

Review Essay

THEOLOGY AND SCIENCE IN THEOLOGICAL PERSPECTIVE

by Egon W. Gerdes

A review and commentary on Jürgen Hübner, *Theologie und biologische Entwicklungslehre: Ein Beitrag zum Gespräch zwischen Theologie und Naturwissenschaft* (*Theology and Biological Evolutionary Theory: A Contribution to the Dialogue between Theology and Science*) (Munich: Beck, 1966), xv + 324 pages.

It should be said at the outset that this is a theologian speaking. I do not claim Hübner's impressive knowledge of the scientific issues at stake, but I share his concern for a dialogue between theology and science. It would be good if the scientific side could also pick up from Hübner and proceed with the dialogue.

The book represents Hübner's doctoral dissertation. The author is trained as both biologist and theologian and is now about to become a *Privat-Dozent* at Tübingen with another dissertation on Kepler as theologian. He is also editor of the theological writings of Kepler for the same publisher who printed his dissertation.¹ These excellent qualifications stand behind this excellent piece of work.

The specific topics of Hübner's study are the German theological reactions to what he calls the biological doctrine of evolution (*Evolutionstheorie*), as it was founded by Darwin and has been continually updated through the decades since. Hübner tackles his subject by giving a critical account of the historical development, less of the biological, more of the theological positions. His personal stance is only implied, but at the end his own position is clearly stated. Let us follow Hübner's own procedure and report on his report before offering a critique of his position.

The report is of interest with respect to three aspects: its general outline, particular structural elements, and some selected crucial issues. The general outline presents four chapters, the last of which comprises the author's personal contribution. Of the remaining three chapters, the first discusses "The Biological Doctrine of Evolution Founded by Darwin as an Example of Scientific Methodology." After tracing the theory of evolution from Darwin to the present and contrasting it to other comparable theories of Roman Catholic and dialectic-materialistic origin, Hübner characterizes the "principle of causal-analytical research of evolutionary theory" as "methodological atheism," a concept which certainly deserves a closer look.

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The second chapter is the longest, presenting in two parts a complete survey of all the German theological reactions to Darwin and Darwinism: taking World War I as a theological watershed, Hübner groups the voices of those before 1918 and of those after into entities for study. His approach to the material is well accounted for, and the resulting consequences are skilfully summarized.

The third chapter is a special case study within the general case study of the whole book, and I must admit that I fail to see the cogency of including a detailed discussion of "The Theology of Emil Brunner since 1938 as Example of Theological Conceptuality." The correlation between Brunner's personalism—which, by the way, appears elsewhere in the book—and the preceding elaborated types of theological reaction seems rather accidental. This view is undergirded by the fact that the study of Brunner's concept of analogy in particular and his theological conceptuality in general yield rather questionable results at best. On the whole they are declared inadequate. So why go to such length?

The particular structural elements which embody Hübner's special contribution to the dialogue between science and theology have to do with the main part of the book, the grouping of the theological voices. According to Hübner, both the pre- and post-World War I "theological utterances" (expressions, *Äusserungen*) vacillate in a spectrum between two poles, which Hübner can also call tendencies. This is to indicate that he wants polarity not to be misunderstood as duality. For it is the same "stuff," in a sense, to which the two tendencies are oriented. On the one hand there is world-view thinking (*weltanschauliches Denken*), on the other hand theological thinking proper. Both of these taken together have to be opposed to scientific causal-analytical thinking. World-view thinking is basically monistic, theological thinking basically polar, though not dualistic. The monism of world-view thinking is concerned about "the common ontological platform" of science and theology. It is an objectifying way of thinking that attempts to answer universally the question of meaning, and, therefore, finally, in the Greek-Hellenistic cosmos categories of which the cyclical understanding of history is an essential part. In contrast to this way of thinking, theological thinking proper, it is claimed, allows both science and theology their own ontological platform; one could even say, in a strict sense, that theology does not even need such an ontological platform to begin with, though it may end up with one. In other words, theology is understood as limiting itself to its own realm—whatever that may be—and leaving scientific thinking to its own inherent movement of thought, an idea which should not go undisputed. Anyway, in its self-imposed restriction, theological thinking is now free to develop as a thinking "explicitly and exclusively oriented primarily to the phenomenality of human existence in the face of revelation."

