refers his reader to Plato's dialogue *Parmenides*, regarded as one of the most important works in speculative dialectics. To emphasize the difference between speculation and existence, Kierkegaard introduces a distinction between time as empty order and succession on one hand, and time as momentous temporality on the other.

The moment interpreted as presence is the categorical condition of temporality, which is defined by reference to the temporal modalities: past, present, and future. Hence temporality, being posed by this division of time into three, is conditioned by the moment's incision in, or penetration of, a concrete series of events. Temporality thereby appears as human time in contrast to succession as an abstract continuum.

Following Kierkegaard, the now as presence is a product of human consciousness, the experience of both presence and absence being indigenous only to consciousness. However, the moment is ambiguous, since it is a double synthesis of time and eternity. Understood as that instant which poses time, the moment itself has no share in time, but is only a reflex of eternity. Understood as that instant which suspends temporality by inducing it into eternity, the moment is "fullness of time", or the absolute paradox. Only in this sense the synthesis of the moment also the synthesis of the spirit.

Only that which has duration participates in time. In itself, as a pure incision, the moment does not belong to time. But by virtue of the moment, a demarcation is put up

between the past, the present, and the future. For this reason time can be comprehended as that which exceeds succession as mere flux. The moment obtains its true significance through human decision, or choice. The fundamental choice is that choice whereby man chooses himself in his eternal validity. This is concurrently the decision which decides the crucial question of existence by posing a distinction between good and evil.

This choice does not involve this or that - here, all or nil, life or death, are at risk. However, man is bound to opt for life, it being impossible to choose death consciously. Therefore death is not a consequence of choice, but rather of abstaining from choice, which indicates absence of faith. The self demands to be reborn in full consciousness, with acknowledgment of its existence as given. At the very moment of self-assumption, the actual self with its lack of perfection arises to consciousness as the only possibility, including the past with its deficiencies and failures.

The birth of the spirit presupposes the conscious decision in freedom of the will and signifies its unconditional surrender to the power which has put it into existence. By this move the only true synthesis is effected - the synthesis of time and eternity, which is that which makes man whole by uniting body and soul *sub specie aeternitatis*. The self is the only reality, and the one who chooses thereby selects himself, just as the one who declines thereby forsakes himself. Kierkegaard compared the free decision of the will to "a jump on the depth of 70,000 fathoms".

*Salto mortale sive vitale!*

Let us consider, for a moment, the dominant frame of reference for these thoughts, the pattern of Kierkegaard's authorship. Our basic works, the *Philosophical Fragments* and *The Concept of Dread* were both published within the same week of the year 1844, which indicates their close relationship, although they are ascribed to different authors (Johannes Climacus and Vigilius Haufniensis). In this short paper I shall, for brevity's sake, ignore the fact that Kierkegaard wanted his reader to distinguish his pseudonyms, hoping that this will not alter my conclusions in any radical way.

It is common knowledge that Kierkegaard, in his philosophical anthropology, separated three levels of existence: the aesthetical, the ethical and the religious (A & B). The aesthete is the sensual man who has chosen to live for his desires and who is therefore prepared to "kill time". The ethicist is the sober man who has acknowledged that life is too short for frivolous distractions and that the true assignment of mankind is to save that which is given in time by redeeming it for eternity. Further, the religious man is he who has comprehended that the mission is not accomplished by man alone but only through the eternal spirit, God. Finally the religious stage is differentiated into: (A) the blurred belief in a higher power of existence, and (B) the distinct belief in Jesus Christ as the temporal incarnation of the eternal God (the absolute paradox).

According to Kierkegaard, the true mission of man cannot be met without God. Relative to man, God appears chiefly as possibility, boundless, unrestricted possibility. God is the instance which - or, rather, who - in spite of all, makes it possible to exist. At the same time God is  $A$  &  $\Omega$ , the *One* who *is*, who *was*, and who *becomes* - and by virtue of this sempiternity, God is also simultaneous to every existing being at any time. Now, to existing man, eternity does not appear as presence, but rather as the impending. The future is that "incognito" through which eternity is related to time. This relationship is mediated precisely in the crucial moment, the moment of choice. At the decisive moment, our entire attention is directed toward the imminent.

Man, by choosing eternity, decides his own future. So one can say that the future is all there is. If the moment is not yet posed, eternity appears behind us as the past. Thus the ancient Greek attempted to recall himself backwards into eternity; but eternity can never be past, that would involve a contradiction. If, on the other hand, the moment is posed, but only as an empty incision, eternity will appear to our inner eye, but only as an indefinite impending. For this reason the Jew discards the idea of the fullness of time because he constantly attempts to keep eternity at a distance. If the moment eventually becomes clearly posed, viz., as the all-decisive, it is then eternal but also a future which returns as a past. It is at this point that eternity is present in the fullness of time as that presence in which the past becomes one with the future. So the Christian, in contrast to a Greek or to a Jew, must enter eternity forwards, and fully conscious.

The crucial concept is "the fullness of time". In the fullness of time everything became new when "the spirit became flesh and dwelt amongst us". The gospel is thus just "this little world-historical advertisement" which proclaims the incarnation of God. With this we approach the problem which was raised in the *Philosophical Fragments*: Is it at all possible that an eternal salvation can find its point of departure in history? Can one build one's eternal salvation on a knowledge of history? If this knowledge is comprehended as objective perception in contrast to subjective passion, the answer is clearly "no". To Kierkegaard it is clear that truth is subjectivity, and only subjectivity. To accept anything less would involve the elimination of faith.

In a famous "interlude", discussing the relation between temporality and modality, he raises a new question: can the past be claimed to be more necessary than the future? Again, the answer is "no". Understanding this stance requires that we are acquainted with Hegel's definition of "the necessary" as "the union of the possible with the actual". From this identification he concluded that history was determined by innate necessity. Kierkegaard ardently opposed his idea. History is the divinely created history of man. Creation, which is the free act of God, can never emerge from necessity as its source. All creation originates in freedom, and every cause stems from a freely-operating cause.

Not even the consequence of a natural law can explain the necessity of becoming.

