Heiner Meulemann*

The Secularization Theory—Not Disconfirmed, Yet Rarely Tested

Abstract: *Tendencies* of secularization—religiosity decreases in Western societies since 1950—have been found abundantly in comparative survey research. They are taken as starting point to examine what the *theory* of secularization predicts and which predictions have been confirmed. It is shown that the three canonical theories of the change of religiosity—secularization, individualization, and market theory—are identical in their structure und can be integrated as *the* secularization theory. The secularization theory has been tested in cross-sectional and longitudinal designs, and by macro and multi-level analyses—that is, cross-classfied in four forms. Neglecting cross-sectional macro analyses, there are only 11 publications within the three remaining forms. They confirm a negative effect of social differentiation throughout und a negative effect of cultural pluralization often. Yet they often fail to control for important micro impacts upon religiosity, such as denomination or parenthood. In sum, they show that the secularization theory is by no means disconfirmed, yet rarely tested.

Keywords: Longitudinal studies, differentiation, pluralization, determinants of religiosity, cohort succession, multi-level-analysis

1 Introduction

„Secularization theory has been effectively falsified." (Berger 2013a, 60) Yet what is secularization and what is proposed by secularization theory? Only if these questions have been answered, one can proceed to assess falsification. This paper answers the questions and examines whether the answers have been falsified or not. In *section 2* it is clarified what is meant by the concept secularization and what secularization theory contends, in order to review in *section 3* how and with what success secularization theory has been examined up to now.

*Corresponding author: Heiner Meulemann, Universität zu Köln, e-mail: meulemann@wiso.uni-koeln.de

2 Secularization between Concept and Theory

2.1 The Concept Secularization as a Tendency Proposition

Secularization denotes the decrease of Christian religiosity *in European societies and their former colonies*, in brief: *in Western countries* (Bruce 2002, 37). Thus, the concept contains a tendency proposition. Its definition must refer not only to objects, but also to a starting point and a direction. It must clarify the meaning of religion and religiosity and identify a trigger which has elicited the negative tendency at a certain time point.

Religion and religiosity

Religions are world interpretations, as are world views, philosophies or ideologies. World interpretations answer the religious question of wherefrom and whereto of life. Religions differ from other world interpretations in two ways. Seen *cognitively*, religions do not justify their propositions naturally through knowledge and experience, but (1) super-naturally, through *belief*. Seen *socially*, religions reinforce their propositions not only through the exchange of arguments, but predominantly (2) through the *practice* of rites (3) in the *community* of those which share the supernatural justifications (Durkheim 1912, 49–66; 1984, 17–74).

Religiosity is the subjective appropriation of religion and is defined by the same specifics: *belonging* to a community, *practice* of its rites, and *belief* in its propositions (e.g. Norris/Inglehart 2004, 41; Pollack/Rosta 2015, 68–70, 83–84). These three specifics render it possible to juxtapose religion and the secular world as well as religiosity and secularity and to denote a negative development of religiosity as secularization.

Secularization opens up a grey area of transition, diffuse religiosity, which moves away from church religion and focuses on the person (Meulemann 2015, 64–71). A diffuse religion is a contradiction in itself, but diffuse religiosity is a by-product of secularization. It encompasses belief and practice without taking a position to the former or observing the commandments of the latter. Thus, it justifies merging both under the heading of concrete religiosity.

Trigger of the negative tendency and starting point

In the sociology of religion, 'the' secularization is mostly not localized in time, but described by a series of undated steps, e.g. the 'paradigm' of Bruce (2002, 4–30). Yet even in deep historical retrospect a trigger of secularization which meaningfully corresponds to its peculiarity must be identified conceptually and seized by empirical indicators in time.

Looking back on the history of Christianity, secularization was already initiated in the rational self-clarification of religion through its intellectual elites, which began in ancient Jewry and has been continued in the Protestant communities (Berger 1967, 105–154; Gorski 2000, 148–150). But secularization could flourish not earlier than the population at large became free to live their lives without following commandments and using services of the church (Berger 1967, 107–108). *Religiosity or secularity*—this option emerged not until modern age within Christianity. Until today, it exists only—with the exception of Japan, Korea and Taiwan—in the countries formed by Christianity. It results from a secularization of the social order after the religious wars of the 16th and 17th centuries which has been justified philosophically by the replacement of the political theology of medieval Christianity through a secular theory of social life, especially in Hobbes *Leviathan*. The "great separation" between religious and secular justifications of social order became manifest in the separation between church and state (Lilla 2007, 96–102), which opened leeway for a living beyond church rules. Christian belief and church practices no longer were self-justified and obligatory for everybody, and more and more people got a chance to openly live as un-believers and to not participate in church ritual without being sanctioned by the church, the state or the local community. Secularization, therefore, is a proposition of a negative tendency about the development of religiosity in Western, societies not dominated by religion *since the separation of a secular from the religious order*.

What has triggered off that process? The answer is: the state monopoly for the legal notification of life transitions (Rückert 2008, 279–281). As soon as the churches no longer were the only ones to perform marriage ceremonies and as soon as the state legalized divorce, it became evident for the people that they have an option between planning their lives under the guidance by or independently from the churches. The option between religion and secularity here is a model for the option between belief and unbelief, observance and non-observances there. The first opens the door for the second option—which happened in most European nations not before the end of the 19th century (Antokolskaia 2006; Gonzalez/Vitanen 2006, 6).

The starting point of secularization, therefore, is a specific step within the "secularization of law" (Gutmann 2013, 17) that began with the shifting of the justification of legal norms from religion to the necessities of the human living together und that went on in the shifting of the control over family status from the church to the state since the end of the 19th century. It shall be designated here the *authority loss of the churches over the conduct of life*. It set off in most of the European countries only after industrialization, urbanization and the introduction of a democratic constitution. Only then a life without the churches became thinkable,

and only from then onwards also feasible for many. In brief: the secularization did not start before, but within 'modernity'.

2.2 Three Steps from a Tendency Proposition to a Theory

Every tendency proposition requires a measurement at least at two time point in at least a single society. Yet as location and time are not properties of an object but coordinates of its measurement, a tendency proposition is not a hypothesis, that is, not a proposition about the covariation of two properties—let alone a theory. Three steps make a theory out of a tendency proposition.

Goal variable: Subsuming hypothetical trends with a common starting point under a development

The first step is to define the concept underlying the goal variable and to justify its empirical indicators. If the concept is a tendency proposition, the necessity to define a starting point and a direction extends from the concept to the indicators, and the distinction between concept and indicator can be translated into one between *development* and *trends*.

A development is diagnosed by several trends. Testing the first requires to subsume the second ones according to a hypothesis *in advance*; the range of such a hypothesis is measurable by the number of trends, and its degree of confirmation by the percentage of the confirmed among all trends. Thus, the development secularization encompasses trends in all—or a reasoned selection of—dimensions of religiosity and their indicators.

Independent variables: Differentiation and pluralization

The second step from a tendency proposition to a theory is to determine what is effective on the side of the independent variable in place and time. A time specification is just as a place name a *proper name*. Both refer to a single case, rather than a class of cases—which is defined by *analytical properties* encompassing all cases. In order to convert a list of places or a time series into a value list of a property, one must justify what is effective in place and in time and replace the proper names by properties (Przeworski/Teune 1970). This, in turn, requires explicit hypotheses about causes. What is the hypothetical cause of secularization?

First and foremost, it is *social differentiation*—in the sociologically specific sense of the distribution of the tasks necessary for a society's maintenance among its members (Eisenstadt 1964, 376). The more differentiated a society, the richer it becomes, such that men are able to plan and govern their lives more easily and the need to explain life through powers beyond decreases. The more differentiated

a society is, furthermore, the more a person's life is split up into different areas: It moves not only between the private spheres of family and occupation and between workday and Sunday, but gains with the increasing leisure time leeway for public participation in consumption, culture and politics. The social differentiation enlarges the life chance of men, by providing more resources—time, money, education—and by opening up more life domains.

Yet men view their increasingly richer and broader life through the lens of the world-view acquired at home and at school. This world-view depends on the life conditions during the formative years of youth on the one hand, that is, on the wealth or scarcity (Inglehart 1997, 33) of the society that results from social differentiation. On the other hand, it depends on the experiences during the life course which result from the opportunities and the given character of a person. Together, wealth during youth and socialisation during the life course produce social change; but the latter may have its effects independently form the former. Thus, the impact of social differentiation upon secularization is filtered by world-views which may or may not change in accord with it. It is strong when the latter are homogeneous and have no competitors, and weak when they are heterogeneous and have many competitors. Consequently, *cultural pluralization* is a second hypothetical cause of secularization—independent from the first cause and more closely related to the ultimate effect—and is inserted between social differentiation and secularization (Berger 1967; Tschannen 1991; Gorski 2000, 139–143) such that a *causal sequence differentiation-pluralization-secularization* emerges.