One should note that the issues at stake are not *being* but *phenomenon*, not world but man, not nature but revelation. Such thinking, therefore, would have to be characterized as the Hebrew-biblical thinking in which history, for instance, preserves its strictly linear character. Each of these two, polar, modes of theological thought—improper and proper, it has been implied—involves for the author seven particular problems: (1) the concept of God, (2) the subject-

object scheme, (3) the role of science, (4) the special place of man, (5) the origin of life, (6) the understanding of time, (7) the question of the end.²

Hübner presents these two poles or tendencies as results of his findings. We have anticipated them because they are the most basic structural element of his book. Between these poles and tendencies, the following five types of theological reactions to Darwinism move from world-view theology to theology proper.

1. *Conservative-Orthodox Conceptions* (pre-1918: Zöckler, Glaubrecht, Luthardt, Kübel; post-1918: Oesch, Flügge).—The main characteristic of this group is their fundamentalistic approach to scripture (p. 31). This forces the earlier representatives to assert a strict dogmatic monogenism for man, on the basis of an explication of the doctrine of man's image of God (pp. 36 f.). In modern times their company is joined by sundry neo-Pietists and in this country Missouri Synod Lutherans; even the Tennessee Monkey trial helps to illustrate that "a genuine dialogue between science and theology is not possible on this level" (pp. 110 ff.).

2. *The Supposition of Creative Interventions*—the Catholic position (pre-1918, Catholics: Reusch, Mivart, Michelis, Leo XIII, Wasmann; others: Carrière, Dorner, Esslinger, Dutoit-Haller, Dennert, Kirn, Seeberg; post-1918, Catholics only: Pius XII, Pohle, Bartmann, Ott, Diekamp, Schmaus, Rahner, Loosen, Wenzl, Haas, Steinbüchel).—As indicated, this is the typical Roman Catholic position; although before World War I some non-Catholics could be found in their company, they now argue pretty much among themselves. What is their case?—the provision of certain territory reserved for science, but finally under the control of theology (p. 31). Already the early authors begin to distinguish between man's physical origin—open to scientific research—and his spiritual-psychic creation, the domain of theology (p. 47). This consciously Thomistic thinking is ruled on for modern Catholicism in the encyclical *Humani Generis* of 1950. With it the issues are focused on the questions of hominization in general and monogenism in particular. Only after these do the questions of a Catholic world view and the judgments of Catholic scientists follow suit. Let us take them up one by one.

The starting point for Catholic dogmaticians is the crucial conception of God as what we might call architect, building engineer, and contractor, in just this sequence. God is mind who conceives a plan and proceeds accordingly (p. 117). It is particularly Karl Rahner who relates to this his discussion of hominization. Man is essentially one. Nevertheless it is man as spirit—conceived in analogy to God (or God conceived in analogy to man?)—that really makes him into man. And spirit is the new element, which somehow needs to be conceived as intervention, though not necessarily from without (pp. 120 ff.). Thus monogenism can be preserved—in its spiritual aspect—and it is indeed for Roman Catholicism a theologically binding, though not absolute, dogmatic decision (p. 124). Once such a view is accepted it can be expanded into a world view along traditional lines of a scale of being, spirit occupying the top place in the hierarchy followed by life (entelechy) and matter (pp. 125 f.). Such a world view also represents the boundary for the scientists. Evolutionary theory has all the freedom in the area of matter, considerable freedom in the area of life, but an acute danger arises if it feels entitled to speak about the origin of man, particularly his spirit nature (p. 132).

3. *Idealistic Interpretations—monistic-idealistic outlines* (pre-1918: biblicis-

tic-idealistic interpretations: Michelis, Baltzer; monistic-vitalistic interpretations: Frohschammer, Franke, Beth, Siebeck; post-1918: Teilhard de Chardin, and modern Protestants like Moltmann, Pannenberg, Rendtorff).—Consciously monistic positions are naturally defended against the danger of dualisms. They always happen to be idealistic in character, many of them even vitalistic (pp. 31 f.). What keeps the variations of this type together is finally a kind of spiritualism, that is, placing the highest value on spirit, be it of God or man or just spirit in the world. This is already obvious with the early representatives. In what Hübner calls biblicistic idealism, Darwinism is rejected, because compared to a theism built on biblicism it seems to be atheism and materialism (p. 59).

