Churches in Dutch: Causes of Religious Disaffiliation in The Netherlands, 1937–1995[1]

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The Netherlands has become one of the most secular countries in the world. A vast majority of the Dutch people does not attend church regularly and more than half its population is not affiliated with any church at all. In this study we set out to test which individual and contextual characteristics affect religious disaffiliation. We deduced several hypotheses from theories on social integration and rationalization. To test these hypotheses we used retrospective data containing information on events that took place in the lives of our respondents since adolescence. These data were analysed using a discrete-time event history model. We found that the higher the level of rationalization in a certain year, the more likely people were to disaffiliate. This effect was particularly strong for young people. Moreover, by introducing rationalization in the model we found a number of spurious relationships that at first glance seemed to be causal. Not surprisingly, respondents were more likely to disaffiliate in cases where their partners were nonreligious. However, as respondents and their partners presumably are effected equally by rationalization, we cannot but conclude that the process of rationalization is mainly responsible for the process of religious disaffiliation that takes place in The Netherlands.

INTRODUCTION AND RESEARCH QUESTIONS

Since the turn of the last century, religious affiliation declined in parts of northwest Europe and particularly so in The Netherlands. In 1899, all Dutch were asked to answer the question "Do you belong to a church?" Almost everyone (97.7 percent) responded with a clear "yes." In 1930 the question was put again and this time 86 percent of the population appeared to be affiliated. At the end of the 1960s, it was down to 76 percent. From then on the trend accelerated. In 1980 only half of the population was a member of any church. Today, church members are a minority (40 percent) in The Netherlands. Next to declining church membership rates, we witness declining church attendance in The Netherlands. In a relative short period of time (1970–1990), the percentage of people attending church at least once a fortnight dropped from 67 to 35. Compared to other countries, The Netherlands turns out to be one of the most secular in this respect, along with Norway and former East Germany. Accordingly, this makes The Netherlands a well-suited case to study determinants of religious disaffiliation as one aspect of the secularization process.

Both macro trends described above result from micro processes: apparently many individuals reduced their chuch attendance and/or left church completely to become nonmembers. That is why we stated the following (micro-level) research question: *What causes individuals to disaffiliate, i.e., reduce church attendance and/or become nonmembers?*[2] Of course this question is not new (Bahr 1970; Brinkerhoff and Mackie 1993; Bromley 1988; Dobbelaere 1981; Erickson 1992; Felling, Peters, and Schreuder 1991; Stark 1968; Tschannen 1991), but until recently answers to this question were based on cross-sectional survey designs and a limited set of explanatory factors, often restricted to individual characteristics alone.

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Cross-sectional survey designs, however, have their limitations when it comes to proving causal order. Some authors, for instance, stress the secularizing power of such individual characteristics as educational attainment (Davie 1990). When this hypothesis is tested with the use of cross-sectional survey data, an important question remains unanswered: Does religious disaffiliation occur before or after one has completed his or her educational career?[3]

Next, many sociologists emphasize the relevance of certain factors in explaining aspects of secularization without actually testing them. For instance, many sociologists point out that an increasingly rationalized society is likely to curtail religion's influence and consequently cause religious disaffiliation (Tschannen 1991). Some authors tested this highly debated hypothesis (Stark 2000) at the macro-level (Verweij, Ester, and Nauta 1997) including variables indicating rationalization. Unfortunately, they could not rule out ecological fallacies (cf. note 2). Others included "time" as an explanatory variable (Firebaugh and Harley 1991; Van den Broek 1996). Although time may have its effect, it is of little theoretical interest because many "real" causes could be responsible for this time effect.

To get past these problems and improve upon previous research, we will follow up and elaborate upon a study done by Need and De Graaf (1996). Like Need and De Graaf, we obtain information on disaffiliation by using a retrospective data design (Sherkat 1991; Need and De Graaf 1996). In this design, respondents are asked at *what age* events such as disaffiliation and completing one's education took place. Thus, we are able to determine the chronological order of disaffiliation and other life events. By doing so, we make our causal inferences more plausible and reliable.