Differentiation and pluralization may be regarded as complementary. The medium of social differentiation is the structure of roles in a society. It is geared to and often grants the natural and economic reproduction of a society. The medium of cultural pluralization are the interpretations of world and life which everybody takes over from tradition or derives from encounters with others. Social differentiation and cultural pluralization each contribute in their specific way to the maintenance of a society. And as men see the social structure through the lens of culture, one may say: The two hypothetical causes of secularization are located on social layers in general, such that secularization theory implicitly contends that all social developments affecting personal religiosity are facets of differentiation or pluralization and both together explain it *exhaustively*.

In sum, the secularization theory aims at explaining a negative development of religiosity with two causal hypotheses (Jagodzinski/Dobbelaere 1995, 77–82; Pollack/Rosta 2015, 78–80). They will be called the *differentiation* and the *pluralization hypothesis* in the following. The further the *social differentiation* advances, the greater will be the cultural pluralization. The further *cultural pluralization* advances, the greater the opportunities for everybody to distance oneself from the

handed-down religion and the stronger will be the secularization in the society at large.

Differentiation and pluralization are taken to be the crucial social causes of personal religiosity not only in the secularization theory but also in its two rivals which have become canonical in the literature, the individualization theory and the religious market theory. Yet they depart from it insofar as they define the ultimate step of the causal chain more broadly and justify the impact of the pluralization differently.

The *individualization theory* (e.g. Pickel 2010, 221–224) does not introduce a new mechanism into the causal sequence, but splits the effect of pluralization into two, following and opposing each other. As pluralization individualizes or—what amounts to the same—privatizes religion, it at first reduces belief in Christian dogma and observance of church practices and then puts non-Christian worldviews and magical practices in their place. Because of the broadened palette of alternative supplies and the increasing capacity of people to discriminate, the institutionalized religion loses in favour of individual composition, syncretism or *bricolage*; yet the religiosity of the total population remains on the same level. Of the two effects of pluralization assumed in the individualization theory, the negative one is in accordance with, and the positive one contradicts secularization theory.

The *religious market theory* (Stark/Finke 2000; De Graaf 2013) not only predicts a partially different direction of the effect, but also highlights another mechanism: competition, which strengthens religion. It derives from diversity a consequence opposite to the pluralization hypothesis, the market hypothesis. Christian church religiosity as well as alternative religiosity should increase or at least stay constant, yet the first should not lose in favour of the second.

The individualization and the market theory explain, just as the secularization theory does, the religious development of Western societies through differentiation and pluralization. Yet the first gives the ultimate member of the causal sequence a new header for two contradictory trends, the second switches the sign of the second hypothesis throughout. Consent prevails about the first two members of the sequence, dissent about the range of the third member and the impact of the second on the third. All three theories share the macro-social perspective on the religious development which constitutes their common structure.

On this common ground, the three theories can be modified in the same manner. In each, the first two members of the sequence can be set side by side as causes of equal rank. Thus, the causal sequence is reduced to two levels, and the causality from differentiation to pluralization becomes a correlation. The differentiation hypothesis is split up into one hypothesis on the positive correlation between differentiation and pluralization and another one on the positive impact

of differentiation on secularization. Yet the common structure remains the same: Each theory has three concepts and two hypotheses, and in each the differentiation hypothesis can be split up in the same manner.

Multi-level Model: Minimal program of independent micro-variables and cohort succession hypothesis

The third step from a tendency proposition to a theory is to clarify how a macrosocial can explain a microsocial development. Just as the secularization theory, its two alternatives, individualization and market theory, are stuck on the macro level and blind for the micro perspective. Yet the causal sequence proceeds unevenly on the micro and the macro level: differentiation and pluralization are located on the macro level only; yet secularization is the reflection of micro decisions on the macro level. The secularization theory as well as its two rivals, therefore, demand a *multi-level model* from macro to micro level and back again (Coleman 1990, 1–26; Ruiter/van Tubergen 2009, 868). It comprises three steps: the impact of macro conditions on micro causes, the impact of micro causes on micro effects, and the aggregation of micro to macro goal variables. This aggregation, however, is conditioned by the micro causes of religiosity. To understand it, a micro theory of religiosity is needed which is treated neither in the secularization theory nor in its two alternatives. For this, a *minimal program* shall be proposed.

Micro effects on religiosity can be derived in two perspectives. First, *during socialization* religiosity results positively from the religious imprinting at home and at school and negatively from the reflexivity of the adolescent (Meulemann 2017a). Second, certain *life stages* can lower the natural self-concern of every man and move the religious question into the foreground of consciousness while others intensify the self-concern und move the religious question into the background (2012, 56–58). Both perspectives require information about the *social origin* and the *current life stage* of a person which in part can be gained from routine sociodemographic survey questions.

Belonging to a denomination in general as well as specifically is an indicator of the imprinting at home and at school. Because it fosters belief and practice, its control reduces the impact of both and can in some cases explain it. A positive impact of belonging must be controlled in order not to over-estimate other causes which correlate with them. For this reason, they occupy the first rank of the minimal program. More precisely than by denominational belonging, the imprinting at home and at school is captured by a retrospective question about the *religious upbringing during youth* (Ruiter/van Tubergen 2009, 871); it is put on the second rank of the minimal program. Antagonist to the imprinting at home and at school is the reflexivity of the adolescent; its indicator, the *educational level*, is put on the third rank. Parenthood and—indirectly—partnership reduce the self-concern und un-

derline the religious question; for, children transgress the life horizon of parents and remind them on their death. Being employed challenges achievement motives, stresses self-concern, and moves the religious question into the background of consciousness. *Parenthood, partnership and employment* virtualize or actualize the religious question and therefore are put on the fourth rank of the minimal program. Finally, *women* are throughout more religious than men although this cannot be explained in either of the two perspectives (Voas et al. 2013).

Furthermore, if religiosity is analysed longitudinally, *age* must be added. Its effect cannot be revealed by a cross-sectional comparison between age groups which comprise persons from groups born later with each later time point, but by a comparison between groups of constant years of birth, so-called *cohorts*. Belonging to a cohort constitutes a general mechanism of social change which can explain changes of every personal quality within a society. It points either to the imprinting during youth, the development of which may generate social change, or to the aging during the life cycle, the uniformity of which may generate social stability. Because old people die off and young people move up and if old as well as young people stick to their attitudes during the life course, attitudes positively correlated with age increase, and attitudes negatively related with age decrease. Yet, if everybody while growing old reinforces or weakens their attitudes, they remain constant in the society at large. In either case, cohort behaviour is aggregated to social developments.

With religiosity in mind, it may be on the one hand that men in their youth enter increasingly rich societies with more and more collective security, such that they are imprinted less and less by religion during youth and remain so during their lifetime. On the other hand, death approaches and the religious question looms larger, such that men first turn away from religion and then back to it during their lifetime. Thus, change results from *cohort succession*, and stability from *cohort aging* (Meulemann 2013, 376–385; 2015, 77–81). Secularization, individualization and market theory have been blind for the impact of aging upon religiosity. Although cohort succession has been emphasized as a motor of religious change already three decades ago (Sasaki/Suzuki 1987), none of the three theories justifies predictions on cohort succession or on cohort aging. They must be deduced from them *ex post*.

The secularization theory predicts only one effect which is negative, namely the decrease of religiosity. Therefore, its prediction is the easiest to deduce. It suggests two propositions. First, religiosity starts on a lower level with each younger cohort; for, in that case developments in cohorts aggregate to a decrease in society. Second, religiosity remains constant within cohorts or decreases, yet does not increase. Thus, secularization theory obviates cohort aging and implies the

negative cohort succession hypotheses: With younger cohorts religiosity decreases monotonously, and within each cohort it remains constant.

The individualization theory predicts a decrease of Christian church religiosity and an increase of individualized or privatized religiosity. The first prediction, again, implies the *negative cohort succession hypothesis*. The second prediction, however, inverts the sign of the pluralization hypothesis—which has two consequences for a cohort succession hypothesis. First, if pluralization as a macro tendency increases religiosity, cohort aging is no longer obviated. Rather, it may become part of the assumed macro tendency of increasing religiosity. Second, this tendency can also rest upon a *positive cohort succession*. Then the sign of the cohort succession hypothesis should switch as well: With younger cohorts *alternative* religiosity increases monotonously, and within each cohort it remains constant.

The market theory inverts the sign of the pluralization hypothesis throughout—which has the same consequences for the cohort succession hypothesis as for the positive part of the individualization hypothesis. With younger cohorts, *every* form of religiosity increases monotonously, and within each cohort it remains constant.