Similarly, monistic vitalism, to use Hübner's terms again, "interprets theologically the freedom of spirit in an idealistic way as being found already within material development" (p. 61). This amounts to an ontologization of the concept of development which, in turn, permits "a melting together of the world views of theology and science, with the help of philosophical concepts of development" (p. 66).

In modern days Teilhard de Chardin is the exemplary case of this type. His "consequent universal monism," it is claimed, "proceeds in the last analysis from Christian faith," or, to be even more precise, is conceived christologically. There is a double aspect to this. On the one hand there is a personal side: Teilhard proceeds from his "living experience of Christ, bordering on mysticism." On the other hand, the Christ event is of cosmic importance. "The meaning of evolution itself is incarnation," because "Christ is conceived as the evolver." Thus monism and faith go together; "evolution serves the spiritualization of matter." Hübner's summary is: "For Teilhard also the scientific work issues in mysticism, faith, and adoration. The sacred is the depth dimension of the profane" (pp. 143–56). After having discussed Teilhard, the author, unfortunately, mentions only briefly what I consider the most exciting contribution of modern Protestant theologians like Rendtorff, Philipp, Pannenberg, and above all Moltmann. We shall therefore have to come back particularly to the last man.

4. *Separation of the Areas while Attributing an Inclusive Function to Religion—while co-ordinating them theologically and philosophically* (pre-1918: Bolsmann, Schmid, Schweizer, Ritschl, Bornemann, Reischle, Eck, Wendland, Kaftan, Titius, Haering, Otto, Wobbermin, Troeltsch, Hunzinger, Petersen, Dennert, Kleinschmidt; post-1918: Schlink, Heim, Brunner, Tillich).—From this type on, Hübner's own sympathy increases; I suspect it may even reach its climax here. This should already be obvious in the fact that it is one of the authors of this type, Brunner, who subsequently is treated in a chapter by himself, although the critical abilities of Hübner forbid him just to embrace his hero unseen. This type attempts to let science be science and theology be theology with the one reservation that any overarching knowledge will not come from science but should be expected from theology (p. 32).

Both deal with the same subject matter, but are distinct as perspectives, as Hübner lets Rudolf Otto contribute. "The one asks for causes, the other for purposes" (p. 89). Thus it is teleology that makes the difference—at least for the early authors. If it is true that science works with causality, and theology with teleology, then the overarching claim of theology becomes clear, because

it is understood that causality is not interested in teleology, whereas teleology embraces causality (p. 79). Therefore, for example, Kaftan sees "in the concept of development of modern science the possibility to overcome this difficulty (i.e., between faith knowledge and empirical knowledge) to the extent that it can be interpreted in the sense of the purpose concept" (p. 83). In modern times this type is the camp of the great theologians of the immediate yesterday. It should be worth our while to look at each of them briefly after characterizing their common concern. All first separate science and theology neatly and then re-co-ordinate them in a world view (*Weltanschauung*). In so doing they also react against theologies oriented to Kant and Schleiermacher. In other words, their systems have "anti-idealistic and anti-subjectivistic traits" (p. 161).

For Edmund Schlink the primary separation of the areas is that "theology proceeds from the Holy Spirit, science from reason." The secondary co-ordination is intended in scientific statements of nature as a whole which, however, are by nature religious so that only theology can make them properly (pp. 164-69).

Karl Heim separates the two areas with the help of physical concepts of space (which unfortunately ties him more than necessary to Greek ways of thinking). Science operates on the causally accessible surface, whereas theology reaches into the non-objective reality of the lone ego, the depth dimension relative to the causal plane. All dimensions deal with the same "stuff," namely, life. In life, that is, *vitalistically*, theology and science are co-ordinated, in the sense that the depth dimension—understood as related to spirit—finally upholds and infiltrates the scientific plane. And since spirit stands in analogy to Spirit, human spirit to Divine Spirit, it is actually "God's Spirit [that] leads evolution entelechially" (pp. 169-78).

For Emil Brunner the distinction is given as the difference between truth as encounter and truth as idea, the former theological, the latter scientific. But both are truth, Logos. In this they are related. But the scientific Logos of reason is finally subject to the theological Logos of revelation, since it is only in the Logos Christ that the Logos of creation can be seen as creation (pp. 178-90).

