Social-Scientific Modeling in Biblical and Related Studies

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This article provides background information about the use of the social sciences and introduces the basic themes and factions in the debate about modeling in the field of biblical and related studies. It argues that some of the controversial issues could be clarified by drawing on the current discussion on modeling in the philosophy of science, especially Uskali Mäki's functional decomposition approach. It also presents a model for analyzing early Jewish and Christian movements at the end of the first century, assessing the model's composition, function and truth-value in the framework of Mäki's approach.

1. Introduction

Modeling is a relatively new topic in biblical and related subjects—it was first introduced in the 1970s—and it is controversial because the application of social-scientific models raises the difficult question of the cultural gap between the present societies, where the models are usually developed, and the ancient cultural context to which the models are applied.

Because biblical and related studies may not belong to the most familiar scholarly fields of the readers of this journal, I first sketch an overall picture of the development of the discipline and its main methods (Section 2). The subsequent sections summarize the arguments presented for and against modeling in biblical studies (Section 3), and discuss in more detail two approaches to modeling within biblical studies: a heuristically oriented approach of the Context Group (Section 4), and Rodney Stark's deductive approach (Section 5). My own viewpoint is closer to the approach of the Context Group, but with a critical edge derived from Uskali Mäki's functional decomposition approach to modeling that I introduce in

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Section 4. In the final section (Section 6) I apply Mäki's approach to a model for an analysis of early Jewish and Christian movements.

2. Methods and Modeling in Biblical and Related Studies

The area of research that is nowadays commonly called "biblical and related studies" or the study of "biblical and related literature" is originally a historical discipline that uses the same kinds of historical methods as all research on antiquity and ancient sources. The term "related" in the name of the discipline signals that the research is not restricted to any dogmatically defined canon of the Hebrew Bible (the "Old Testament") or the New Testament. Although the historical methods applied in biblical studies are closely related to the methods used in the study of antiquity in general, a set of approaches within the discipline have become known as historical-critical methods. These approaches examine (1) the history of texts and the original wordings of manuscripts (textual criticism), (2) the unity and the composition of sources (source criticism; earlier "literary criticism"), (3) form, social setting and history of smaller (oral) units of tradition (form-, genre- and tradition criticism), and (4) the editorial history of the sources (redaction criticism; the texts were often rewritten and reedited several times). These basic historical-critical methods dominated research up to the 1970s. After that, a variety of approaches from literary criticism, rhetorical criticism, anthropology, sociology, psychology, social psychology, etc. have been adopted to complement the basic historical-critical research.

As the above brief summary shows, there was some interest in the social setting even within the historical-critical paradigm. Form-, genre- and tradition criticism were partly inspired by the rise of the social sciences at the end of the 19th century and they introduced the concept of Sitz im Leben to biblical studies. Despite this promising start, genuine interest in the social sciences soon gave way to a more theologized dialectical approach from the 1920s onwards, and biblical scholars no longer actively followed what was happening in the social sciences. The new rise of the social sciences in biblical studies dates back to the 1970s when scholars started to criticize the one-sided study of "theologies" of biblical literature. Instead of focusing on abstract principles and ideologies thought to be reflected in the texts, scholars turned their attention to their more concrete social context.

From the very beginning there have been two branches among scholars interested in this kind of approach: the socio-historical approach focuses on the description of social realia and social-scientific criticism emphasizes explicit application of theoretical models. Since the 1970s the "modelers"

have introduced various theoretical traditions from sociology, anthropology and social psychology (for overviews see Elliott 1986, vol. 35; 2001; 2008, vol. 38; Holmberg 1990; Osiek 1992, vol. 22; Hochschild 1999; Martin 1999; Horrell 2002; Esler 2004; the present overview draws on Luomanen, et al. 2007b, pp. 15–16). Because biblical scholars have been inspired by several branches of the social sciences the term "modeling" has been used quite loosely within the field. As some critics have aptly noted (see below), the modelers have used the term "model" to characterize all kinds of theoretical approaches from the highly abstract level to particular small-scale models. The broad spectrum of "models" as they appear in biblical scholarship also becomes clear in the following brief listing of the approaches that have dominated the discussion since the 1970s. They all include some kind of models.