Summary: Common structure of theories

The three steps from a tendency proposition to a theory are the following ones in the case of secularization. First, the definition of secularization is restricted substantively to *Western, not religiously dominated national societies* and located in time *after the authority loss of the churches* which established the option between religiosity and secularity for the population at large. Second, all social determinants of secularization can be seen as facets of *differentiation* and *pluralization.* Third, a *minimal program of independent micro-variables of religiosity* and a hypothesis on the effect of *cohort succession* on religiosity are indispensable for the explanation of the aggregate quality of secularization in a multi-level model.

In the literature, the first step is treated only vaguely; yet for the second and third, three theories have become canonical: secularization, individualization and market theory. All three share the assumption of a causal sequence differentiation-pluralization-secularization and the hypothesis of a positive impact of differentiation on pluralization. However, they differ from each other in three respects: the extension of the object range from Christian church religiosity to alternative religiosity; the sign of the pluralization hypothesis; and the sign of the implied cohort succession hypothesis.

The secularization theory restricts its prediction to the decrease of Christian church religiosity. It assumes a negative effect of pluralization on religiosity and

implies a negative cohort succession hypothesis: *Christian church* religiosity *decreases* monotonously with pluralization and with younger cohorts.

The individualization theory treats Christian church *and* alternative religiosity. For the former, its prognosis is identical with the one of secularization theory, namely negative. For the latter, its prognosis switches the sign of the pluralization and the cohort succession hypotheses into the positive: *Alternative* religiosity *increases* monotonously with pluralization and with younger cohorts.

The market also theory treats Christian church *and* alternative religiosity, yet switches the sign of the pluralization and cohort succession hypothesis for both: *Every form* of religiosity monotonously *increases* with pluralization and with younger cohorts.

The assumption of a causal sequence differentiation-pluralization-secularization, the differentiation hypothesis and the implied multi-level model define the structure common to the three theories. On its base, all three theories are designated as *the* secularization theory in the following. *The* secularization theory treats predominantly Christian, yet sometimes also alternative religiosity. It encompasses *the* differentiation hypothesis, *a* pluralization hypothesis, and *a* cohort succession hypothesis—that is, exactly three hypotheses. It presupposes a minimal program of micro-determinants of religiosity and it tests the assumed development by means of cohort analysis.

3 Theory of Secularization: Cross-sectional and Longitudinal Designs in Macro- and Multi-level Analyses

The test of merely a *tendency proposition* is possible under the following conditions only. (1) It must be captured in population surveys with standardized questions in nationally representative samples. (2) These must be *replicated* in time; simultaneous comparisons between countries are possible only when they are sufficiently different on the assumed conditions and the differences can be interpreted as developmental—that is, when the assumption of the *non-simultaneity of the simultaneous* is taken for granted. Specifically, the tendency of *secularization* must be examined (3) in *Western*, historically Christian countries and (4) in the *dimensions* which have emerged during the development of the Christian churches as belonging, belief, and rites, and during the secularization as diffuse religiosity. Finally, to test the secularization *theory* is to be examined two further conditions must be met. (5) Macro data as well as micro data must be available over time and

merged in a data set that corresponds to the multi-level model. (6) The merged data must be analysed in a specific form of regression, the *multi-level regression*.

The tendency of secularization has been demonstrated by survey research massively (Meulemann 2017b). Yet the explanation of the tendency by a theory has been attempted in only a few studies. None of them follows the causal sequence as a temporal one, such that differentiation and pluralization are regarded simultaneously or individually, that is, with regard to only two causal levels. Moreover, as the individualization theory has been nowhere examined simultaneously in its positive and negative facet and its positive facet coincides with the secularisation theory, only secularization and market theory remain to be examined as forms of the secularization theory. The following review of its tests will be presented in two dimensions.

First, according to the *data base*, cross-sections and longitudinal designs can be distinguished. In cross-sections, differences between countries can be interpreted as development only under the assumption of the *non-simultaneity of the simultaneous*. In longitudinal designs, the development is measurable in time and its associated properties. Therefore, the transition from cross-sectional to longitudinal designs is a progress.

Second, it is evaluated how well statistical analysis procedures can handle the imbalance of the secularization theory that independent variables are located on the macro, and the goal variable on the micro and macro level. Because analysis procedures can be applied to every data base, the difference between them is subordinate to the difference between data bases. In cross-sections as well as longitudinally, impacts of or correlations between levels may be analysed in a simple or demanding form of correlation and regression techniques. As for the simple form, the goal variable is aggregated and the analysis restricted to macro data; because the aggregation excludes individual variances and inflates correlations, estimations can be interpreted with reservation only. As for the demanding form, macro and micro data are analysed such that correlations are estimated on the appropriate level. Therefore, the transition from macro to macro *and* micro, that is, multi-level, is a progress.

The multi-level analysis, in turn, can come in two forms. On the one hand, macro data can be added to each micro unit such that a *pure micro regression* results which ignores the clustering of macro data within countries such that the standard errors of the macro effects are under-estimated and their significance over-estimated. On the other hand, the embedding of persons within countries, can be accounted for and micro as well as macro effects estimated according to their respective sample size in a *multi-level regression* such that the macro effect does not gain significance all too easily. Therefore, the transition from pure micro to multi-level regression is a progress. Yet because it refers to the estimation of

the effects rather than the structure of the data, both can be labelled *multi-level analyses*.

Crossing the dimensions data base and analysis procedure results in four forms of testing a theory of the development of individual properties within societies: Cross-sectional macro analysis, cross sectional multi-level analysis, longitudinal macro analysis, and longitudinal multi-level analysis. Because the transition from cross-sectional to longitudinal designs is decisive, this enumeration is a rank order as well.

3.1 Cross-sectional Macro Analysis

The impact of *social differentiation* on secularization has been examined with two indicators. First, the *socio-economic development* and the *collective security* are positive indicators of social differentiation. They have been investigated in a sample of all nation states of the world and in a sample of 'post-industrial' service societies only (Norris/Inglehart 2004, 46). In 70 countries of all continents, developmental stages and religions in 2000, the Human-Development-Index HDI (Gross National Product, GNP, extended by level of education and life expectancy), the degree of alphabetization, the level of schooling and the access to mass media correlated strongly negatively, between -.53 and -.45, with the average of church attendance and of prayer (62). Yet as soon as 21 of 23 'post-industrial' societies have been examined only (46), correlations drop drastically: as for HDI and church attendance from -.53 to -.25, and for HDI and prayer from -.53 to .08, and lose—because of the reduced number of cases—significance (62, 99). In the remaining societies, that is, in 33 'industrial' and 23 'agrarian' societies, the average religiosity is much higher than in the 'post-industrial' ones (57–60) and the HDI is much lower (49) such that the strong correlations 'world-wide' are conditioned by extreme values in 'agrarian' and 'industrial' societies.

Therefore, if secularization is not restricted to Western countries and used as a comparative perspective on the countries of the whole world and if religiosity is measured on the aggregate level, the differentiation hypothesis is confirmed. In advanced—post-industrial, mostly West European—country differences of collective security obviously have been too rarely palpable in everyday life to become visible as driving force of differences of average religiosity. GNP and HDI lie high up and close by in post-industrial societies. Therefore, one must look for other dimensions which discriminate wealth according to its existential weight for people (Hirschle 2011, 2013).

Yet even within advanced societies this negative result does not hold throughout. In 21 West European countries which are nearly identical with the 'post-

industrial' societies of Inglehart/Norris, the HDI correlates strongly negatively and significantly with the average of denominational belonging (-.50), church attendance (-.54), belief in God (-.65) and self-ascribed religiosity (-.74); and the same holds less strongly for 21 Eastern European countries (Pickel 2010, 236). Although the West European countries examined are mostly and the data sources partly identical, Inglehart/Norris do not, and Pickel does find significant correlations of the HDI with aggregate religiosity. Moreover, the correlation of the same variables diverge substantively: HDI correlates with church attendance non-significantly -.25 in Norris/Inglehart, and -.54 significantly in Pickel. Seemingly, Pickel has examined some few countries which are not identical with those of Norris/Inglehart and which inflate correlations through extremely high values of the aggregate church attendance, so called out-liers; because of possible out-liers, aggregate correlations without the accompanying scattergram, that is, the list of the country values, cannot be trusted in small samples. In any case, the discrepancies between correlations do not allow a decision about the *differentiation hypothesis* in Western societies on the base of indicators of the socio-economic development and the collective security and aggregate values of religiosity.