For Paul Tillich all science (whether dealing with thinking or being—and biology deals with the latter) does and ought to work autonomously. This also goes for those sciences in which thinking and being come to conscious existence in spirit, the humanities (*Geisteswissenschaften*), with their theoretical and practical aspects. Theology cannot be grouped under any of these sciences, because it is in no way autonomous but is theonomous. This accounts both for its difference from and at the same time superiority over science. Again, its data are the same as those of science. It gives to them, however, their depth dimension and that not only existentially but also with respect to world view (*weltanschaulich*). This program of Tillich is called theonomous metaphysics.

From Schlink, Heim, Brunner, and Tillich, there is now only one further step to go and that is to abandon all attempts to re-co-ordinate the separated areas in whatever sort of world view is common to the two, in other words, the conscious advocacy of pluralism (pp. 190-200).

5. *Separation of the Areas by Abandoning All Systematic Combination of the Different Ways of Knowledge* (pre-1918: Rade, Kähler, Herrmann, Elert; post-1918: Schumann, Barth, Bultmann, Gogarten).—These authors have given

up trying to harmonize science and theology and, therefore, accept what might amount to a dualism with respect to our problem, to a pluralism in principle (p. 32). But neither dualism nor pluralism is the actual starting point for the writers of the early period. These terms would already be too positivistic. Therefore one should leave it in the as-yet-uncommitted negative formulation that: "they can and actually do renounce any ontological co-ordination of science and theology" (p. 101). For Rade science deals with indifferent truth, theology with interested truth (p. 102). For Kähler theology restricts itself to "the Christian relation of man to God including the world," while leaving natural and historical contexts as such outside its competence (pp. 102 f.). Herrmann strictly separates the provable reality of science from the experienceable reality of theology (pp. 104 ff.). And Elert operates with the traditional concepts of transcendent and immanent to keep theology and science apart (pp. 107 f.). None of these authors therefore would consciously allow himself to be drawn into attempting a Christian world view.

In our judgment such a dismissal of things worldly smacks treacherously of Pietism. Should these men have been affected by it, and perhaps also their successors in modern times? Let us see. Schumann insists on "excluding any continuity of being, and with that of thinking, between creature and creator." All that the creature, man, has to work with is a world view from which he deduces a first cause. This, however, should not be misunderstood as creator, for creation as creation is not intelligible but an article of faith. Thus the thought of creation has to exclude that of *Weltanschauung*, world view (pp. 203 ff.).

Karl Barth also separates science and theology in two respects: their source of knowledge and their subject matter. The subject matter of science is *existing contexts*, that of theology the *word of God*. The source of knowledge for science is reality understood as world and that understanding would be qualified as "*historisch*," that is, *historically given*. For theology it is reality understood as creation, and this understanding, Barth insists, is precisely "*geschichtlich*," that is, *historically related* (p. 210). The corresponding *termini technici* are *analogia entis*—which is abrogated—and the embraced *analogia fidei sive revelationis*, one could also say *relationis*. It should be kept in mind, however, that, even when Barth speaks of creation in his sense, he has presupposed a set of christological assertions. For it is in Christ that God has revealed man and made a covenant with him, which is the inner ground of creation just as creation is the outer ground of the covenant (pp. 206–14).

Bultmann also distinguishes between a double understanding of world. On the one hand is the world, the context of work, which is rightfully the sphere of science. On the other hand is creation, but as such understandable only existentially, in faith. In other words: "In the oneness of the existential decision itself there is understanding in faith." Such an understanding makes the faithful exist in the world, but not from the context of the world nor toward it (p. 214–19).

Finally Gogarten develops a positive understanding of secularity on the basis of the Lutheran doctrine of justification. It is in justification that man learns to understand himself and the world as being created. This understanding involves both: knowledge and acknowledgment. For man it means liberation from encirclement by the world. For the world, it means liberation from any divine or demonic character to profanity, and by this it is precisely dis-

tinguished from God. The secularization of modern times (*Neuzeit*) is thus regarded as a legitimate consequence of Christian faith. Thus the world justified is the primary area of science; man justified is the primary area of theology.

Now we report on some crucial issues not necessarily related to the central structural elements of the book just discussed. They have to do with the chapters on Darwin, which really exceeds our competency, and the chapter on Brunner, which actually evades our interest, for reasons indicated earlier.