Aristotle described the change of becoming as the transition from possibility to actuality; but this change refers to existence, not to essence. As Kierkegaard points out, possibility and actuality are determinations of existence, in contrast to necessity, which is a determination of essence. Hence he considers the inference from reality to necessity to be illegitimate; necessity is a purely logical concept, totally inapplicable to history. Everything created is historical. And the past is irrevocable, "over and done with", as we are accustomed to saying. But is the immutability of the past necessarily permanent? Kierkegaard does not think so: the past is not more necessary than the future, and if both were necessary, man's freedom would only be a pious fraud, and everything would be determined since the dawn of time by the laws of fate. This is unacceptable to him; and therefore, in order to circumvent fate, he denies the necessity of the past.

To elucidate the uncertainty which is impressed upon the created by the Creator, he offers a little example: When a person sees a star, he begins doubting its presence and contemporaneity when considering the fact that it has been created and thus could possibly have been destroyed before the received light could make this known to him. This point is still viable also in the light of modern physics. Correspondingly, in the outer world a shadow of doubt reigns. Not even he who feels pain by pinching himself in the arm is easily convinced being immune to the penetration of illusion into his life.

Compare Shakespeare: "*The great globe, yea, all which it inherit, shall dissolve and, like this insubstantial pageant faded, leave not a rack behind. We are such stuff as dreams are made on, and our little life is rounded with a sleep.*" - *The Tempest*, act iv. Please, note the ambiguity of the word "*the globe*", the name of his own theatre!

Inasmuch as the faith chooses to believe in something which cannot be known, it suspends doubt through a decision. For this reason, faith is the true "organ" of history. Through faith, the historical is invested with a meaning which extends far beyond what is merely historical. And solely as an object of faith can something historical become the grounds on which an eternal salvation can be built. Confer Shakespeare once more:

*"And my ending is despair, unless I be reliev'd by prayer which pierces so that it assaults mercy itself and frees all faults."* - *The Tempest*, epilogue).

## **2. KIERKEGAARD'S TWO THESES**

After this very condensed study of the status of the notion of time in Kierkegaard, I will discuss two theses concerning time which I have found in the works examined: 1) *the thesis of time's dependence on consciousness*, advanced in *The Concept of Dread*, 2) *the thesis of the possibility of repeating the past*, as a precondition for repentance, presented in the *Philosophical Fragments*.

That Kierkegaard's authorship, evaluated as a whole, contains many unresolved tensions and obvious contradictions, is not very surprising in the light of his declared aversion toward the paragraphical tyranny within traditional philosophical systems. However, it is hardly in itself an infringement on his thinking to require the individual works of his anonymous authorship to comply with certain elementary requirements, primarily, a formal requirement of inner consistency based on the works' own premises. It is here natural to refer to Mark Taylor who, in his work on Kierkegaard's authorship, has stressed that the existential stages in the pseudonymous works are described in such a way that it is reasonable to view them as coherent and well-rounded concepts.

My intention with these remarks is not what the reader perhaps might fear, viz., to find a poor excuse for educating the ignorant about what this great philosopher should have written in the event that he had put greater emphasis on avoiding the most obvious misunderstandings and errors. Finger-wagging is certainly worthless and inappropriate to a genius like Kierkegaard. No, my aim is solely to direct the reader's attention to certain difficulties in connection with the notion of time in the works under investigation and thus to warn against some rather superficial interpretive possibilities, in order to suggest others instead which are probably not so obvious.

We must be aware of the fact that the common characteristic of these two works is not limited to their pseudonymous character. The simultaneity of their creation and publication attests to a much deeper affinity: when evaluated in the light of teachings on the existential stages, the pseudonyms appear to enjoy the same status. Both figures, Climacus as well as Haufniensis, can be considered as exponents of the religiosity "A", all the while both referring to and approaching the religiosity "B". The most significant common feature in our context, which involves their exposition of the notion of time, is the conception of logic presented in connection with the polemics of the pseudonyms against the favorite victim of Kierkegaard's anger, viz. Hegel.

It is here categorically stated that time and change are concepts which are totally incommensurable to any logical system. Thus Haufniensis in his introduction clearly insists that "in logic, no motion may be imminent, for logic is, and all logic merely is". Later he appends ironically, in a note, that "motion in logic can be accredited to Hegel". But without agreeing with Hegel, much less acclaiming him for having induced motion in logic, we can today (with the benefit of knowledge gained from historical hindsight) safely assert that, on this particular point, Kierkegaard was wrong.

The development within the past twenty years of a previously unknown logical discipline, tempo-modal logic, has demonstrated with all desirable clarity that it is in fact possible to introduce time and motion, or change, into logic. But this modern logic is in reality based on a rediscovery of medieval ideas. Kierkegaard's conception rests on

a peculiar prejudice which he apparently shares with all of recent European philosophy. It is therefore all the more strange to conclude that his own reflections on the concept of time comprise a highly original contribution to - tempo-modal logic! Let us look a little more closely at the two theses stated above, starting with that on human consciousness as a precondition of temporality. Haufniensis offers the following justification:

*"When time, correctly, is designated as infinite succession, it seems natural also to determine it as well as: past, present, and future. But this distinction is misplaced if understood as lying within time itself, for it emerges first in time's relation to eternity ... That life which is in time, and is merely temporal, has no presence."*

*"The moment characterizes the present ... but if one is to determine time by means of the moment ... then the moment is precisely not the present, for the purely abstract and imagined intervention between past and present does not exist ... but if, by contrast, time and eternity touch each other, it must be in time, and so we arrive at the moment. In Latin, it is termed: momentum, and its derivation ... expresses mere disappearance. Thus understood, the moment is not the atom of time, but that of eternity."*

*"The synthesis of the temporal and the eternal is not yet another synthesis, but an expression of that primary synthesis in which man is a composition of body and soul born by spirit ... When the spirit is posed, the moment is present ... It is first in this moment that history begins; nature does not lie in the moment ... the moment is that ambiguity in which time and eternity touch, thereby establishing the concept of temporality ... And first now does this division become invested with significance: present time, past time and future time".*

A natural interpretation of the thesis on human consciousness as a precondition of temporality, based on the quoted context, will indicate a clear differentiation between: a) the insipid passing of time in nature, which is the vacuous succession of immanence, and: b) true temporality, understood as the human time of history, being characterized by its division into three, viz., past, present, and future, where the past and the future manifest themselves in memory and expectation, respectively, and where the present is actualized as experience and determination. This interpretation is basically correct; but it is invalidated, however, if it is augmented with the claim that temporality, despite its subjective validity, is objectively an illusion, being not valid in, and for, nature.