Some of the first works where the social sciences were applied to biblical studies had a clear functionalist orientation (Theissen 1977; Meeks 1972, vol. 91;1983). Other early applications drew on Weber's typology of charisma (Theissen 1977; Holmberg 1978), the grid and group model by Mary Douglas (Malina 1986; Neyrey 1986, vol. 35), sectarian studies (Gager 1975; Elliott 1981) and Mediterranean anthropology (Malina 1981; Rohrbaugh 1996a). Though Berger and Luckmann's sociology of knowledge (with the model of legitimation) was already applied in the 1970s (Meeks 1972), it gained more attention at the end of the 1980s and in the beginning of the 1990s when it was applied in some influential studies in order to illuminate the sectarian stance of various New Testament writings (Esler 1987; Watson 1986; Overman 1990). More recent applications include medical anthropology (Pilch 2000), Anthony Giddens' structuration theory (Horrell 1996) and the social identity approach (Esler 1998b; 2003; Jokiranta 2007). Some of the most recent works have also combined the cognitive science of religion[1] and cognitive science in general with the social science approach.[2] In the present context, it is not possible to give more detailed examples of all the above listed areas. The example in the final section of this article focuses on discussing models that are designed to explain religious sects.

1. The cognitive science of religion emerged among scholars of comparative religion at the beginning of the 1990s. This multidisciplinary approach draws on cognitive science, cognitive and developmental psychology, neuroscience, evolutionary biology and anthropology.

2. To our knowledge, Luomanen, et al. 2007a is the first volume where the cognitive study of religion is programmatically introduced in the field of biblical studies. My forthcoming book deals with the same topic: *Theology in the Flesh: Exploring Socio-Cognitive Exegesis.* The book is under contract to E. J. Brill's Biblical Interpretation Series.

3. Arguments For and Against Modeling in Biblical Studies

The scholars who endorse the conscious use of models—mostly affiliated with the Context Group[3]—have argued for their position in several contexts (see Malina 1982, vol. 36; Elliott 1986, vol. 35; 1993; 2008, vol. 38; Esler 1995; 1998a, vol. 49; 2000, vol. 78; Rohrbaugh 1996b). The following arguments deserve special attention:

- Models are an indispensable part of human cognition. Therefore, we can only choose whether or not we use them consciously.
- Models have an important heuristic value. They evoke new points of view and ask new sets of questions. Models cannot be proved right or wrong. If a model produces plausible results, it does not matter from where it is derived.
- Even scholars who focus on describing particular historical events use models, but implicitly.
- Models are placed in between larger theories and concrete research data. Models embody larger theories for testing against the collected data.[4]

Leaving aside the criticism presented from an interpretative Geertzian position (Garrett 1992, vol. 6), critics have drawn attention to the following points (see Horrell 2000, vol. 78; 2002; Craffert 2001, p. 24; Lawrence 2004):

- There is always the danger that models are imposed on the evidence. Theoretical questions about the model are as important as its pragmatic applicability.
- Usefulness and capacity to evoke new perspectives and questions are not sufficient reasons for accepting a model since most of the anachronistic and ethnocentric models will do the same.

3. The Context Group is a working group of scholars interested in using the social sciences in biblical interpretation. Members of the group meet annually in order to work collaboratively on joint projects and in order to offer peer reviews of publications on which the members are working. The group started its work in the late 1980s. For more information, see the website of the group: http://www.contextgroup.org/. In practice, modeling has become a sort of trademark for the scholars affiliated with the Context Group. This can be seen, for instance, in the names of two significant collections of essays produced within the group: *Modelling Early Christianity: Social-Scientific Studies of the New Testament in Its Context,* ed. by Philip Esler (London: Routledge, 1995) and *Social-Scientific Models for Interpreting the Bible: Essays by the Context Group in Honor of Bruce J. Malina,* ed. by John Pilch (Leiden: Brill, 2001).

4. In particular, this three-level scheme (theories, models, data) characterizes the textbook of John H. Elliott who follows Thomas Carney.

- It is of paramount significance how deviations from a model are accounted for since these critical questions are the key to the development of the models and social-scientific research in general
- In practice, the "modelers" have used the term model to characterize all kinds of theoretical approaches from the highly abstract level to particular small-scale models.
- In anthropology, which has been the crucial frame of reference for the Context Group, the research usually starts with ethnographic description, not with models.