To begin with Darwin and Darwinism, it is indeed helpful to be reminded at the outset that Darwinism arose in the context of Deism, Agnosticism, Positivism, Enlightenment, even Materialism. From a Catholic point of view—widely shaped by medieval realism—it therefore looks much like nominalism. One might add that from a Protestant point of view—widely shaped by modern idealism, as far as Germany is concerned—it looks equally much like phenomenism (p. 19).

Darwinism, we are told, shaped science in general and biology in particular in two ways. It taught them to work causally and not teleologically, and the causality employed by them is to be understood epistemologically and methodologically only, not realistically or ontologically (pp. 21–25). Whether these assertions about biology and science are correct or not, the biologist and scientist are asked to tell us, so that we may be assured that we do not deal with a straw man. If we can accept these premises, however, Hübner's other prolegomena become understandable. If ontology is ruled out, then any ontological inclusion or exclusion of God is by definition outside the scope of science. Hübner notes two ontological methods: that of Theism and that of Materialism. Wherever these are employed, however, they also become the methodological principles encroaching upon science, which, in turn, we are told, rejects them. Thus science is plainly non-ontological, but only methodological in approach, not theistic or anti-theistic (materialistic), just atheistic, methodologically. This is what is meant by methodological atheism (pp. 19–27).

Emil Brunner's theology is cited in order to win a theological conceptuality. Proceeding from Brunner's concept of truth as encounter, that is, taking personalism as a theological criterion, Brunner is examined for his attitude within the five types discussed. As is to be expected, he is placed in type 4: He separates and then re-co-ordinates science and theology. His main concept in this operation is that of analogy, essentially again in a form of *analogia entis*. This Hübner takes as the starting point for developing his own position in the next chapter, where he begins by contrasting Brunner's *analogia entis* with Barth's *analogia fidei*. But before he goes into that he draws some conclusions from his Brunner studies that center around the idea of "Theological Conceptuality as Directions for Language and Dialogue" (pp. 275 ff.). Let this suffice by way of summarizing Hübner's report.

We can now turn to the fourth chapter of the book, which contains indications for Hübner's own position. In it he consciously stands on the shoulders of Brunner, whom he had placed under type 4, and of Barth, Bultmann, and Gogarten, who appeared in type 5. With Brunner and Barth he advocates a sharp distinction of science from theology in order to provide for each its freedom to operate properly (*sachlich*). The problem in both authors is focused on the then co-ordinating concept of analogy, be it *analogia entis* (Brunner) or

analogia fidei (Barth). Granted, in both cases analogy is meant to serve the function of language forms of faith. And yet, "Does not the very concept of analogy through its ontological origin seduce to objectifying description?" Therefore, the concept of analogy should indeed be examined to see whether or not it cannot consciously be given up altogether (pp. 292-96).

Here Bultmann and Gogarten offer themselves as the next leaders. The concept of analogy is here replaced by that of the paradox, realized existentially in the occurrence of justification. Bultmann's and Gogarten's contributions are thus revealed as consciously building on the Lutheran tradition. The concept of paradoxicality as a genuinely theological means of language can indeed assure better than anything else so far that the world remains the world.

Thus it becomes theologically illegitimate to dictate to science, be it even the framework alone. This is to say that the "ground and purpose of the world and of man cannot yet be grasped by a mere concept of God but are established by a deed of God toward man." It is this deed of God that grants man freedom, a paradoxical eschatological freedom, "in nature from nature," and indeed for nature which needs no longer to be demonized nor divinized. Thus far goes Bultmann (pp. 296-300). Gogarten goes the next step. Through justification by faith man receives a freedom of faith which enables him to speak even of the profanity of the world and of nature. Science therefore means "even the evangelical fulfilment of the divine commandment," namely, to make the world subject to man. But does the concept of paradoxality not involve schizophrenia? The answer is no. True, paradoxality is not harmonized in a world view, for that would destroy its very character. Rather, it is taken up into the realm of existentiality which allows the co-existence of several levels of thought (pp. 300-303). Hübner needs to be thanked and followed. For nobody really can go back behind Brunner and Barth, Bultmann and Gogarten. With all of these theologians one would like to assert the ontological separation of science and theology, and with all of them one would want to labor over at least an existential reco-ordination. For no reco-ordination at all would split reality, life itself, into two irreconcilable ontic halves, which seems rather nonsensical. This double assertion indeed gives us our program: the givenness of ontic unity and totality, the openness ontologically, to tackle the world and life methodologically, epistemologically in ways that let each approach be genuine in its own right. We would, furthermore, agree that the concept of analogy—essentially a Greek-Hellenistic concept—seems to create more problems than it solves. The concept of paradoxality—essentially a Hebrew-biblical concept—may indeed serve modern discussions better. But do we have to stop here? Hübner himself does not.