Second, *social inequality* is a negative indictor of social differentiation; it decreases security and increases the demand for religion. In a sample of 56 nations of the whole world a regression of church attendance on HDI and the Gini-coefficient of social inequality shows a strong effect of the HDI and a nearly equally strong positive effect of the Gini-coefficient on church attendance and on prayer (Norris/Inglehart 2004, 66).[1] In 18 post-industrial societies the Gini-index correlates (without controlling for the HDI) .61 with prayer. In roughly 40 West and East European countries the Gini-index correlates positively (.47) with the importance of God in life (Pollack 2016, 244–245). It looks as if indicators of social inequality confirm the *differentiation hypothesis* world-wide and in advanced countries.

The impact of *cultural pluralization* on secularization has been examined also with two indicators. First, it should mirror itself positively in the religious and cultural diversity of a society. In 37 countries with a Christian tradition in 2000 the average of 'Christian church religiosity'—a factor score summarizing church practice, Christian convictions and diffuse religiosity on the individual level (Pettersson 2006, 246)—is determined in a regression by the Human-Well-Being Index (HWI, comparable to the HDI) negatively and by cultural diversity positively. The *differentiation hypothesis* is confirmed, the *pluralization hypothesis* disconfirmed

---

1 This holds for model A.—In the table the negative sign for the HDI coefficients has obviously been omitted. That the coefficient is, as reported, positive, is not possible given the bivariate correlations reported further up and the—according to differentiation theory also empirically—strongly negative correlation between the two predictor HDI and Gini.

in favour of the *market hypothesis*. The correlation between the indicators of differentiation and pluralization, HWI and cultural diversity, which should be positive according to the secularization hypothesis is not reported.

Second, the *state regulation* of religion is a negative indicator of pluralization. In 21 post-industrial societies 2000 an index of religious freedom correlates .38 and .40 with the averages of church attendance and of prayer (Norris/Inglehart 2004, 99, 52). This contradicts the *pluralization hypothesis* and confirms the *market hypothesis*. Yet in 42 European countries the religious regulation by the state—the opposite pole of religious freedom—correlates positively (between .25 and .45) rather than negatively with belonging to a denomination, belief in God and self-ascribed religiosity, but not with church attendance; and the denominational pluralization according to the Herfindahl-index does not correlate with any of these four variables of religiosity (Pickel 2010, 236). In brief: Among post-industrial such as European countries which are culturally similar none of the two competing hypothesis is confirmed.

Evaluation

In the above cross-sectional macro analyses, the differentiation hypothesis with its indicators for wealth and collective security and for social inequality is confirmed throughout while the pluralization and market hypothesis fare equally well or bad. Yet the analyses try to explain the aggregate secularization at a certain time point by properties which discriminate between countries according to their developmental status. They do not follow the development of cause and effect over time and they do not explain correlations by acts or attitudes of persons. They offer a first orientation for a deeper examination of the secularization theory—nothing more. Apart from that they share three problems.

First, the sample of countries must be defined in accord with the secularization theory. While the secularization refers to Western societies, many of the studies presented draw samples from the population of countries 'worldwide'. Thus, the assumption of the non-simultaneity of the simultaneous gains plausibility. Yet if countries world-wide and in the West are regarded separately and the results compared, the differentiation hypotheses (Norris/Inglehart 2004, 62, 99) and the market hypothesis (Pickel 2010, 236) are successful world-wide, yet not in Western societies—and the pluralization hypothesis not even there. If there is a secularization 'worldwide' at all, it is a heterogeneous phenomenon. What holds in the world, does not necessarily hold in the West.

Second, the analysis procedure pertinent to third variable analysis, simple regression, can be applied only with difficulty when further dimensions of religiosity are controlled for on the aggregate level. This demonstrates the following example. HDI and Gini-index have a strong impact on church attendance and

prayer in bivariate analysis. Yet these impacts vanish completely when the importance of God is introduced as a further predictor into the regression; it attains extremely high standard regression coefficients (of .70 and 1.05(!)) and the explained variance jumps up to 67 and 93% (Norris/Inglehart 2004, 66). If facets of religiosity which correlate strongly already on the individual level are aggregated on the country level, their correlations jump up extremely and exert, analysed as independent and dependent variable in a regression, a strong impact upon each other. The further dimensions of religiosity introduced as third variables literally constitute a dam against the impact of global properties of societies such as HDI and Gini-index. As will be seen in *section 3.3*, fixed-effects regression is a means to solve this problem.

Third, as religiosity is analysed on the aggregate level, it becomes difficult to explain differences between correlations of a given macro variable with different dimensions of religiosity. For example: Why does state regulation of religion in 42 states of Europe not affect church attendance, but belief in God and self-ascribed religiosity (Pickel 2010, 236)? If anything, it should affect actions more strongly than belief. As the aggregation ignores individual conditions of religiosity, it deprives the analyst of criteria to choose among dependent variables and to compare their impacts.

3.2　Cross-sectional Multi-level Analyses

Results

The 37 countries of the macro analysis of Pettersson (2006, 247, 249) have been analysed also on the micro level of 39.200 persons with a pure micro regression and a multi-level regression. Belonging to a denomination, education, parenthood, gender, age and life satisfaction—that is, the minimal program of micro impacts except marriage and employment yet enlarged by life satisfaction—have been controlled for. Both procedures lead to the same result, but the multi-level regression is decisive because of its correct estimation of the macro effects. The factor 'Christian church religiosity' depends negatively on the HWI and positively on cultural diversity. Thus, the multi-level analysis confirms the macro analysis: The secularization is driven by differentiation, but contained by pluralization; again the differentiation hypothesis is confirmed and the pluralization hypothesis refuted in favour of the market hypothesis. Additionally, education has a negative impact; age and life satisfaction have no impact; and parenthood, female gender, and belonging to the Catholic or Orthodox in contrast to the Protestant church have a positive impact.

While Pettersson combines practice and belief into an index, Halman/Draulans (2007) analyse them separately: Belief is a factor score derived from agreements to religious convictions and diffuse religiosity, practice a factor score derived from church attendance, prayer and voluntary engagement in the church. The sample consists of 30 West and East European countries in 2000. On the level of countries, differentiation is indicated by GNP, and pluralization by the Herfindahl-index of religious diversity and by an index of the prevalence of all kinds of media. On the level of persons, belonging to a denomination, education, employment, gender and age as well Post-materialism (Inglehart 1997) which is expected to have a negative impact are controlled for—that is, the minimal program without parenthood and marriage, yet enlarged by values. 35.000 persons are analysed with a pure micro regression.

The results are: Belief does not depend on GNP on the country level, but negatively on the two indicators of pluralization. The *differentiation hypothesis* is not confirmed, yet the *pluralization hypothesis* is. On the level of persons, belief does not depend on education or Post-materialism, but positively on age, female gender and belonging to a denomination and negatively on employment. Practice is determined in the same manner as belief. The accordance of the effects shows that the secularization comprises belief and practice; the higher percentage of explained variance of belief can be read as a hint that belief goes ahead of practice in the course of secularization.

In a multi-level analysis rather than a pure micro analysis, Ruiter/von Tubergen (2009) analyse church attendance in 48 countries 1990, 1995 and 2000—all Christian except Bangladesh and Japan—with 136.611 respondents. Although the data cover a decade, effects of time are not examined and macro-variables are ascertained for one time point only. Differentiation is indicated by the Gini-index of inequality negatively, pluralization by the percentage of the population with tertiary education and the percentage of urban population positively and by the state regulation of religion negatively. As for the correlation of macro-variables, it is reported that they are lower than .50 throughout and show no multi-collinearity. On the level of persons, religious imprinting is captured by the religiosity of the members of the respondent's generation and of the parents such that belonging to a denomination needs no longer to be controlled for. Furthermore, family status, employment, gender, size of community, and war experience are controlled for. The minimal program of micro-impacts is fulfilled except for parenthood, and expanded.

The results are: Church attendance depends on the Gini-index of social inequality positively. Among all country variables, it has the strongest effect. If the Gini-index is replaced by GNP with which it correlates -.57, the size of the effect drops and the sign becomes positive, yet remains the strongest. Either way, church

attendance drops with social differentiation. The *differentiation hypothesis* is confirmed. Less strongly than on wealth and inequality, church attendance depends on all three indicators of pluralization—as expected, negatively. State regulation has the second strongest effect and urbanization the third. Regarding state regulation, the *pluralization hypothesis* is disconfirmed in favour of the *market hypothesis*; regarding urbanization and educational expansion, it is confirmed. On the level of persons, religiosity of the respondent's generation and religiosity of the parents have the strongest effects which are, as expected, positive. Education, income, living alone, and urban residence have weak effects which are, as expected, negative; female gender has a positive effect.