Confronted with the claim that temporality is nothing but a subjective illusion - a claim which represents a clearly incorrect interpretation of Kierkegaard's teachings on the dependence of temporality on consciousness - it must be insisted that, wherever the opposition between subjectivity and objectivity is encountered, "Subjectivity is Truth". Spirit is always opposed to nature. Regarding the question of reality versus illusion, it therefore applies that the subjective time is real, whereas the objective time is illusive.

However, it was hardly the intention of the pseudonyms to reduce the natural sciences *ad absurdum*. Furthermore, nature is the mutual base of all existence, thus comprising the substratum of both insipid and animated nature. For this reason natural time should be termed illusive only in the context of an existential evaluation. In which sense, then, is spirit opposed to nature, we may ask? The answer to this question, as far as I see it, must consist in the absolute paradox - the incarnation of God in the man Jesus.

The incarnation unites eternity with time in such a way that God, i.e, the Creator, assumes human form. This, however, is inconceivable, and therefore incapable of being an object of knowledge. But why does Kierkegaard think that it is incomprehensible? Is not the moment precisely something we all know? Yes, we know it as that which is disappearing - but as such it is nothing but a mimicry of the eternal, a miserable parody. Only as contentually satiated fullness of life, i.e., as God's own presence, is the moment incomprehensible. In this sense it can never be comprehended, but merely experienced. Its incomprehensibility is such that we can nevertheless conceptualize the difficulties which prevent understanding. At issue here is a contradiction, viz. the contradiction that - to a created spirit - eternity must needs be something which is itself created.

To man, eternity must needs be directed towards the future. But the assumption that eternity is something which can be created must similarly apply to eternal truth, and therefore truth cannot be timeless either. From this it cannot be concluded, however, that truth is created with necessity. Granted that the goal of spirit is to break through, as freedom, it must do so freely. The apparent contradiction here is simply a reflection or repetition of an even more profound and primordial contradiction: out of nothing, the eternal God created the world of time in time. Thus the truth about that which occurred cannot be independent of time. But when something first has become true, it will remain true for all future. Only in this connotation can the truth be termed: eternal.

I will now proceed to discuss the thesis of the possibility of repeating the past as the condition of possibility for repentance. Concerning this thesis, Climacus writes:

*"Can the necessary be created? ... All creation is suffering and the necessary cannot suffer, it cannot endure the agony of reality which is that the possible ... at the moment wherein it becomes real, is shown to be nothingness, for reality annihilates possibility. Everything which comes into existence thereby proves, in its very creation, that it is not necessary, for only the necessary cannot be created ... Necessity stands wholly alone ... Nothing exists because it is necessary ... The real is not more necessary than the possible ... (Aristotle's teachings on the two forms of possibility in relation to necessity. That he begins by claiming all necessity to be possible is a mistake.)."*

*"All becoming occurs in freedom, not of necessity; existing things come into being not for a reason, but from a cause, and each cause ends in a freely operating cause ..."*

***Mogens True Wegener***

*Everything which has been created is eo ipso historical, for although nothing can be predicated of it, the decisive predicate of history allows itself to be predicated, namely, the fact that it has been brought into existence ... Nature is too abstract to be more strictly dialectical with respect to time. This is the imperfection of nature, that it does not possess ... history; and its perfection, of which it has an inkling, is that it has been brought into existence (which is the past), and that it exists (which is the present)."*

*"That which has happened is over and done with and cannot be repeated, and therefore cannot be changed either. Is this immutability the immutability of necessity? The unchangeability of the past is produced by a change, the change of becoming, but such an immutability does not exclude all change as it did not exclude it, for all change is excluded only inasmuch as it is excluded at every instant of time. The immutability of the past is (therefore not merely) dialectical in terms of a previous change, but must be dialectical with respect to a higher change which suspends it (that of repentance, e.g.)."*

To this can be added a remark by Haufniensis: *"The possible corresponds entirely to the future. The possible is freedom's future, and the future is time's possibility."*

The above passage on nature can be viewed as indicating the correctness of our interpretation of the first thesis. With regard to the second thesis, it can clearly be seen from the quoted segment that it presents some very peculiar viewpoints concerning the correct definition of the traditional modal concepts: possibility, actuality and necessity. Kierkegaard takes the liberty of correcting Aristotle, the greatest logician of antiquity.

A consideration of modern logics does not permit a decision as to which of them - Aristotle, or Kierkegaard - is right on this issue. I am personally more inclined toward a pragmatic attitude according to which the validity of systems of logic is understood to be relative to their areas of application, and are established by convention on the basis of an appropriate consideration. Judged against this background, it is quite conceivable that Kierkegaard's system can function more purposefully than the Aristotelian one when evaluated with an eye towards an existentially oriented philosophy.

It may seem a little disingenuous to refer to Kierkegaard's logic as an independent system, since it has not been delivered over to us in any finished, full-fledged form. It seems nonetheless reasonable to maintain that it resembles, potentially, or virtually, a logical system. This is a consequence of the formal requirement of consistency which must apply to each of the pseudonymous works. In contrast to Hegel, Kierkegaard in his more philosophical works, at least, insists on the principle of non-contradiction all the way to the highest synthesis, which constitutes the absolute paradox.

But what, then, characterizes this distinctive Kierkegaardian logic in comparison to other and more traditional systems? I will briefly present the structure in his logical system as I find it implicit in the texts ascribed to his pseudonym Johannes Climacus.

The system appears to be situated midway between atemporal and tempomodal systems, since the concept of possibility is defined temporally, whereas the concept of necessity is defined atemporally. The concept of the necessary is determined as that which can be denied only at the risk of contradiction, in contrast to the concept of the accidental, which is determined as that which can be alternately confirmed and denied without contradiction. This alternation shows precisely the variability of the temporal. The accidental is bound to time and synonymous with the temporal, which is divided into three and conjugated into past, present, and future.

The concept of the possible is now defined as the accidental relative to the future, and the concept of the actual is defined as the accidental relative to the present or past, whereas possibility and actuality are conceived as mutually exclusive determinations. Further, what is once given is determined as immutable in the sense of irrevocably past, although the immutability is not taken to be necessary. Finally, becoming is interpreted as the transition from possibility to actuality, which occurs instantaneously.