Of the remaining names mentioned by Hübner, two should be noticed. Heinz-Horst Schrey is the one who analyzes the modern situation in the term used above: schizophrenia. His attempt to overcome it is given with the concept of complementarity. But since he thinks of it in physical terms, like wave and corpuscle, he is essentially still moving in Greek categories, probably reason enough for Hübner not to incorporate much of his thinking (pp. 304 ff.).

Hübner pays a greater tribute to his own teacher, Gerhard Ebeling, who, in a sense, returns to more traditional concepts than any of the other authors just mentioned. Ebeling proceeds from the Lutheran doctrine of the two realms, understanding the one as the work of God, the other as the work of man,

according to the will of God of course. The two meet not only in God but also in man as he realizes his existence. Theology deals with man's correspondence to God in the totality of his personhood, science with man's correspondence to the world, but only in the particularity of man's transactions (*Partikularität seines Handelns*). The critical question which Hübner fails to raise, probably out of respect to his teacher, is whether Ebeling really goes beyond what has already been said or whether he may even regress. For the totality of personhood again smacks not only of Pietism but also of some kind of idealism lying behind it. And the particularity of man's transactions—is that not man in his phenomenality? And is not man in his phenomenality precisely the man theology is rightly concerned about when it is biblical?

These critical remarks are not meant to overshadow the help which Ebeling might give on two accounts. In the first place, there is his distinction between science as that which "figures counting" (*zählend berechnet*) and theology as that which "figuratively accounts" (*erzählend Rechenschaft gibt*), if we try to imitate the German play on words. One could also say it is the difference between accounting by counting or recounting. Second, the word character (*Worthaftigkeit*) of events which lead Ebeling into problems of language helps us not to relapse into ontological questions as a starting point. Hübner himself subscribes to this by closing his book with the remark that it is not the commonness of a world view that counts but the community of conversation, dialogue (pp. 311–18).

We should not take our leave from Hübner without pursuing a little further the problem which he has raised. Since he has restricted himself to authors in German, it may not be out of place to introduce the names of two Germans who have since contributed to the discussion. Both of them were briefly mentioned by Hübner, but demand further attention. The name of Günter Altner appears in Hübner's book as a "further theological pointer for the present discussion" (p. 306). This same Altner has recently critically reviewed Hübner's book.³ He praises Hübner for "an interesting theological account of the failure of most theological excursions into the area of the biology of evolution" (p. 616). He is also sympathetic to Hübner's sympathy with those authors who separate science and theology ontologically. Since he is, however, himself ontologically interested and has carefully moved in this direction, as Hübner had noticed, he raises a double question which should be listened to. In the first place he wonders "whether the partners thus separated will have much to tell each other in the future." Apparently Altner believes that when science and theology do talk with each other, they necessarily talk about ontology, that is, both really reach beyond their respective areas and build world views on their particular findings. This in itself leaves a double question open which we shall not attempt to answer but merely to formulate: Must science and theology talk about ontology; what else can they talk about? If they talk about ontology, is this desirable and legitimate? Altner's answer is clear. It is embodied in his second question: Is it sufficient just to talk about "practical application" (which he seems to identify with phenomenality)? Altner answers: No. The question which needs to be put to Altner, however, is whether theological phenomenality—as the historical category—is not *the* proper, and the only proper, area of theology motivated by Hebrew-biblical impulses. Or, negatively, does not the attempt to go behind phenomenality to that which keeps the

world together in its inner being already presuppose a commitment to thinking in inherited Greek-Hellenistic cosmos categories? At this place it should be granted that our hidden presupposition thus far has been that Hebrew-biblical thinking and Greek-Hellenistic thinking are in principle incompatible, although the Christian and post-Christian West has all through its history attempted to harmonize the two ways of thought. One may therefore naturally differ in the judgment whether this marriage has been successful or not, whether it should be continued or divorced. Our position, I take it, is clear.