This study's achievements are two. First, it compares several indicators of the pluralization hypothesis and criticizes its opposition against the market hypothesis. State regulation, indeed, has a negative impact on religiosity. Yet that does not preclude that the authority loss of handed-down world-views in their competition with alternatives and the detachment of people from 'primary' relations weaken religiosity at the same time (De Graaf 2013, 237–238). Rather than in these latter dimensions, the decision between pluralization and market hypothesis is made in the dimension of the variety of the supply. Does competition between religions and world-views *without* the favouring or repressive interference of the state further or reduce religiosity?

Second, the study controls for the imprinting by the home and the school with two variables: the religiosity of the respondent's generation and the religiosity of parents, and thus fulfils the most important condition of the minimal list. As this imprinting probably persists, its control can absorb and capture effects of later life stages.

Huber/Krech (2009, 62) analyse the 'centrality of religion' and the self-ascribed religiosity in pure micro regressions. Centrality of religion is defined as the sum of positive answers to questions of practice and belief (Huber 2009, 38). Here, it is taken as an indicator of practice, because it contains two clearly defined practices, church attendance and prayer, yet only one clearly defined conviction, belief in God. The self-ascribed religiosity is—in contrast to its treatment as an independent dimension in *section 2.1* and as in some of the studies reviewed further down—taken as an indicator of belief. The 21 countries sampled are predominantly Western and among those again predominantly Catholic; yet there are also 7 Non-Western countries (Huber/Krech 2009, 59). Differentiation is indicated positively by the HDI and negatively by the Gin-index of social inequality, pluralization by the Herfindahl-index of denominational diversity. Correlations among macro variables are not reported. On the level of person, belonging to Christianity, Jewry, Islam, Hinduism and Buddhism as against to no religion is

controlled for. Furthermore, age, gender and education are controlled for—that is, the minimal program of micro impacts, without parenthood and employment.

The centrality depends on the HDI negatively and the Gini-index positively; the Herfindahl-index is not used a predictor. The *differentiation hypothesis* is confirmed, the *pluralization hypothesis* is not examined. The centrality increases with age, is stronger among women than men, and independent of education—the belonging to a denomination is not used as a predictor.

The self-ascribed religiosity depends on the HDI negatively and does not depend on the Gini-index and the Herfindahl-index. The *differentiation hypothesis* is confirmed only partially; neither the *pluralization* nor the *market hypothesis* are successful. On the person level, the self-ascribed religiosity depends very strongly (with a standardized regression coefficient of .63) on the centrality of religion now introduced as an independent variable. In spite of this, self-ascribed religiosity still increases with age, is stronger among women than men, and does not depend on education. It is highest among Christians, followed by Muslims, Hindus, Buddhist, Jews and people without religion.

Immerzeel/Van Tubergen (2013) analyse practice and belief in a multi-level analysis of 32 West and East European countries 2002 to 2008 with roughly 150.000 respondents. Practice is indicated by church attendance, belief by self-ascribed religiosity. As in Ruiter/Van Tubergen, the impact of time is not examined. The aim is to test the negative impact of security, as a dimension of social differentiation, on religiosity; pluralization is not considered. Security or insecurity on the person level is captured as *economic*—permanent contractual employment, part time employment, unemployment: current or formerly, respondent or partner—and as *existential*—health, family or single/widowed, war time experience, fear of terrorism; and on the country level as *economic*—percentage of social expenditures of the GNP and unemployment rate. Correlations between macro-variables are not reported. On the person level, employment status of father and mother, education, gender, and age are controlled for—yet not belonging to a denomination, parenthood, and marriage. The minimal program of micro impacts, thus, is partly fulfilled, partly extended.

The results for church attendance are as follows: On the country level, it depends on social expenditure negatively and on the unemployment rate positively, as expected; the *differentiation hypothesis* is confirmed. On the person level, it depends on most of the less privileged employment statuses positively, as expected, and on health and partnership negatively, as expected. The results for self-ascribed religiosity are as follows. On the country level, it depends neither on social expenditures nor on the unemployment rate; the *differentiation hypothesis* is not confirmed. On the person level, it depends on all of the less privileged employment status and the war time experiences positively, as expected, and on

health and partnership negatively, as expected. On the person level, both goal variables depend on the predictors in the same manner. The merit of the study is the examination of many facets of insecurity on the person and country level simultaneously. Yet it raises the question why insecurity on the country level affects only church attendance, yet not the self-ascribed religiosity.

Also by means of multi-level regression, Pollack/Rosta (2015, 437–445) analyse practice and belief in 54 European and 'other modern and modernizing' nations in 1999/2000. Practice is indicated by church attendance, belief by the importance of God in one's life. On the country level, differentiation is captured positively by the GNP, the percentage of welfare expenditures on the GNP, and negatively by the Gini-index; pluralization is captured positively by the Herfindahl-index of diversity and negatively as state regulation which in turn is measured by an index of intervention and an index of discrimination. Correlations between indicators of differentiation and pluralization are not reported. On the level of persons, education, gender, family status, attitudes to the separation of church and state, the acceptance of different faiths, and the support of the educational goal autonomy are controlled for—yet belonging to a denomination and parenthood are not. The minimal program is partly fulfilled, partly extended.

The results of model 2 are as follows. On the level of countries, church attendance and belief are dependent on GNP positively and on the Gini-index negatively. The *differentiation hypothesis* is confirmed for both dimensions of religiosity. Yet both do not depend equally on pluralism. The Herfindahl-index of diversity lowers church attendance in accordance with the *pluralization hypothesis*, but it does not affect belief. The state regulation, as measured by the index of intervention, has no impact on either goal variable; as measured by the index of discrimination, it has an impact on church attendance only, which is negative as expected by the *market hypothesis*. The two confirmed effects suggest—as already the study of Ruiter/Van Tubergen—to abandon the sterile opposition of the two hypothesis and to associate diversity with the pluralism dimension, and state regulation with the market dimension. On the level of persons, church attendance as well as belief increase with female gender, age, marriage, and widowhood; both decrease with employment and the endorsement of the educational goal autonomy.

Hirschle (2011) assumes that social differentiation affects religious practice less through the GNP than through consumption opportunities. For, while the GNP increases satisfaction chances of fundamental needs in its lower range, it does not do so for superior, expressive needs; these should be captured by the consumption opportunities for 'non-essential' goods. As such goods increase in wealthier societies even more strongly than the GNP, the time to consume them competes with the time devoted to religious communities and ultimately reduces the latter. Hirschle measures 'non-essential' consumption opportunities by the

average frequency of visits of cultural events supplied in the respondent's region of residence. As he wants to determine the impact of social differentiation on the action opportunities of people, he chooses church attendance rather than belief as a goal variable. As the opportunities of consumption discriminate between regions even stronger than between nations, he analyses 82 regions in 20 European countries on the macro level, and controls denominational belonging, education, employment status, household form, gender, age, urbanization, and income—that is, the minimal program without parenthood and marriage, yet with some additions. The results are: Consumption opportunities as well as the GNP determine church attendance on the level of regions; yet the former have a stronger impact than the latter. The *differentiation hypothesis* is confirmed. Obviously, consumption opportunities in regions of highly developed countries are able to better capture social differentiation than the GNP.

The study postulates and proves a proposition that is treated nowhere else: consumption opportunities constitute an impact of social differentiation on secularization specifically at work in developed societies. It thus fulfils the desideratum of *section 3.1* to separate theoretically and empirically between impacts on secularization in more and in less developed country groups. Yet, it aspires more than it can fulfil. For, the 'non-essential consumption' gains its 'social focus' not per se, but only through supplies of the high and the popular culture; rather than the act of buying the good bought makes its consumption social—as the operationalization by visits of cinemas, theatres etc. betrays sufficiently. Furthermore, the 'non-essential' consumption thus delimited operates as a competitor for religious communal activities only when the average working time and the cultural and mass media supply is controlled for. For, these determine what can be done and consumed in leisure time. As long however as they increase, they enlarge the space for secular as well as religious activities. They should have a positive rather than negative impact on religiosity. However, if they weaken religious practice just as GNP, but only somewhat stronger, both should be subsumed under the concept of differentiation. The positive impact found thus confirms the differentiation hypothesis.

Although the study investigates regions rather than nations on the macrolevel and thus violates the selection criterion (1), it has been considered because it exemplifies a specific analysis strategy. From its design, it is a three level, from its realization a two level analysis. For, the 20 national societies are not represented by indicators, and the distribution of effects between the two aggregate levels remains open. Without examining it, the study highlights the possibility that social differentiation within smaller social units operates more tightly on persons.