Although it is a simplification to contrast the camp of "modelers" with that of "social historians"—in reality there is much overlap and many scholars acknowledge the validity of both points of view—models have been and continue to be a major bone of contention. While Dale Martin sees profound epistemological differences connected to discussion about models (1999, pp. 109–10), John Elliott (2008, 38:31) confidently labels the fear that models might be imposed on the evidence as a "bogeyman"; ". . . not one example of such inappropriate procedure has ever been cited and none is known to me."

4. Heuristics and the Truth Value of Models
The advocates of models within the Context Group have responded to the critics who claim that models presume "positivism" or "determinism" or "filling-in gaps" (Stowers 1985; Garrett 1992, vol. 6; Horrell 1996, pp. 18–22; Martin 1999, p. 130) by emphasizing that models are only heuristic tools that have no ontological reality or truth value. They only help find new questions and frameworks which may—or may not—prove to be helpful in understanding the texts. (Elliott 1993, pp. 43–45; 1995, p. 7; 1998a, p. 256).

The question about the truth value is an important one and it should not be dismissed simply by referring to the heuristic usefulness of models. As Pieter Craffert has aptly noted (2001, p. 24), "If one's expectation is that models should be useful in showing up questions and possibilities not asked before, then most (ethnocentric and anachronistic) models will pass the test." What we need is more philosophical reflection on how models do their job. Recent philosophy of science discussion seems to offer reasonable discourses for claims about the truth value of scientific models. It is not just through our scholarly taste or a feeling of becoming enlightened by new perspectives that we can justify the use of models.

I find Uskali Mäki's functional decomposition approach to modeling (2009; see also 2011, vol. 180) quite promising for the study of biblical

and related traditions. Although Mäki fully acknowledges the fact that models as wholes can never fully resemble their target system, he argues that it is possible to identify some "privileged parts" in the model which "can be considered for truth." This is where decomposition comes into play. Mäki defines modeling as follows:

> Agent A uses object M (the model) as a representative of target system R for purpose P; addressing audience E; at least potentially prompting genuine issues of resemblance between M and R to arise; describing M and drawing inferences about M and R in terms of one or more model descriptions D; and applies commentary C to identify the above elements and to align them with one other.

Mäki acknowledges that a fully pragmatic approach could tie the truth value of a model with M-P and/or M-E relations by claiming that model M is "true" if it successfully fulfills purpose P, or convincingly addresses the audience E. In my view, this is actually a case similar to the one Craffert refers to (see above) and which Mäki also dismisses on the grounds that "agent A can successfully use a false model M to impress audience E. And A can successfully use a false model M to serve another purpose P . . ." Notably, in this pragmatic approach, it is usually the model as a whole which is regarded as impressive or serving a certain purpose.

However, in Mäki's view, it is more appropriate to decompose modeling and start by isolating the M-R relation from the pragmatic functions of modeling. It is the ability of model M to resemble system R to a certain degree—or that the model at least potentially prompts "genuine issues of resemblance" to be considered between M and R—where the potential for the truth value of a model lies. Nevertheless, practical questions about audience E and purpose P are not without significance either. They help to isolate the parts of a model which can be considered for truth from the parts that are idle or may facilitate the modeling without claiming truth themselves.

A corollary of Mäki's approach is that the constituent parts of models (R, M, P and E) are mute in themselves without the voice of the modeler who provides a commentary for his/her model description D. While D simply describes an (imagined) model by concrete means of a mathematical equation, a visual image, a graph, a verbal account etc., it is the commentary C which actually spells out the relevant parts, purposes and audiences of the model and thus also sets the stage for assessing the possible truth value of the relevant M-R relations.[5]

5. In the present context, it is not possible to go into details of discussion concerning

In my view, Mäki's decomposition approach seems to provide distinctions that—if applied to the discussion about modeling in biblical studies—might help to clarify some issues in the dispute between "modelers" and "social historians." Explicit model commentaries along the lines of Mäki's approach should help to identify the nature and location of a modeler's relevant historical claims, which can then be subjected to critical discussion of their truth value. Furthermore, appropriately elaborated commentaries can also make clear the level of abstraction in the models—the issue that the critics have found so annoying because the term is used in so many ways. What all this might mean in practice becomes clearer in the final section of this article where I apply Mäki's approach to the model that serves as an example in this article.