In the light of the two modes of thought sketched, Altner contributes two more points of interest to the discussion. He finds it "hard to understand when Hübner immediately values the reference back to salvation-history-statements of the biblical traditions as done by some theologians as a reference back to the scientific temporal scheme" (p. 620, Hübner pp. 230, 308). What Altner apparently failed to see in Hübner's keen insight is the fact that salvation history works indeed for wide stretches with biblically labeled Greek categories, of which the concept of time is a beautiful test case. For whereas the kairological time understanding of scripture operates with open-ended time, it is the linear expansion backward and, even more, forward that counts; there the scientific chronological time concept puts its emphasis on points on the line of time, on stretches of time, on its measurability, that is, on a time specified, understood in the cosmos categories which are Greek. Thus we think that Hübner is right, although he has not fully developed this crucial point.

In recent times the expression of the biblical understanding of time has mostly been attempted in existential terms, as we have encountered them in Brunner, Barth, Bultmann, and Gogarten. It is here that Altner rightly feels some uneasiness. "It is questionable whether Hübner's distinction of the two ontological planes does not separate the two former opponents, science and theology, too far, to the detriment of an existential theology which must miss [or is deprived of] the ontological aspect, and to the disadvantage of a science endangered by world views [*weltanschaulich bedroht*]" (p. 621). We share this uneasiness, but we do not think that the possible solution lies along the lines of a return into the field of ontology and world view. We would like to ask rather whether the biblical understanding of time—if it is as governing as we believe it is—can be appropriated only existentially.

This leads us to our second name. For it is the conviction of Jürgen Moltmann, also mentioned by Hübner, that there is a more adequate appropriation of biblical thinking possible than in existentialism, namely in eschatology.

Moltmann's *Theology of Hope*⁴ has definite implications for the relationship between science and theology which the author has subsequently spelled out in an article called "Theology in the World of Modern Sciences."⁵ It is in this article, which Hübner did not yet know, that he carries the argument beyond the existential interpretation which we met last. It is, indeed, important enough to be studied briefly. In Part I, Moltmann grants that man no longer reflects on a world in which he has to live with gods and demons. But with that his problems are still not solved, because now he has to live with the bomb and revolution (p. 621). After tracing the emergence of this situation historically, Moltmann then draws a twofold consequence (in Part II). In the first place, the conflict between theology and science is not primarily a conflict within man or about man, it is about the whole, about "the future—salvation or de-

struction—of the whole” (pp. 625 f.) Thus any narrow, anthropologically, personalistically narrow, existentialism as determining principle is rejected. And this is indeed a step forward. In the second place, our concept of theology, with which we still operate, stems out of scholasticism. It needs to be exploded from within just as all medieval world views were exploded in modern times. There is no use in lamenting about it romantically. Concretely, theology has to “give up its limitation to church, faith, and internality” (pp. 627 ff.). Again a blow at narrow existentialism, be it in the most sophisticated forms of Brunner, Barth, Bultmann, and Gogarten. In the eschatological horizon—the character of which Moltmann abundantly describes in his *Theology of Hope*—there appears to open up more than just conversation between theology and science, and that without falling into the trap of world views concerned in the Greek sense about the order of the cosmos. There is a common concern about the future of the world which allows theology and science to move forward to commonness in thinking. What may be implied here, although Moltmann did not spell it out, is the conviction that science itself is moving out of the Greek thought patterns that nourished it for so long. If science discovers the historical category, how much more should theology; if science liberates from static cosmic categories, how much more should theology! Moltmann sees a double starting point for genuine conversation and common thinking of science and theology. On the one hand there is the problem of foundations (*Grundlagenproblematik*) of both science and theology, on the other hand the necessary formation of an ethos for the scientific-technological domination of the world (p. 628).

In Part III Moltmann again takes up the crisis within science. The old world of metaphysically assumed “givens” is being replaced by a world of constructive possibilities. “Objective truth remains objective truth, but it can objectively be proven that objective truth is not absolute truth but contingent truth” (p. 631). Here future comes in, and with it the quest of hope. “Reality is not yet rounded out to a whole but it moves toward it in open history” (*ibid.*). Thus science is discarding metaphysical assumptions for historical categories. But what about the “theological dimension of the sciences”? In the meantime not only science but also theology has emancipated itself from metaphysics (p. 633). It asks no longer for possession but for hope, that is, for the eschaton, anticipated in history. It understands revelation precisely as the opening up of history for the world (pp. 634 ff.).