From this we can see how temporality's three *casus* or *tempi* - past, present, future - install themselves as primitives, or irreducibles, with consciousness as the determining instance. On the basis of the logic which I have here outlined we can say that freedom, a key concept of Kierkegaard's, manifests itself as a *nisus* anticipating a definite future course among a veritable infinity of possible courses which are all mutually exclusive. Still, it is a little odd that Kierkegaard found it incumbent to let Climacus be so resolute in his rejection of the principle expressing the necessity of the past.

Diodoros Kronos, it is true, made use of the principle as a premise of his famous "Master Argument", whereby he claimed to have shown the immutability of the future. But Leibniz, who is quoted laudingly by Climacus, adhered to an equivalent principle: *unumquodque, quando est, oportet esse*, and at the same time he opposed determinism. Therefore it is not very likely that Leibniz found the principle just stated to constitute a serious threat to freedom. Did Kierkegaard after all not accept Leibniz's solution to the age-old question of the relationship between freedom and providence?

Should we conclude that Leibniz erred with respect to the principle mentioned, and that he unjustifiably assumed the necessity of the given, whether present or past? No, not at all. What can be concluded is merely that the word *oportet*, as used in the context above, cannot be equated with his usual concept of strict, timeless necessity. Maybe the principle should be read: *it is impossible for anything that is that it was not*. With this rendering, taking possibility in Kierkegaard's sense of future openness rather than in Leibniz's, and Aristotle's, sense of conceivability, or absence of contradiction, the principle is translatable to: *it is inevitable for anything that now is that it once was*. The principle is thereby suddenly disclosed to be both reasonable, and harmless!

Are we then obliged to concede that Hegel's concept of the necessary as the union of the possible and the actual is merely different from Kierkegaard's, but harmless too? This is at once much more questionable: Hegel's conception of the relationship between the concepts of possibility and necessity seem to imply a collapse of modal distinctions. The differences between the concepts are obliterated, the relation between reason and outcome becomes indistinguishable from that between cause and effect, with the result that determinism reigns absolutely and totally in the end.

The objection here is raised toward Hegel can also be directed against Spinoza. According to him the only freedom human beings can attain is intuition of necessity, comprehended as knowledge of the laws of existence. This objection, however, does not apply to Leibniz for, according to him, the laws of existence are an expression of the highest expediency and instituted freely by the creator. To Leibniz, freedom is superior to necessity, and therefore Kierkegaard could use him as an antidote to Hegel.

Without the inspiration from Leibniz, Kierkegaard could hardly have developed a logic as highly sophisticated as that which we encounter in *Philosophical Fragments*. One can, however, imagine yet another source of inspiration, viz., a philological one. As a theologian, Kierkegaard must have been familiar with Hebrew; in this language, the verbs are conjugated into two tenses: "unfinished" (*fiens*) and "finished" (*factum*). His concepts of possibility and actuality might be borrowed from this source.

### **3. CONCLUSION**

How does the question regarding the possibility of repentance stand, seen in the light of this? "It is over and done with and cannot be changed", we are used to saying. Is this not worthy of credence after all? Even Kierkegaard is willing to invest the past with a characteristic of immutability and immovability. But to him, this characteristic does not mean that the past is irrevocable in a necessary sense. But is God capable of correcting the work of Creation so radically as to undo what has happened?

In his tale of "the other death" from the collection *Alef*, the Latin American poet Jorge Luis Borges relates the strange story of a mestiz, Pedro Damian who, after having spent his entire life repenting his cowardly conduct in a certain battle, is allowed by God to relive the battle on his deathbed. This re-experience is so realistic that he, after performing heroically, dies, shot in his heart by a bullet from a battle which occurred a lifetime earlier, whence every reminiscence of his earlier cowardice is eradicated!

This figure is patterned on a medieval theologian named St. Petrus Damian who in a little treatise entitled *De Divina Omnipotentia* discussed the idea that God may not only regret the past, but that it is even within the power of the almighty to alter the past. As a rather radical example, the holy man considers the almighty's power to repeat the

founding of Rome. As we know, the Romans calculated their calendar *ab urbe condita*. Damianus thus raised the problem of history (Ranke: "wie es eigentlich gewesen").

Kierkegaard employs a subtle logic in maintaining the possibility of repentance. He is correct in claiming that the immovability of the past cannot be termed necessary in his own chosen sense of the term. Strict necessity is expunged both from history's characteristic factuality and from the causal nexus which is determinant for its progress. But is this equivalent to asserting that the Creator can freely disturb or annihilate truth? We must carefully consider what is at issue here. If God can suspend the laws which he has ordained for his creation, he comes close to contradicting himself.

There is reason to believe that precisely the future's characteristic of possibility, when compared to the irrevocability of the past mediated in the present, constitutes a basic law for all creation. This law guarantees the direction of time's progress and points out a fundamental condition of all possible experience. The consequence of suspending the direction of time would be an instantaneous destruction of all order in the universe. If the direction of time's flow is suspended, thermodynamics is concurrently suspended, leading to cosmic collapse, the instantaneous impending of chaos.

There is a clear distinction between logical and physical necessity. In contrast to the former, which is atemporal, the latter is firmly anchored in time and expresses its unflinching direction. Kierkegaard is entirely correct in saying that the determination of what is going to happen is not absolute. As already mentioned, Kierkegaard recognizes a conditional physical necessity. Of this necessity it is true that every cause refers to a "freely operating cause", which can only mean that all causality is rooted in spontaneity. This idea corresponds to the fact that physical laws are at bottom stochastic.

To Leibniz, as well as Aquinas, Anselm and Augustine, the belief in providence entails that the truth relating to future contingents must be immutable, i.e., atemporal. The idea of a timeless truth is also in other ways deeply embedded in Western thought. There is hardly any other presupposition which appears so fundamentally established and unrelinquishable. Nevertheless, it is difficult to liberate oneself from the immediate impression that such concept is at variance with the idea of human free will.

Leibniz claimed that he had a satisfactory solution to the difficulty; his proposal can be seen as an elaboration of the so-called "medieval solution" due to the scolastics. Whether or not Kierkegaard embraced this solution is, as seen above, an open question: he spoke much of "faith in providence", which is basically equivalent to "trust in God". Belief in divine dispensation means confidence in God's care and love, regardless of how one's life progresses. The idea that man's fate is decided for all time is foreign to Kierkegaard since it seems to exclude human freedom. This does not imply that Leibniz' solution is inconsistent; it can very well be consistent without being plausible.