5. The Art of Rodney Stark: Rational Choice and Social Laws

Not all biblical social science theorists have such a practical and heuristic approach to theorizing as the above cited proponents of modeling in the Context Group do. Rodney Stark is the best example of a hard-core covering law theorist who assumes that results from sociological research on modern religious movements allow us to draw inferences about the social reality of ancient religious groups as well. According to Stark,

> . . . it is the abstract generality of science that makes it possible for social science to contribute anything to our understanding of history, let alone to justify efforts to construct history from social scientific theories. (Stark 1997, p. 23).

Stark also states that

> . . . there is no reason to suppose that we cannot reason from the general rule to deduce the specific in precisely the same way that we can reason from the principles of physics that coins dropped in a well will go to the bottom. (Stark 1997, p. 26).

Because Stark is originally a sociologist (of modern religions) and is without training in languages required for the study of ancient texts, it has been easy for scholars who have specialized in the study of early Judaism and/or early Christianity to point out some problems in Stark's work (Smith 1997, vol. 102; Pearson 1999, vol. 29. For more positive evaluations see Blasi 1997, vol. 75; Eisenbaum 1998, vol. 66; Treviño 1996,

the relation of *C* to *D.* As Mäki notes, description *D* also plays an important role in facilitating idealization in modeling.

vol. 35). He has also received extremely critical comments from some of the leading proponents of biblical social-scientific criticism. Bruce Malina, for instance, characterizes Stark's results as "the usual ethnocentric anachronisms we have come to expect from those who have applied North American or Northern European sociology to Mediterranean antiquity" (Malina 1997, vol. 59).

Although Stark basically assumes a similar hierarchy from abstract theories to observations and testing of hypotheses as do the scholars who have drawn on Carney (see above), in practice, his analysis does not take much note of the intermediate level. Stark does not regard middle-range theorizing to be sufficient in sociology. He makes his stance clear in *Cities of God* where he discusses Merton's approach (2006, p. 18–19). I have elsewhere (Luomanen forthcoming) discussed Stark's approach in detail and noted that he often makes quite direct deductive leaps from his theories to concrete conclusions, thereby ignoring the discussion about the differences between ancient and modern contexts. It seems clear that Stark is extremely confident—I would say overconfident—on the validity and applicability of generalized covering law explanation in sociology.

Stark is also very well known for *A Theory of Religion,* which he coauthored with William Sims Bainbridge (1987). In this theory, Stark and Bainbridge analyze religion from the viewpoint of religious markets, drawing on principles of rational choice theory (or exchange theory). Apart from standard criticisms against rational choice theories (see, for instance, Bryant 1997, p. 191), Stark and Bainbridge's theory has been criticized for not paying enough attention to ritual, morality and emotions (Collins 1993, p. 404–6).

In 1999, Stark published a major update to the theory, modifying it to meet some of the criticism that had been presented against it (1999, vol. 17). Among other things, Stark replaced a very thin formulation of rational choice with a more sociological version that concentrated more on choices as they appear to persons themselves. In another context, Stark has also stated that his version of rational choice theory leaves open the content of the rewards people prefer. According to Stark, "This leaves all the room needed for people to be charitable, brave, unselfish, reverent and even silly" (1997, pp. 169–72, especially p. 171). This move saves Stark's version of the rational choice theory from accusations that the theory contains unrealistic assumptions about people's capability to make objectively rational choices. This is a relatively common strategy among rational choice theorists (cf. Hedström 2005, p. 62). However, this does not improve the usability of the general theory. On the contrary, if peoples' choices can vary freely according to their personal preferences, all decisions

they make can be declared rational—but only afterwards (Bryant 1997, p. 194). The theory has no predictability at all.

Does this mean that all the conceptualizations and propositions of Stark and Bainbridge's theory are useless? Not necessarily. Although the theory has an extremely formal deductive structure, its definitions and propositions are not constructed in a vacuum. Several propositions of the theory are actually based on a good deal of empirical research. In particular, the parts that describe conversion, as well as formation and development of religious movements, are based on valid sociological research that Stark and his colleagues have conducted. Thus, even though Stark and Bainbridges' general approach has its limits, there are some concepts in their theory that may help make useful distinctions in the study of early Jewish and Christian sectarianism. The example in the last section of this article applies key concepts from Stark and Bainbridge's theory in order to develop a model for the analysis of early Jewish and Christian communities between 70 C.E. and ca. 100 C.E.