Evaluation

The seven cross-sectional multi-level analyses presented—that is, pure micro and multi-level regressions—control for individual conditions of religiosity. Therefore, they are not subject to the objections against cross-sectional macro regressions. Yet they rest upon the assumption of the non-simultaneity of the simultaneous which by definition cannot be proven in cross-sections. In accord with the cross-sectional macro analysis, they confirm the differentiation hypothesis, in contrast to it also the pluralization hypothesis. The latter is confirmed in three of the five studies which examine it at all, yet in Pettersson (2006) disconfirmed in favour of the market hypothesis and in Huber/Krech (2009) neither confirmed nor disconfirmed. On the advanced level of this section both hypotheses of the secularization theory can be accepted—although the differentiation hypothesis more confidently than the pluralization hypothesis.

3.3 Longitudinal Macro Analyses

The first longitudinal analysis at all was a macro analysis (Jagodzinski/Dobbelaere 1995). It examines whether frequency of church attendance in 10 West European countries depends positively on social differentiation and negatively on pluralization. Differentiation is operationalized by the GNP; pluralization is seen as a result of the Protestant teaching of the personal quality of the relation between God and man and indicated negatively by the percentage of Catholics. For both time points, that is, for 20 units, church attendance is regressed on GNP and on percentage of Catholics; thus, the impact of time is not captured by its proper name but by analytical properties of societies. The correlation between GNP and percentage of Catholics is not reported. Although Western Europe is a very homogeneous group of countries and although only a short period is considered, GNP has a positive and percentage of Catholics a negative influence, as expected; the *differentiation* and *pluralization hypotheses* are confirmed.

Later longitudinal macro analyses may advance in three directions: They expand the data base of countries and time points such that analysis procedures can be refined and additional macro variables be considered. All three advances are applied in Hirschle (2013). *First*, he analyses 13 West European countries between 1970 and 2009 with on average 25 time points for countries. *Second*, rather than a simple regression he applies a so-called fixed-effects regression which analyses the effects of time within countries only and 'fixes' the differences between them, that is, takes them out of consideration. In this manner, the effects of unmeasured variables between countries are controlled for which can be global or

aggregated. With regard to the latter, the *mean* of micro determinants of religiosity is controlled for, yet not their individual values within countries. Thus, one of the deficiencies of macro analyses alluded to in *section 3.1* is partially cured. *Third*, he introduces—as already in Hirschle (2011)—a new macro influence: Increasing consumption opportunities which compete against church practices for time use; however, he operationalizes these by the GNP, usually treated as an indicator of social differentiation. Furthermore, he does not regard pluralization.

Goal variables are the country means of church attendance and of self-ascribed religiosity, seen as an indicator of belief. In regressions (*table 2 and 3*, model 1 and 2), GNP has a strong impact upon church attendance and a somewhat weaker impact upon belief. The *differentiation hypothesis* is confirmed. Furthermore, the following consideration examines *how well* it is confirmed. As the variance explained by proper names—that is, by a dummy variable for each—is the upper limit for the variance explainable by analytical properties, the former is a yardstick for the latter. According this yardstick, the comparison between the regression on GNP (which varies over time) alone and the regression on GNP *and time points* shows that the impact of the GNP remains the same and the additional impact of time is minimal. The effect of time, thus, is fully absorbed by the effect of GNP. The analytical property catches what time effectuates, and what the proper names of the year number leave indeterminate; 'time' has no more impact than GNP. Finally, the (controlled for) differences between countries are at least twice as large as the (analysed) differences between time points.

The study achieves two things. *First*, it postulates as Hirschle (2011) a specific impact of social differentiation upon secularization. Again, however, the already voiced criticism holds. *Second*, it tries to explain in two regressions (in *table 2 and 3*, model 4) whether the influence of GNP on church attendance is conditioned by belief rather than the impact of the GNP on belief by church attendance. Because, additionally to the impact of the GNP, belief has an influence on church attendance, yet church attendance no impact on belief. That social differentiation does not reduce belief, but does reduce practice. For, the expansion of action opportunities provided by differentiation at first affects practices

Evaluation

Longitudinal macro analyses for the first time test whether the *development* of differentiation and pluralization affects secularization. The two studies reviewed both confirm the differentiation hypothesis, and the one study also examining the pluralization hypotheses—Jagodzinski/Dobbelaere—confirms it as well. Moreover, as the variance explained by proper names is the upper limit for the variance explainable by analytical properties, the former is a yardstick for the latter; and with this yardstick, Hirschle shows that time is no longer needed as a pre-

dictor once it is substituted by a suitable analytical property of differentiation. However, both studies suffer from the deficiencies of macro analyses in general already mentioned in *section 3.1.*

3.4 Longitudinal Multi-level Analyses

Like the longitudinal macro-analyses, the longitudinal multi-level analysis tests whether the development of differentiation and secularization affects secularization. But as it also controls for micro determinants on religiosity and tests whether a development on the personal level, aging within birth cohorts, affects secularization. Thus, the longitudinal multi-level analysis is the only form to strictly examine *the* secularization theory—namely the three hypotheses on differentiation, pluralization, and cohort succession.

Reitsma et al. (2012) merge data of 42 Western and Eastern European countries between 1981 and 2007 with 178 country-time-samples and 254.499 respondents and apply a multi-level regression. Goal variable is a cross-classification of two dichotomous variables, church attendance and self-ascribed religiosity; the latter is taken to be an indicator of belief. The positive value of both is labelled *consistent religiosity*, the negative value of both *secularity*; the inconsistent combination belief without church attendance is termed *individualized religiosity*, and the inconsistent combination church attendance without belief *habitual religiosity*. Thus, religiosity is captured by a typology of practice and belief with four values.

Independent variables on the country level refer to a dimension of social differentiation, security, which is positively indicated by GNP and by the percentage of welfare expenditures of the GNP; and to two dimensions of pluralization: rationalization as evident in technological development which is negatively indicated by infant mortality, and individualization which is positively indicated by the percentage of one-person-households. Independent variables on the person level are education, income, family status single, urban or rural residence, gender and cohort (year of birth)—yet not belonging to a denomination and parenthood. The minimal program of micro determinants is partly fulfilled, partly expanded. Social differentiation and the two indicators of pluralization and all person level variables should have a negative effect on the three positive values of religiosity. These—consistent, individualized, and habitual religiosity—are analysed in three multinomial logistic regression in comparison to secularity.

In the first of these three regressions, the one of the *consistent religiosity* on the macro variables, time, and the micro variables, the GNP and the percentage of welfare expenditures on the GNP have the expected negative effect; yet infant mortality and the percentage of one-person households have no effect. The *differ-*

entiation hypothesis is confirmed, but the *pluralization hypothesis* is not. Furthermore, consistent religiosity is lower in former communist than in West European countries. Finally, it *increases* with time in all countries and in former communist countries even more strongly. Although the country and time differences of social differentiation and pluralization have been controlled for, time still has an impact; and this contradicts the confirmed *tendency proposition*.

Of the person level variables, education, income, living alone, urbanization, male gender and belonging to younger cohorts have a negative effect. As expected in the *negative cohort succession hypothesis*, consistent religiosity decreases with every younger cohort. The study thus examines all three hypotheses of the secularization theory and confirms them—yet at the price of a contrary to expectation positive effect of time. This raises the suspicion that the negative cohort succession effect is so strong that after controlling for the strongly negative effect of the macro variables, the remaining effect of time becomes positive. Is the negative tendency of secularization hidden in the negative cohort effects?

A regression of the consistent religiosity on year of survey, former communist country and the interaction of both gives a hint to an answer. In this regression neither the differentiation nor the pluralization hypothesis are examined, but only the trend in Western and Eastern Europe; and years, rather than being substituted by analytical properties, remain proper names. The result is: Consistent religiosity is lower in formerly Communist countries, and it decreases with time in the non-Communist countries while it increases in in the formerly Communist ones. Thus, the tendency proposition secularization still holds for West European countries; the contrary tendency in Eastern European countries reveals a re-vitalization of religion after the forced secularization.

In the two remaining regressions, the *individualized* and *habitual* religiosity are mostly determined like the *consistent* one. The effect differences between the three regressions are difficult to explain.

The problem of the study is its dependent variable, the typology. Theoretically, it is almost impossible to justify differences of effects between the types; empirically, they show up rarely and randomly. Therefore, the justification of hypotheses and the interpretation of effects must retreat, so to speak, to religiosity in general, that is, in terms of the typology to consistent religiosity. As for the effects on inconsistent forms, however, it is not clear whether they have furthered belief and blocked practice, resp. belief and motivated practice. The typology mixes the correlation between dimensions of the goal variable with tests of impacts upon them. Analysing the belief and practice separately, would have reduced the number of goal variables from three to two and allowed simpler analysis procedures than the multinomial logistic regression. Furthermore, it would have been more

revealing. Hypotheses about different effects could have been derived and empirical effects been interpreted.