God as creator is omnipotent. God as providence is omniscient. As a consequence of omniscience, God knows everything which can possibly be an object of knowledge concerning the future. Does this exclude that God as creator can produce something hitherto unknown and totally new even to himself? Only if it is assumed that the truth about everything which ever can and will occur is already given and known of eternity. But, of course, nothing prevents God from creating something wholly new.

New truth is continually created. However, when something has first become true, it must at least have been true forever after. On this interpretation of the notion of truth, the futurity of eternity has eventually been confirmed. This understanding takes the idea of creation seriously by allowing the creation of new facts. At the same time it permits the work of creation to be understood as "a divine experiment" (Grundtvig).

On the basis of the notion of truth which has here been outlined, it is natural to compare time to a tree in which the past forms the root and trunk, and the soaring branches stretch into the future with its open possibilities. Is the future always open? Any and all trees, even the tree of time, can wither and die. This is the termination, death; and death "always gets the final say", as the saying goes. Contrary to popular meaning, this is no necessity either, since everything is possible - for God.

But repentance is a condition, the condition of possibility, according to Climacus, and Kierkegaard. What does it mean to repent? Is repentance nothing but lamenting one's wasted possibilities? In order to make sense of this concept it may be advisable to consult a poet, Dante, for example. Kierkegaard and Dante certainly do not have much in common - but at least they do share one thing: integrity, sincereness, seriousness. To Dante, repentance is the condition of admittance to the highest level of happiness, which is the eternal beatitude - and in this he resembles Kierkegaard.

How does Dante describe this change? After having seen the cave of the damned and climbed the mountain of purification, he passes two rivers: Lethe (river of oblivion) and Eunoë (river of remembrance), before he can reach the earthly paradise. Both Dante and Kierkegaard believe that by being permitted to forget evil and remember goodness the soul is finally allowed to enjoy true happiness, heavenly beatitude.

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*Almost all quotations in the preceding refers to these two central texts:  
"The Concept of Dread", Caput III & "Philosophical Fragments", Interlude.  
S. Kierkegaard: Samlede Værker, 3rd edition, vol. vi.*

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## APPENDIX

*The following, which is a prototype of my system W (cf.ch.27), was revised 2011.*

"a) a logical system can be given; b) but a system for human existence cannot be given". In this assertion from "*Concluding Unscientific Postscript*", which associates to the preceding "*Philosophical Fragments*", Kierkegaard summarizes his criticism of Hegel.

But, he adds: "Are we .. to construct a logical system, then care must primarily be taken, that nothing is included, which is subjekt to the dialectics of existence". The Hegelian attempt to introduce change or motion into logic can only lead to confuse logic, which is by definition indifferent with regard to existence. Being temporal, existence is dynamic. But, as a system, logic is closed, or static. For this reason, logic is incommensurable to history.

When, in what follows, I make the intrepic attempt to formalize what I have termed "the logic of Kierkegaard", I mean by the word 'logic' something different from Kierkegaard. Logic, in any case tempo-modal logic, means at least to me something more like what he called: "the dialectics of existence". But I accept that "the question, in which sense the category can be used as a short-hand expression for existence" is decisive. The system proposed is a modified version of that of Ockham, and Leibniz, as this has been axiomatized by Prior, and McArthur. Similar systems have been investigated by Rescher, Prior & Fine, and Øhrstrøm.

Following Kierkegaard, temporality is the most fundamental feature of human existence. But temporality is precisely distinguished by the usual tripartition in past, present, and future. Hence it is natural to use these *tempi* as primitives. So I shall extend the propositional calculus (*PC*) with the temporal operators *P, F*, the modal operators *L, M*, and the universal operator *W*.

Our system therefore includes the following primitives:

- $\neg, \Rightarrow$  as logical constants, used in negation and implication
- $p, q, r$  etc., as logical variables, for propositions with truth value (0 or 1)
- $P, F, L, M$  &  $W$  as operatorer, used as prefix to the variables

The following combinations are accepted as well formed formulas (wff):

- ' $\neg p$ ' read: "not  $p$ "                      ' $p \Rightarrow q$ '        read: "if  $p$  then  $q$ "
- ' $Pp$ ' read: "in the past  $p$ "              ' $Fp$ '                read: "in the future  $p$ "
- ' $Lp$ ' read: "necessarily<sub>1</sub>  $p$ "            ' $Mp$ '                read: "possibly  $p$ "
- ' $Wp$ ' read: " $p$  is a world proposition", or: "that world in which  $p$ "

We now introduce a series of definitions:

- d.1 ' $p \vee q$ '  $\equiv$  ' $\neg p \Rightarrow q$ '                      read: " $p$  or  $q$ "
- d.2 ' $p \wedge q$ '  $\equiv$  ' $\neg(\neg p \vee \neg q)$ '                      read: " $p$  and  $q$ "
- d.3 ' $p \Leftrightarrow q$ '  $\equiv$  ' $(p \Rightarrow q) \wedge (q \Rightarrow p)$ '                      read: "iff  $p$ , then  $q$ "
- d.4 ' $Np$ '  $\equiv$  ' $\neg M\neg p$ '                                      read: "necessarily<sub>2</sub>  $p$ "
- d.5 ' $Kp$ '  $\equiv$  ' $\neg L\neg p$ '                                      read: "conceivably  $p$ "

The definitions dd.1-3 are utilized to formulate the standard tautologies of *PC*, which are supposed to be commonplace, just as dd.4-5 are utilized to construe modal propositions.

We then introduce some postulates, or axioms, viz. LL1-3, PP1-4, FF1-4, MM1-4:

*Mogens True Wegener*

- L.1  $Lp \Rightarrow p$  read: "if necessarily<sub>1</sub>  $p$ , then  $p$ "  
 L.2  $L(p \Rightarrow q) \Rightarrow (Lp \Rightarrow Lq)$  "if necessarily<sub>1</sub>: if  $p$  then  $q$ , then:  
 if necessarily<sub>1</sub>  $p$  then necessarily<sub>1</sub>  $q$ "  
 L.3  $KLp \Rightarrow Lp$  read: "if it is conceivable (: not excluded)  
 that necessarily<sub>1</sub>  $p$ , then necessarily<sub>1</sub>  $p$ "

These axioms for necessity<sub>1</sub> are quite trivial. The first says that what is necessary<sub>1</sub> is true. The second permits distribution of the  $L$ -operator over the implication. The third, together with the from L.1 provable theorem  $LLp \Rightarrow Lp$ , enables a reduction of iterated  $L$ -operators, and is distinctive for the strictest of all modal systems, viz. the Lewis-system **S5**. This seems to be identical to that of Leibniz, which again corresponds to that of Kierkegaard.