6. Example: A Model for the Analysis of Jewish and Christian Movements
The model described here was developed about ten years ago (Luomanen 2002) but here its components are described and assessed using the framework of Uskali Mäki's functional decomposition approach (cf. above). Notably, one should assess the following model by paying attention to all aspects of the model's following decomposition (E, P, D1-D2, C and M-R relation), instead of, for instance, trying to understand the model solely on the basis of the diagram D1, which may not be fully self-explanatory.

Model audience E:
The background of the following model lies in discussions about the sectarian character of the community behind the Gospel of Matthew. During the 1990s, three well-known New Testament scholars presented social-scientifically informed analyses about the sectarian character of Matthew's (i.e., the editor of the gospel) community (Overman 1990; Saldarini 1994; Stanton 1992). An analysis of these contributions revealed clear discrepancies between what the sectarian models assumed about the surrounding social reality to which the sects responded, on the one hand, and how the scholars ended up describing the actual relation between Matthew's community and its opponents, on the other. The scholars were drawing on Bryan Wilson's and Benton Johnson's sectarian models that discard simple church-sect opposition in favor of a more general approach that is interested in a sect's response to its social surroundings (or "the world") at large (Wilson 1973, pp. 22–26; Johnson 1963, pp. 539–49). Nevertheless, scholars ended up describing the opposition mainly in religious terms or

assuming oscillating roles for the opponents both as a parent body and as a competing sect. Furthermore, although the scholars assumed that after 70 C.E. Judaism did not have any centralized governance—different factions and groups were competing over power—Matthew's community was still thought to be in opposition with "Judaism," understood as the majority or more powerful parent religion.

Model purpose P:

The above observations of scholarly discussion showed that the presuppositions of the models did not really match the scholars' understanding of Matthew's socio-religious position. Obviously, a more informed discussion of the parent body and a more thorough assessment of the match between the model and the social reality to be described was needed before sectarian models could be applied. Furthermore, a model that would enable the depiction of different minority positions—instead of labeling all minorities simply as "sects"—would also be helpful. Thus, the key questions that had to be explained better with the new model were: (1) reasons for the genesis of the minority groups, (2) relations of the minority groups to their parent bodies, and (3) differences between the minority groups.

Without going into details in this regard, my argument was that given the nature of the available sources and their topics (religious writings and disputes), it is actually preferable to use more traditional models of sectarianism that focus on the analysis of religious aspects of social interaction. Furthermore, I argued that even after the destruction of Jerusalem in 70 C.E., the "Common Judaism" had such a central role in Jewish social memory[6] that it practically functioned as a parent body against which different factions and groups defined their positions. Building on these presuppositions and drawing on Stark's and Bainbridge's conceptualizations, I developed the model that is described in more detail below.

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6. To be sure, I did not use the term "social memory" in the original article but the basic idea was there.

Model Description D1: The Diagram
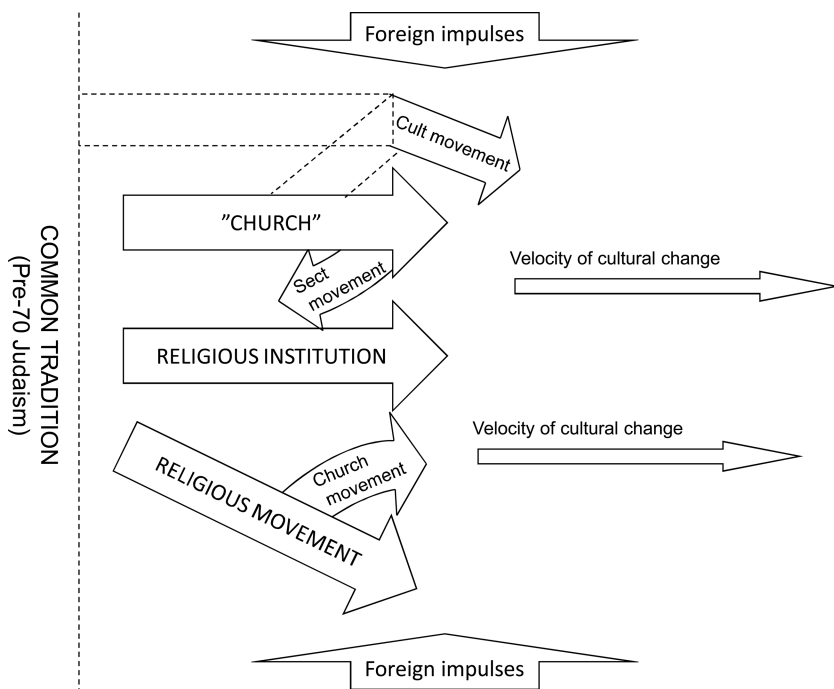
Model Description D2: The Concepts