Reynolds (2017) analyses in a multi-level regression the 'organizational' and the belief dimension of religiosity in 16 West and East European countries 1981, 1990, 1999 and 2008; because not every country has been surveyed at each time point, 57 country*time samples result with roughly 50.000 respondents. The 'organizational' dimension—in the following equated with practice for the sake of simplicity—is captured by a factor score of five church related variables; the belief dimension is captured by a factor score of five convictions. On the level of countries, social differentiation is indicated positively be the HDI and negatively by the percentage of agrarian population, and pluralization is indicated positively by the Herfindahl-index of denominational diversity. Correlations between macro variables are not reported. On the level of persons, gender, education, community size, and cohort belonging are controlled for—but not denominational belonging, parenthood, marriage and employment. The minimal program of micro impacts is partly fulfilled, partly extended.

The results are as follows. On the country level, belief as well as practice decrease with the HDI when it is applied as the only macro indicator; however, when the agrarian population is added as a second indicator of social differentiation, both do not attain significance. And when the Herfindahl-index is added as a third predictor, all three do not attain significant effects. Thus, the *differentiation hypothesis* is confirmed, and the *pluralization hypothesis* is neither confirmed nor disconfirmed in favour of its rival, the *market hypothesis*. On the person level, belief as well as practice depend on education and on belonging to a younger cohort negatively, and on female gender and rural residences positively—always as expected. The *negative cohort succession* hypothesis is confirmed.

The study examines all three hypotheses of the secularization theory simultaneously without hitting upon a counterintuitively positive tendency as Reitsma et al. (2012). It yields a clear profile of confirmation and disconfirmation: The negative trend of belief and practice in 16 European countries between 1981 and 2008 is explained by *the differences* of social differentiation between countries *and their developments* on the macro level, and by the succession of less and less religious birth cohorts on the micro level; yet neither pluralization nor market contribute to the explication. Secularization is a tendency which can be explained by the three hypotheses of the secularization theory specifically and by the two analysis models for social change, multi-level regression and cohort analysis, in general.

Evaluation

Both longitudinal multi-level analyses test the three hypotheses of the secularization theory simultaneously. The differentiation hypothesis is confirmed by both,

the pluralization hypothesis by Reynolds (2017) only, and the negative cohort succession hypothesis by both. In spite of this three desiderata remain.

First, the explanation by analytical properties and by cohort succession should be tested against explanations which additionally comprise the proper names whose impact ideally must have been taken over by the analytical properties. As in Reitsma et al. (2012) und Hirschle (2013) it should be examined whether the analytical properties capture not only something, but *everything* hidden in 'time'. If the addition of proper names does not yield a significantly higher explained variance, the secularization theory would be confirmed not only partially, but exclusively: There are no further impacts at work beyond the ones already considered.

Second, macro predictors should be tested one at a time. As they are presented in Reynolds now, pluralization is tested only after the two indicators of differentiation und then narrowly misses the 5% significance level. Probably, it would attain it as a single predictor, that is, in a fair comparison with HDI.

Third, the two macro levels of analysis, country and time, should be treated separately statistically. In the current analyses, the replications of surveys in countries are treated as independent samples although they are dependent upon each other. Therefore, the standard errors of the macro variables are—as in the pure micro regression—under-estimated, and macro effects too easily proven significant. Furthermore, the estimates of the effects can be biased as well (Schmitt-Catran/Fairbrother 2016).

All these desiderata can be fulfilled in the data seta at hand in both studies such that *the* secularization theory can be tested according to all rules of the art without additional data collection.

4 Summary and Conclusion

The Base for the secularization theory is small. If one excludes the cross-sectional macro analysis as an at best introductory form of analysis, eleven studies remain; the goal variables and results of these are summarized in *table 1*. If one restricts the collection to multi-level analyses, nine studies remain; if one restricts the collection to the only appropriate form of the longitudinal multi-level analysis two studies remain. The most popular form is the cross-sectional multi-level analysis with seven studies.

Design, authors, period	Goal variable		Other dimensions, comments	Independent variables					
				Macro		Micro			
	Practice	Belief		D	P	I	E	Pa	Em
Cross-sectional multi-level analyses									
Pettersson			Factor score for both	-	+	+	-	+	-
Halman & Draulans	Y	Y	Factor score for each	0	-	+	0		-
Ruiter & van Tubergen	Y	Y		-	-/+	+	-		-
Huber & Krech	Y	Y	Centrality = practice, Diffuse = belief	-	(0)	(+)	0		
Immerzeel & van Tubergen	Y	Y	Diffuse = belief	-/0			-		
Pollack & Rosta	Y	Y	Diffuse = belief	-	-/+		-		
Hirschle	Y		Unit of analysis: region	-		+	0		-
Longitudinal macro analyses									
Jagodzinski 1981-1990	Y			-	-				
Hirschle 1970-2009	Y	Y	Diffuse = belief	-					
Longitudinal multi-level analyses									
Reitsma et al. 1981-1998		Y	Typ, diffus = belief	-	0		-		
Reynolds 1981-2008	Y	Y	Factor score for each	-	0		-		-

Y yes, treated; + positive, - negative effect on religiosity, 0 no effect; -/+ diversity increases religiosity, -/0 diversity lowers, non-regulation increases religiosity, 0 no effect; -/0 negative effect of practice, no effect of belief. Empty cell: goal variables or independent variable not examined. D Differentiation, P Pluralization; brackets in Huber & Krech: examined for diffuse religiosity only. I Imprinting by home, in Ruiter & van Tubergen: religiosity of generation and religiosity of parents, in all others being Catholic; (+) in Huber & Krech: belonging to a denomination or not. E Education, Pa Parenthood, Em Employment. Female gender has a positive effect in each multi-level analysis.

Fig. 1: Synopsis of the tests of the secularization theory

In most studies, practice and belief are determined in the same manner. Thus, effects upon practice and belief can be depicted in a single row for each study. The confirmation of the hypotheses can be read from the expected signs, that is, the confirmation of the differentiation hypothesis in column D from a negative sign and of the pluralization or market hypothesis in column P form a negative or positive sign.

Regarding the *goal variables*, practice and belief are treated simultaneously in only six studies. None of them reports the correlation between practice and belief which should be positive in general, but could differ between studies. Therefore, the equivalence of the regressions of practice and belief cannot be assessed. Two studies treat practice and belief as a single factor (Pettersson) or in a typology (Reitsma et al.); both obviates the detection of different effects.

Regarding the *independent macro variables*, differentiation and pluralization are treated simultaneously in only eight studies. The secularization theory expects—taking the polarity of the variables into account—a positive correlation between all indicators of differentiation and polarization. None of the studies which study both report the correlations between them.

The differentiation hypothesis is examined in all eleven studies. It is confirmed throughout in seven studies, confirmed for practice only in one (Immerzeel/Ruiter), neither confirmed nor disconfirmed in another one (Halman/Draulans)—yet disconfirmed in none. It is the backbone of the secularization theory, and its supporting leg empirically.

The pluralization hypothesis is examined in eight of the eleven studies. It is disconfirmed in Pettersson, and confirmed in Halman/Draulans and Jagodzinski/Dobbelaere; it is confirmed in the dimension diversity and disconfirmed in the dimension state regulation in Ruiter/van Tubergen and Pollack/Rosta; and neither confirmed nor disconfirmed in Reynolds. Thus, the confirming studies are more and of higher rank. So far, the pluralization hypothesis asserts itself against its rival, the market hypothesis. The pluralization hypothesis is theoretically and empirically the free leg of the secularization theory.

Regarding the *independent micro variables*, only the nine multi-level analyses are relevant. Only five of them control for the most important variable of the minimal program, the *imprinting* by home and school, and only one of these in the demanding form of the religiosity of the generation or the religiosity of the parents. Yet the most simple and almost always surveyed indicator, belonging to a denomination, is *not* controlled for in four studies; and in one (Huber/Krech) only partly. This betrays how blind secularization research has been for the micro level of religiosity. In so far as impacts upon religiosity, such as education or value endorsement, correlate with imprinting, it may be that their impact is overestimated without controlling for the latter. *Education*, an indicator of reflexivity,

is controlled for in all nine multi-level analyses and has always the negative effect expected. *Parenthood* is controlled for in only one study and has the positive effect expected. *Employment* is controlled for in five studies and always has the negative impact expected. *Women* are in all studies more religious than men; therefore, a specific column is not provided. All studies survey *age*. Yet it is not presented in a special column, because it attains an unequivocal meaning either as within co-hort aging or cohort succession in replicated surveys only. Therefore, the *cohort succession hypothesis* can only examined in the two longitudinal multi-level analyses; its *negative* form is confirmed in both. Altogether, only four studies fulfill the minimal program at least insofar as they control for three of the four variables listed. Again, this demonstrates the blindness of secularization research for the micro level.