- P.1  $p \Rightarrow \neg F\neg Pp$  read: "if  $p$ , then no future without past  $p$ "  
 F.1  $p \Rightarrow \neg P\neg Fp$  read: "if  $p$ , then no past without future  $p$ "

The two axioms P.1 & F.1 represent the unrestricted validity of truth values over time. Moreover, they claim that time possesses the property of connectivity.

- P.2  $PPp \Leftrightarrow Pp$  read: "iff (in a) past's past  $p$ , then (in a) past  $p$ "  
 F.2  $FFp \Leftrightarrow Fp$  read: "iff in a future's future  $p$ , then in a future  $p$ "

These axioms are double: If read from left to right they permit the reduction of iterated tense operators. If read from right to left they claim that time is dense, which is a condition for time being continuous in the sense of "indefinite succession", cf. Kierkegaard.

- P.3  $P(p \vee q) \Leftrightarrow (Pp \vee Pq)$  read: "if (in some) past either  $p$  or  $q$ , then  
 either (in some) past  $p$  or (in some) past  $q$ "  
 F.3  $F(p \vee q) \Leftrightarrow (Fp \vee Fq)$  read: "if (in some) future either  $p$  or  $q$ , then  
 either in some future  $p$  or in some future  $q$ "

These two axioms enable distribution as well as extraction of operators. The axioms are somewhat weaker than  $\neg P\neg(p \Rightarrow q) \Rightarrow (Pp \Rightarrow Pq)$  &  $\neg F\neg(p \Rightarrow q) \Rightarrow (Fp \Rightarrow Fq)$ , which for  $Hp \Leftrightarrow \neg P\neg p$  ("in all past  $p$ ") &  $Gp \Leftrightarrow \neg F\neg p$  ("in all future  $p$ ") - which are *not* assumed - would correspond to  $H(p \Rightarrow q) \Rightarrow (Hp \Rightarrow Hq)$  &  $G(p \Rightarrow q) \Rightarrow (Gp \Rightarrow Gq)$ ; cp. L.2.

Instead of the latter we shall later introduce two rules; cf. RSP & RSF below.

- P.3 entails  $P(p \Rightarrow q) \Leftrightarrow (\neg P\neg p \Rightarrow Pq)$  &  $\neg P\neg(p \wedge q) \Leftrightarrow (\neg P\neg p \wedge \neg P\neg q)$ .  
 F.3 entails  $F(p \Rightarrow q) \Leftrightarrow (\neg F\neg p \Rightarrow Fq)$  &  $\neg F\neg(p \wedge q) \Leftrightarrow (\neg F\neg p \wedge \neg F\neg q)$ .

It seems natural to suppose, that Kierkegaard assumes time to be linear:

- P.4  $FPp \Rightarrow (p \vee Pp \vee Fp)$  "if (in a) future past  $p$ , then either  
 (now)  $p$  or (in a) past  $p$  or (in a) future  $p$ "  
 F.4  $PFp \Rightarrow (p \vee Pp \vee Fp)$  "if (in a) past future  $p$ , then either  
 (now)  $p$  or (in a) past  $p$  or (in a) future  $p$ "

Then follows two axioms, whereof the first enables inference from an indefinite past to a definite past, and the second enables inference from an indefinite future to a definite future:

- P.5  $Pq \Rightarrow (\neg P\neg p \Rightarrow Pp)$  "if (in a) past  $q$ , then (in a) past  $p$  if in all past  $p$ "  
 F.5  $Fq \Rightarrow (\neg F\neg p \Rightarrow Fp)$  "if in a future  $q$ , then in a future  $p$  if in all future  $p$ "

We further introduce four axioms for (future-directed, cf. Kierkegaard) possibility:

- M.1  $Fp \Rightarrow Mp$  read: "if in some future  $p$ , then possibly  $p$ "

The axiom M.1 allows for the future-directed branching of possibilities; this, however, would not be the case if we also had  $Mp \Rightarrow Fp$  (cf. F.4).

M.1 is equivalent to  $\neg M\neg p \Rightarrow \neg F\neg p$ . Granted there is a future, we have according to F5 further  $\neg F\neg p \Rightarrow Fp$ , from which finally  $\neg M\neg p \Rightarrow Mp$ , cf. M1.

M.2  $Mp \Rightarrow \neg L\neg p$  read: "if possibly  $p$ , then not necessarily<sub>1</sub> not  $p$ "

The axiom M.2 decides the relative strength of what is possible and what is conceivable, the latter defined (d.5) as: that which is not necessarily<sub>1</sub> excluded (due to inconsistency, e.g.) M.2 is equivalent to  $Lp \Rightarrow \neg M\neg p$ , whence  $Lp \Rightarrow \neg F\neg p$ , once more due to M.1.

M.3  $MMp \Leftrightarrow Mp$  read: "iff  $p$  is possibly possible, then possibly  $p$ "

The axiom M3 permits reduction as well as expansion of  $M$ -operators. Instead of the usual thesis  $\neg M\neg(p \Rightarrow q) \Rightarrow (Mp \Rightarrow Mq)$  we assume the rule RSM and:

M.4  $M(p \vee q) \Leftrightarrow (Mp \vee Mq)$  "iff possibly (either)  $p$  or  $q$ , then (either) possibly  $p$  or possibly  $q$ "

The axiom M.4 permits distribution as well as extraction of  $M$ -operators and implies both  $M(p \Rightarrow q) \Leftrightarrow (\neg M\neg p \Rightarrow Mq)$  and  $\neg M\neg(p \wedge q) \Leftrightarrow (\neg M\neg p \wedge \neg M\neg q)$ .

M.1 is the most interesting one of the axioms MM.1-4. In spite of the earlier mentioned Haufniensis quotation ("the possible corresponds entirely to the impending"), it would hardly be fortunate to replace M.1 with ' $Mp' =_{df} 'Fp'$ ', because  $\neg F\neg p$  then would exclude  $M\neg p$ , due to  $\neg F\neg p \Rightarrow \neg M\neg p$ , which follows from  $Mp \Rightarrow Fp$  - and this would destroy freedom.