A basic distinction that Stark and Bainbridge make is the one between re-
ligious institutions and religious movements. In contrast to religious in-
stitutions, which accept the social environment in which they exist and
adapt to its changes, religious movements "wish to cause or prevent
change in a system of supernaturally-based general compensators" (i.e., in
religion). Institutions and movements can be imagined as the two oppo-
site poles of one axis that permits different degrees of institutionalization.
The benefit of this kind of conceptualization is that it allows for degrees of
tension instead of adopting a predetermined number of types, which sel-
dom perfectly match the case under examination, resulting in the prolifer-
ation of new terms and categories. (Stark and Bainbridge 1987, pp. 16–
17; cf. Elliott 1995, pp. 80–89).

According to Stark and Bainbridge, there are two basic avenues by
which new religious movements emerge. Sects come into existence
through schisms with existing religious organizations. Cults, for their

part, come into existence when invented or imported new religious ideas gain social acceptance. Consequently, Stark and Bainbridge define sect movements as deviant religious organizations holding traditional beliefs and practices, contrasting these to cult movements, which are deviant religious organizations with novel beliefs and practices. (Stark and Bainbridge 1987, pp. 124–28, p. 156).

The theory of Stark and Bainbridge implies that, just as religious institutions and religious movements represent the two opposite ends of one axis, there is also a continuous spectrum of degrees of novelty between sect movements and cult movements.

Stark and Bainbridge think that religious movements can also be classified according to the direction of their development. It is understandable that sect movements, deviating from religious institutions and churches that are in low tension with their sociocultural environment, move toward the high tension pole. However, there may, at times, also be developments in the opposite direction. When religious movements move toward less tension with their sociocultural environment, they are called church movements. (Stark and Bainbridge 1987, p. 126).

Model Commentary C:

The diagram presents a theoretical model of a post-70 C.E. situation in the context of early Jewish and Christian religious movements and institutions. It is not an exhaustive description of the actual historical situation, nor does it imply that all the groups presented by it existed. Instead, it sets forth a set of concepts derived from Stark and Bainbridge's model, presented in the context of post-70 C.E. situation. Furthermore, the diagram should not be read as a strict mathematical model (such as a graph with X and Y axes). Rather it should be taken as symbolic representation which uses some relevant aspects of vector space—but not in a strict mathematical sense so that one could actually count with these vectors; the diagram has no direct explanatory potential—in order to describe continuous changes, impulses and tensions in a reality that is ultimately social.

The diagram includes arrows referring to the relativity of cultural closure; societies and cultures usually interact with outsiders (foreign impulses) and change over the course of time (velocity of cultural change; cf. Stark and Bainbridge 1987, pp. 60–67). Since churches and religious institutions adapt to change, the direction and speed of their development matches the velocity of cultural change. Dotted lines leading to cult movement indicate that even new cults usually draw on tradition to some extent.

On the whole, this symbolic description of the post-70 C.E. situation

with some relevant aspects of vector space facilitates the discussion of more concrete historical examples, such as the community where the Gospel of Matthew was produced. In practice, this means that relevant aspects of the community's relation to other Jewish and Christian movements and institutions as well as to pre-70 c.e. traditions are assessed in the light of the diagram and the concepts of the model. As a result, the community finds its place in the symbolic vector space of the diagram.