In the light of these new horizons it makes sense (in Part IV) to ask for a common ethos and responsibility in the face of the increasing gain of technical power. This commonness, as is immediately understandable, is by far exceeding all existential withdrawal. It moves into the world as its proper sphere and does not abandon it in some Pietistic fashion (pp. 636 ff.). With this approach Moltmann would indeed not fit into Hübner’s type 5. But does he really fit type 4? Are not all types, 1 through 5, still laboring to work within or proceeding from Greek categories, that is, concretely connected with a world view? Could it not be said that all of them have indeed not been able to get out of the vicious circle? They either agree to it (type 1) or rebel against it (type 5) with all variations in between (types 2 through 4). They are all interrelated. Compared with them Moltmann’s view is a liberation to something new and cannot be fitted into the categories established; he bursts them wide open.

Thus Hübner has indeed done us a double service. Not only has he summarized what has been said in Germany about science and theology in response to Darwin and Darwinism, he has also so focused the issue that we can see the commonness of all of the solutions offered and their basic futility as long as they stay glued to outdated thought patterns.

We are beginning to carry our present argument to its last step. Consciously building on what has been said thus far, let us point out a few observations. Is it not obvious that modern science itself is overcoming the inherited categories? Take for example the concept of time which for centuries has been understood in the Greek way, chronologically, as measurable stretches of time. Now physics opens up the thought and perhaps even the real possibility of the invertibility of time. Such a time changes its character into the direction of the Hebrew kairological understanding of time, time open and fulfilled rather than stretched from here to there. Or let us mention biology which was our starting point. The closeness of the possibility of manipulating or mutating genes again brings home to us the insight that science has long since ceased to be contemplative, meditative—or materialistic, for that matter. In other words, what stands in the foreground is not ontology, is not world view, is not the idea but the phenomenon, and not only the phenomenon understood but the phenomenon acted upon, changed. With such an approach science has manifested its exodus from the Greek world once more. Not the ordered cosmos but the open future (the time discussion would suggest), and not the understanding but the changing of the world (the phenomenality orientation would suggest) are the things that count. In both of these areas, and we have alluded to examples only, science has freed modern man, emancipated modern man, secularized modern man much more than the church has been able to do since, in the prisons or the shambles thereof of early days, the church has remained with its theology far behind. One could say, therefore, that the secular world has done the biblical, Hebrew, Christian job which the church, married to pagan concepts, has refused to do. Any wonder why the church is where it is? Or to put it in a different way: the church better realize that it is kept in the Babylonian captivity of paganism while the post-Christian world which it originally originated is freed to the service we all are called upon to perform.

Lest these remarks remain in the area of speculation, let us add one concrete remark which may illustrate both the post-ness and the Christian-ness of the post-Christian world we are in. Both science and theology are wrong whenever they isolate man from his world or vice versa. Particularly theology—due to its currently uneschatological tradition—tends to conceive of man as opposed to the world and the world pulling man down. Here lies a dilemma which has been ours ever since we allowed ourselves to think of God as the higher principle above, the world the lower principle below, and man caught in between. If anything is Greek, non-biblical, even anti-biblical, then it is this. The alternative is the world with a past and particularly with a future. St. Paul's thought pattern is probably still the best help at this point: this world is not the world under the heavenly world but behind it. There is the new world ahead and, in theological jargon: even God is ahead. And as the world ahead is breaking into the world at hand—and biblical thoughts of this kind are expressed in assertions about the Holy Spirit—real possibilities, an open future is appearing into which we are asked to move. In the closed universe in which

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theology still prefers to move, we have long since played through all variations of the games we know. Let us walk out.

NOTES

1. I received this information from Dr. Hübner in Tübingen last summer.
2. The crucial discussion of the two poles or tendencies makes up the substance of the section "Die Problemlage," pp. 225 ff.
3. Günter Altner, review of Jürgen Hübner's *Theologie und biologische Entwicklungslehre . . .*, in *Evangelische Theologie*, XXVIII (December, 1967), 616-21.
4. Jürgen Moltmann, *Theologie der Hoffnung* (1st ed.; Munich: Kaiser, 1964); there have been several editions since then, including *Theology of Hope* (New York: Harper & Bros., 1967).
5. Jürgen Moltmann, "Theologie in der Welt der modernen Naturwissenschaften," *Evangelische Theologie*, XXVI (December, 1966), 621-39.