In order to fight determinism effectively, Kierkegaard had to choose one of two options: Either he would have to discard F.4, allowing a future directed branching of time itself; but this possibility was probably well beyond his powers of imagination. Or he would have to weaken  $Mp \Leftrightarrow Fp$  to  $Fp \Rightarrow Mp$ , i.e. M.1, thus allowing a future directed branching of possibilities.

The axiom M.1 is closely related to the axiom A.19 of McArthur (1976), just as the system described above, comprising LL1-3 & PP1-5 & FF1-5 & MM1-4, is almost identical to his system **OT**, by which he intended to comprise Ockhamist Tense-logic.

However, the Diodorean concept of possibility used in the system presented here does not permit the inference from presentness to possibility,  $p \Rightarrow Mp$ . In the same vein it suspends the traditional equivalence  $Lp \Leftrightarrow \neg M\neg p$ . On both issues the system is faithful to Kierkegaard.

In contrast to the axioms MM.1-2, the other pair MM.3-4 is quite ordinary and distinctive for "a von Wright edition" of the Lewis-systemet **S4**, which is somewhat weaker than **S5**.

By means of d.5, we have already introduced a concept of *physical* necessity<sub>2</sub> ( $N$ ), in contrast to our concept of *logical* necessity<sub>1</sub> ( $L$ ). The operator ' $N$ ' represents "the consequence of a law of nature", cf. Kierkegaard, which can be read "the (now) unpreventable/ inevitable". From M.1,  $Fp \Rightarrow Mp$ , we further get:  $Np \Rightarrow \neg F\neg p$  and by F.5:  $Fq \Rightarrow (Np \Rightarrow Fp)$ .

We finally introduce four axioms for world propositions. Similar axioms make up a basis of the "egocentric" logic of Leibniz (depicting a monad), as reconstructed by Prior (1977).

W.1  $Wp \Rightarrow p$  "if  $p$  is a world proposition, then  $p$ "

W.1 determines a world proposition as one which is true *simpliciter*.

W.2  $Wp \Rightarrow \{q \Rightarrow PN(p \Rightarrow q)\}$  "if  $p$  is a world proposition, then, if  $q$ , it was inevitable that if  $p$  then  $q$ "

**Mogens True Wegener**

W.2 determines the true as that which followed inevitably from a world proposition.

W.3  $PN(p \Leftrightarrow q) \Rightarrow (Wp \Leftrightarrow Wq)$  "if it was inevitable that iff  $p$  then  $q$ , then, iff  $p$  is a world, then  $q$  is also a world"

According to W.3, the equivalence of worlds follows from what was inevitably equivalent.

W.4  $p \Rightarrow : \forall q : q \Rightarrow PN(p \Rightarrow q) : \Rightarrow Wp$  "if  $p$  - and if, for all  $q$ ,  $q$  implies that it was inevitable: if  $p$  then  $q$  - then  $p$  is a world proposition"

According to W.4, it is a condition for a true proposition being a world proposition, that all other true propositions follows from the first proposition on account of past inevitability.

W.5  $\exists p : Wp$  "there is a world"

We may interpret  $Wp$  as a proposition  $p$  which, due to the operator  $W$ , is representative for the entire world course up to the present moment. Thus  $p$  is representative of this instant too. According to W.5, the axioms WW.1-4 are not empty: the proposition "the world is" is true.

Since the concept of inevitability (necessity<sub>2</sub>) stands for some in a near or distant past already instituted future directed lawlike consequence, it follows from the axioms WW.1-5, that nothing in the world is purely accidental, but everything is ordered and connected by law. What is real is all-comprehensive, forming a lawlike chain of causes and effects which at any instant also comprises the initial conditions. However, it remains true that "every cause points back to a freely operating cause", Kierkegaard. Thus causality is anchored in spontaneity.

W.2 can be considered as a formalization of the above mentioned Leibnizian principle: *unumquodque, quando est, oportet esse*. This principle, however, is only a reflex of the famous Aristotelian *dictum*: "Everything, which is, is of necessity when it is; and everything, which is not, is of necessity not when it is not. But not all that, which is, is of necessity, just as not all that which is not, is of necessity not." - cf. his *Peri Hermeneias* (ix,19a23).

In order to grasp this quotation we must distinguish between *necessitas consequentiae*, i.e.  $N(p \Rightarrow q)$ , and *necessitas consequentis*, i.e.  $Nq$ . Because  $Nq$  only follows from  $N(p \Rightarrow q)$  in case of  $Np$ , it is easy to see, that W2 should not viewed as a threat to the concept of freedom. W.2, if expressed by means of the combined operators ' $PN$ ', in stead of the operator ' $L$ ', as we find it in Rescher and Prior, can be said to represent an indeterministic concept of causality.

From W.2 follows  $* Wp \Rightarrow \{PN(p \Rightarrow q) \vee PN(p \Rightarrow \neg q)\}$ , "if  $p$  is a world proposition, then in some past inevitably: if  $p$  then  $q$ , or in some past inevitably: if  $p$  then not  $q$ ", and  $\dagger Wp \Rightarrow \{\neg P\neg M(p \wedge q) \Rightarrow q\}$ , "if  $Wp$  then, if never past impossibly both  $p$  and  $q$ , then  $q$ ":

*	1	$q \Rightarrow \{Wp \Rightarrow PN(p \Rightarrow q)\}$	W.2, imp./exp.
	2	$\neg q \Rightarrow \{Wp \Rightarrow PN(p \Rightarrow \neg q)\}$	2, subst. $q/\neg q$
	3	$q \Rightarrow : \{Wp \Rightarrow PN(p \Rightarrow q)\} \vee \{Wp \Rightarrow PN(p \Rightarrow \neg q)\}$	1, PC
	4	$\neg q \Rightarrow : \{Wp \Rightarrow PN(p \Rightarrow q)\} \vee \{Wp \Rightarrow PN(p \Rightarrow \neg q)\}$	2, PC
	5	$q \vee \neg q \Rightarrow : \{Wp \Rightarrow PN(p \Rightarrow q)\} \vee \{Wp \Rightarrow PN(p \Rightarrow \neg q)\}$	3 & 4, PC
<i>q.e.d.</i>		$\{Wp \Rightarrow PN(p \Rightarrow q)\} \vee \{Wp \Rightarrow PN(p \Rightarrow \neg q)\}$	$\vdash q \vee \neg q$ , RMP
		From the world everything true or false follows with past inevitability.	
$\dagger$	1	$Wp \Rightarrow \{q \Rightarrow PN(\neg p \vee q)\}$	W.2, d.1, subst.
	2	$Wp \Rightarrow \{q \Rightarrow P\neg M\neg(\neg p \vee q)\}$	1, d.5, subst.
	3	$Wp \Rightarrow \{\neg q \Rightarrow P\neg M\neg(\neg p \vee \neg q)\}$	2, subst. $q/\neg q$
	4	$Wp \Rightarrow \{\neg P\neg M\neg(\neg p \vee \neg q) \Rightarrow q\}$	3, contrapos.
<i>q.e.d.</i>		$Wp \Rightarrow \{\neg P\neg M(p \wedge q) \Rightarrow q\}$	4, de Morgan
		Everything, which is compossible with the world, is true - cf. Leibniz.	