The foregoing summary suggests some conclusions. First, *goal variables* should be analysed separately according to the dimensions of religiosity in order to allow comparisons between them and to detect asynchronous developments. By all means, the correlations between goal variables must be reported, in order to assess the equivalences of the regressions and the revealed impacts.

Second, the *independent macro variables* should be associated with either of the two driving forces of secularization differentiation and pluralization. In any case, diversity and regulation, that is, the dimensions associated with pluraliza-tion or market, should be regarded simultaneously. Furthermore, a larger set of variables than the ones ultimately analysed should be introduced and the selec-tion of the latter justified, as in Ruiter/van Tubergen (2009). Correlations between macro variables must be reported; also it should be discussed, how causal rela-tions between them could be conceived of in a path analysis.

Third, a minimal program of independent micro variables should be agreed upon among researchers. Such a program does not only include certain variables, but exclude others, which are not clearly justified as conditions of religiosity yet could bias the estimates of other essential ones.

Fourth, the selection of country *groups* should be justified. Secularization should be analysed separately in Christian and non-Christian countries.

Finally, tests of secularization theory should follow a requirement which holds for all internationally comparative multi-level analyses: As samples of per-sons become very large, almost every micro predictor can attain significance. Therefore, not only raw regression coefficients and their significance should be reported, but also standardized ones which allow a comparison of the predictive strength between predictors.

As of today, the secularization theory rests upon only a few and sometimes incomplete studies. Yet in more or less appropriate designs, its three hypotheses have been tested and, although not always, confirmed. And the two examples of

the most appropriate design, the longitudinal multi-level regression, show that hypotheses can be tested adequately and successfully already in available data sets. The secularization theory is by no means disconfirmed, but rarely tested. So far, it has fared well. It may even fare better, if more researchers will analyse the already compiled data sets according to the rules of longitudinal multi-level analyses.

References

Antokolskaia, M. (2006), *Harmonization of Family Law in Europe: A Historical Perspective. A tale of two Millennia*, Antwerp–Oxford

Berger, P. L. (1967), *The Sacred Canopy. Elements of a Sociological Theory of Religion*, New York

— (2013a), Religion as a Transnational Force, in: Soeffner, H.-G. (ed.), Transnationale Vergesellschaftungen, Wiesbaden, 59–74

— (2013b), Nach dem Niedergang der Säkularisierungstheorie, in: *Society* 49, 313–316

Bertelsmann Stiftung (2009) (ed.), *What the World Believes. Analyses and Commentary on the Religion Monitor 2009*, Gütersloh

Bruce, S. (2002), *God is Dead—Secularization in the West*, Oxford

Coleman, J. S. (1990), *Foundations of Social Theory*, Cambridge/MA

De Graaf, N. D. (2013), Secularization: Theoretical Controversies Generating Empirical Research, in: Wittek, R./T. A. B. Snijders/V. Nee (eds.), *Handbook of Rational Choice Social Research*, Stanford, 321–354

Durkheim, È. (1912), *Les Formes élémentaires de la vie religieuse (5ème édition 1968)*, Paris (dt. 1984)

Eisenstadt, S. N. (1964), Social Change, Differentiation and Evolution, in: *American Sociological Review* 29, 375–386

Gorski, P. S. (2000), Historicizing the Secularization Debate: Church, State, and Society in Late Medieval and Early Modern Europe, ca. 1300 to 1700, in: *American Sociological Review* 65, 138–167

González, L./T. K. Viitanen (2006), *The Effect of Divorce Laws on Divorce Rates in Europe*, IZA DP No. 2023 (Forschungsinstitut Zukunft der Arbeit)

Gutmann, T. (2013a), Säkularisierung des Rechts, in: Berger 2013b, 15–18

Halman, L./V. Draulans (2007), How Secular is Europe, in: *British Journal of Sociology* 57, 263–288

Hirschle, J. (2011), The Affluent Society and its Religious Consequences: An Empirical Investigation of 20 European Countries, in: *Socio-Economic Review* 9, 261–285

— (2013), "Secularization of Consciousness" or Alternative Opportunities? The Impact of Economic Growth on Religious Belief and Practice in 13 European Countries, in: *Journal for the Scientific Study of Religion* 52, 410–424

Huber, S. (2009), Religion Monitor 2008: Structuring Principles, Operational Construct, Interpretive Strategies, in: Bertelsmann Stiftung 2009, 17–53

—/V. Krech (2009), The Religious Field between Globalization and Regionalization: Comparative Perspectives, in: Bertelsmann Stiftung 2009, 53–95

Inglehart, R. (1997), *Modernization and Postmodernization*, Princeton

Immerzeel, T./F. van Tubergen (2013), Religion as Reassurance? Testing Insecurity Theory in 26 European Countries, in: *European Sociological Review* 29, 359–372

Jagodzinski, W./K. Dobbelaere (1995), Secularization and Church Religiosity, in: Van Deth, J. W./E. Scarbrough (eds.), *The Impact of Values*, Oxford, 76–119

Lilla, M. (2007), *The Stillborn God. Religion, Politics, and the Modern West*, New York

Meulemann, H. (2012), Wie weit hat die erzwungene Säkularisierung gewirkt? Religiosität 2002 – 2008 in West und Ost von Deutschland und Europa, in: Keil, S./J. W. Van Deth (eds.), *Deutschlands Metamorphosen – Ergebnisse des European Social Survey 2002 bis 2008*, Mannheim, 43–72

— (2013), *Soziologie von Anfang an. Eine Einführung in Themen, Ergebnisse und Literatur*, 3. Auflage, Wiesbaden

— (2015), *Nach der Säkularisierung. Religiosität in Deutschland 1980–2012*, Wiesbaden

— (2017a), Macht Religion glücklich – oder Glück religiös?, in: Birkelbach, K./H. Meulemann (eds.), Lebensdeutung und Lebensplanung in der Lebensmitte, Wiesbaden, 49–72

— (2017b), *Ohne Kirche leben. Säkularisierung als Tendenz und Theorie in Deutschland, Europa und anderswo*, Manuskript

Norris, P./R. Inglehart (2004), *Sacred and Secular. Religion and Politics Worldwide*, Cambridge

Pickel, G. (2010), Säkularisierung, Individualisierung oder Marktmodell? Religiosität und ihre Erklärungsfaktoren im europäischen Vergleich, in: *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 62, 219–245

Pettersson, T. (2006), Religion in Contemporary Society: Eroded by Human Well-Being, Supported by Cultural Diversity, in: *Comparative Sociology* 5, 231–257

Pollack, D. (2016), *Religion und gesellschaftliche Differenzierung. Studien zum religiösen Wandel in Deutschland III*, Tübingen

—/G. Rosta (2015), *Religion in der Moderne. Ein internationaler Vergleich*, Frankfurt

Przeworski, A./H. Teune (1970), *The Logic of Comparative Inquiry*, New York

Reitsma, J./B. Pelzer/P. Scheepers/H. Schilderman (2012), Believing and Belonging in Europe, in: *European Societies*, 611–632

Caillin, R. (2017), *Religion, Values, and Secularization in Europe. A Multilevel, Cross-national, Comparative Analysis of the European Values Study Data*, University of Limerick

Ruiter, S./F. van Tubergen (2009), Religious Attendance in Cross-National Perspective: A Multilevel Analysis of 60 countries, in: *American Journal of Sociology* 115, 863–95

Rückert, J. (2008), Christliche Imprägnisierung des BGB?, in: Dreier, H./E. Hilgendorf (eds.), *Kulturelle Identität als Grund und Grenze des Rechts*, Stuttgart, 263–294

Sasaki, M./T. Suzuki (1987), Changes in Religious Commitment in the United States, Holland, and Japan, in: *American Journal of Sociology* 92, 1055–1076

Schmidt-Catran, A. W./M. Fairbrother (2016), The Random Effects in Multilevel Models: Getting Them Wrong and Getting Them Right, in: *European Sociological Review* 32, 23–38

Stark, R./R. Finke (2000), *Acts of Faith: Explaining the Human Side of Religion*, Berkeley

Tschannen, O. (1991), The Secularization Paradigm: A Systematization, in: *Journal for the Scientific Study of Religion* 30, 395–415

Voas, D./S. McAndrew/I. Storm (2013), Modernization and the Gender Gap in Religiosity: Evidence from Cross-nation European Surveys, in: Wolf, C./M. Koenig (eds.), *Religion und Gesellschaft*, Sonderheft 53 Kölner Zeitschrift für Soziologie und Sozialpsychologie, Wiesbaden, 269–283