In contrast to earlier sect analyses, the model presented here allows much more variation in the social surrounding if it is applied to Matthew's gospel. The starting point for the application is to realize that the role Matthew gives to Jesus marks the boundary between Matthew's group and his Jewish contemporaries. This new "Jesus cult," connected with a liberal interpretation of the law, characterized Matthew's community and distinguished it from contemporary Jewish groups (Luomanen 1998, pp. 263–65, pp. 278–84). Thus, on the axis between sect and cult movements, Matthew's community finds its place closer to the cult end of the axis and can thus be characterized as a cult movement. However, the community displays a mixture of cult and sect features: it is a cult movement as far as practice is concerned, but there are still many sectarian features in its ideology. In the long run, the form of Christianity which took over Matthew's gospel became institutionalized within the superstructures of the Roman Empire.[7]

M-R Relation and the Truth Value of the Model:

It is clear that my own assessment of the applicability of the model will probably be biased to some extent and therefore readers should feel free to judge for themselves how well the model does it job. However, the main point in this discussion is not to prove the model correct (though I would not be disappointed if these considerations add to the acceptability of my model!), but to exemplify how functional decomposition might help to clarify the central purpose and function of modeling.

The truth value of the above model description, commentary and application to Matthew's gospel can be assessed on two levels: (1) The ability of the general model to resemble the post-70 c.e. situation among different Jewish and Christian movements, and (2) its application to Matthew's gospel.

As regards the first level, I would claim that the model has the potential to prompt "genuine issues of resemblance" (cf. Mäki's approach above) because its key components are based on generally accepted characteristics

7. Cf. proposition 300 in Stark's and Bainbridge's theory: Successful sects and cults tend to move toward lower tension.

of the historical situation after the fall of the Jerusalem temple in 70 C.E. It is largely accepted that after this event the situation among "Jewish" and "Christian" groups[8] was characterized by factionalism: there was no centralized control, some groups were more traditional as regards Judaism, some more liberal. Christianity emerged as a new phenomenon within Jewish culture but Judaism was also affected from the outside by Hellenistic culture and Graeco-Roman religions. The description of the model, i.e., the diagram and the concepts, takes all this into account, making it possible to map different kinds of groups as regards their relation to pre-70 C.E. Judaism and the stance they take towards overall cultural developments. The commentary reminds us of the purpose of the model: it is not an isomorphic model of the post-70 C.E. situation, nor does it claim to fully explain the genesis of all the groups that existed by that time because the historical scene is simply too vast to be grasped by any one model. It is only a model that facilitates the comparison of certain relevant characteristics of early Jewish and Christian movements in a symbolic vector space. The key issue is that there should be enough correspondence between the model and the historical data only on those points that the model seeks to explain. On the general level there seems to be enough correspondence, so that it is meaningful to apply the model into a more particular historical case, such as the Gospel of Matthew. Notably, in my view, the explanatory potential of the model (cf. above the purpose of the model) lies in the causal relations it sees between parent bodies and the minority groups (for instance, if the group is a sect or a cult) and the inner characteristics of the groups that evolve from this dynamic (for instance, sects are conservative, cults open to new ideas).[9]

However, the question about the truth value of my application of the model (the second level) to Matthew's community, as summarized above, is a more complex one because it requires a reconstruction of life and convictions—or at least the most central characteristics of these—of the people among whom the editor of the gospel gave shape to his (less likely her) account of the story of Jesus. Here the discussion easily turns into a debate among scholars specialized in the study of Matthew's gospel. There is no need to go into details of that dispute in the present context. It

8. The term "Christian" is, of course, anachronistic at this stage of development, but if we take it simply as a term that refers to the centrality of Jesus' teaching and Jesus worship among communities which had various other "Jewish" (and later on, "Gnostic") practices and beliefs, it may serve as useful shorthand for facilitating our understanding. For a more detailed discussion of the problem of defining "Jewish Christianity," see Luomanen 2012, Chapter 1.3.

9. Cf. Read's article in this volume and Marchionni's discussion of it. The approach to modeling adopted in this article seems to be closer to that of Marchionni.

suffices to conclude by noting that even if I fail to convince Matthew specialists about my application of the model to Matthew's community, and of the truth value of the explanations for the characteristics of Matthew's community that evolve from the model, there still remains the possibility that the model itself prompts "genuine issues of resemblance" for the purpose of comparing post-70 C.E. Jewish and Christian movements in the context of academic, social-scientifically informed historical-critical research.

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