In addition to the above axioms now comes five rules, viz.:

RL	$\vdash \neg\alpha \Rightarrow \alpha \rightarrow \vdash L\alpha$	"if $\alpha$ is a tautology, then $L\alpha$ is a thesis"
RP	$\vdash \alpha \rightarrow \vdash \neg P\neg\alpha$	"if $\alpha$ is a thesis, then $\neg P\neg\alpha$ is a thesis"
RF	$\vdash \alpha \rightarrow \vdash \neg F\neg\alpha$	"if $\alpha$ is a thesis, then $\neg F\neg\alpha$ is a thesis"
RM	$\vdash \alpha \rightarrow \vdash \neg M\neg\alpha$	"if $\alpha$ is a thesis, then $\neg M\neg\alpha$ is a thesis"
RMP	$\vdash \alpha \ \& \ \vdash \alpha \Rightarrow \beta \rightarrow \vdash \beta$	<i>modus ponens</i>

Theses is a term comprising both axioms & theorems.

The rule RMP has already been applied copiously in the preceding.

With inspiration from Prior (1967), we now introduce a definition of "statability":

d.7  $'Sp' \equiv 'PN(p \Rightarrow p)'$  "iff  $p$  is statable, then, if  $p$  then  $p$ "

In itself, ' $p \Rightarrow p$ ' is only a boring tautology expressing a proposition's identity.

This definition is then augmented by the following fire rules:

RS1	$\vdash S\alpha \Rightarrow Sp$ for every $p$ comprised in $\alpha$
RS2	$\vdash (Sp \wedge Sq \wedge Sr \wedge \dots) \Rightarrow S\alpha$ , where $p, q, r, \dots$ are all the variables in $\alpha$
RSP	$\vdash \neg P\neg(\alpha \Rightarrow \beta) \rightarrow \vdash (Sp \wedge Sq \wedge Sr \wedge \dots) \Rightarrow (P\alpha \Rightarrow P\beta)$ , where $p, q, r \dots$ are all those variables in $\beta$ which are not comprised in $\alpha$
RSF	$\vdash \neg F\neg(\alpha \Rightarrow \beta) \rightarrow \vdash (Sp \wedge Sq \wedge Sr \wedge \dots) \Rightarrow (F\alpha \Rightarrow F\beta)$ , where $p, q, r \dots$ are all those variables in $\beta$ which are not comprised in $\alpha$
RSM	$\vdash \neg M\neg(\alpha \Rightarrow \beta) \rightarrow \vdash (Sp \wedge Sq \wedge Sr \wedge \dots) \Rightarrow (M\alpha \Rightarrow M\beta)$ , where $p, q, r \dots$ are all those variables in $\beta$ which are not comprised in $\alpha$

With these rules for the  $S$ -operator, which are variations of those given by Prior (1968), it becomes possible to pay due regard to the fact that something, which was never known before, hence was hitherto non-statable, can suddenly be made actual, or realized. It is interesting to compare the logic sketched above with other systems - cf. my more refined system  $\mathbf{W}$ , ch.24.

The axioms LL1-3, which are well-known, and the rule RL determines the system  $\mathbf{S5}$ . The axioms PP1-4 & FF1-4 and the rules RP & RSP, RF & RSF together yields the temporal system  $\mathbf{K}_l$  for linear time; unusual are here merely the rules RSP & RSF.

The axioms MM1-4 and the rules RM & RSM resembles approximately the system  $\mathbf{S4}$ , such as this has been axiomatized by *von Wright*, cf. Hughes & Cresswell (1968). However, an important difference is that  $p \Rightarrow Mp$  has been replaced by  $Fp \Rightarrow Mp$ , in correspondence with the assumption of Kierkegaard, that what is going to happen in the future is always possible.

At least the two sub-systems,  $\mathbf{S5}$  &  $\mathbf{S4}$ , correspond to well-known semantical models, and proof has been given for validity and completeness of the systems relative to the models.

The axioms WW1-5 are Prior's (1977). I have at present no proof of their completeness. The semantics seems to be distinctive for Kierkegaard's concept of existence.

In the tempo-modal logic here described possibilities are branching towards the future, and that in spite of the fact that time is linear, according to this system.

The originality of Kierkegaard's conceptions is shown by the fact that the concept of possibility is directed towards the future, whereas the concept of factuality comprises the past as well as the present. This entails that the inference from factuality to possibility is not valid, just as the inference from possibility to factuality remains invalid.

The system sketched above is my best bet as to what Kierkegaard might have arrived at if he had attempted to formalize the dialectics of existence by means of modern formal tense logic. My assumption is just as counterfactual as my proposal is anachronistic. Nevertheless there may be some sound reason and meaning in all this mess of madness.

My intention with presenting the system has been to contribute to a renewed insight into the more or less hidden connections between the central tempo-modal concepts in Kierkegaard's "*Philosophical Fragments*" and "*The Concept of Dread*".

There can be no doubt, that Kierkegaard in these two works pretends to reason logically, and after all one cannot do that without sticking firmly to some definite logic. One who without serious consideration picks a little here and a little there, with no sense of internal consistency, will very soon be trapped in a swamp of irrationality.

It therefore must be said to be a legitimate enterprise to try to find out which type of logic was applied by Kierkegaard in his philosophical practice. If my abstract appendix has been able to cast a little light over these very obscure and almost unaccessible corners of Kierkegaard's intellectual universe, it has served its purpose.

At least it has cleared something up to myself.

Therefore I venture to give it to my reader.

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