Like Need and De Graaf, we include both individual and contextual characteristics in our analyses. First, we extend their research by introducing more theoretically relevant variables. Second, we introduce another aspect of disaffiliation, i.e., declining church attendance. By doing so, we hope to gain more insight into the chronological process of religious disaffiliation and its causes. Third, we make use of another advantage of retrospective survey design, namely, its prolonged time-span under investigation. Fourth, we circumvent problems analyzing the effect of cohorts by introducing age/context related variables because we are able to match the respondent's age to relevant contextual circumstances at any point in time.

THEORIES AND HYPOTHESES

As early as 1933, just after the first signs of religious disaffiliation became apparent in The Netherlands, the Dutch sociologist Kruijt (1933) named five major causes: the rise of socialism, increasing welfare, increasing educational levels, migration, and a growing opposition to clerical rules. Since then, many sociologists have elaborated upon Kruijt's work. Although it became a very diverse research field, most of the explanations can be deduced from two general theories: a theory of declining social integration and a theory of rationalization (Hak 1996; Need and De Graaf 1996).

Declining Social Integration Causing Religious Disaffiliation

The problem of integration goes back to the beginning of sociology (Durkheim [1897] 1967). According to functionalism, there is some sort of solidarity as long as there are social structures (such as church or family) that embody rules followed by their members. Moreover, these members will follow prevailing rules more strictly the better they are socially integrated within these structures (Stark 1994). If we consider a religious community as a social structure and if we assume that there are (more or less) explicit rules about church attendance and church membership within a religious community, then declining social integration may explain religious disaffiliation. In the following, we will deduce several hypotheses from this idea, including both contextual characteristics and individual characteristics.

Contextual Characteristics: Exposure to Parents, Peer Groups, Partners, and Provinces

First, we set out to derive hypotheses on characteristics in the direct surroundings to which an individual is exposed; in short, hypotheses on contextual characteristics. One indicator of integration in a religious community is the religious heterogeneity of one's parents. If both parents belong to the same denomination, we suppose there is little discussion about religious rules such as to which denomination their children should belong. We expect more discussion if one's parents do not belong to the same denomination, and even more discussion in the case where one of the parents is a nonmember. We take this line of reasoning one step further by proposing that debates among parents about church attendance and church membership will increase their offspring's likelihood of disaffiliating. Our first hypothesis therefore runs as follows: the more parents are heterogeneous in religious respect (during the adolescent years of their children), the more likely their children are to reduce church attendance and to become nonmembers (H1).

A second characteristic referring to integration in a religious community is religious upbringing, which has often been regarded as an important factor sustaining religiosity (Iannacone 1995). In terms of declining integration, the argument is that people who have not, or only partly, been raised religiously will not be fully integrated in a religious community later on in life. This, in turn, may lead to religious disaffiliation. We consider church attendance during adolescence as a valid indication for religious upbringing, so our second hypothesis runs straightforwardly: the less people attended church during adolescence, the more likely they are to reduce church attendance and to become nonmembers (H2).

A third characteristic indicating integration is the moment at which people leave their parental home. In The Netherlands, many people disaffiliate at a fairly young age (cf. note 3). Need and De Graaf argued that parents' influence on religious matters will decrease after their children have left the parental home. For those having religious parents, this would mean a potential decrease in the degree to which they are integrated in their religious community, which may cause religious disaffiliation. This leads to our third hypothesis: after people have left their (religious) parental home, the more likely they are to reduce church attendance and to become nonmembers (H3).

During adolescence an individual is not only socialized by his or her parents of course. Peer groups may have a considerable effect on behavior as well. As in our first hypothesis, we assume that religious heterogeneity among friends during adolescence will have an effect: the less church members people have as close friends during adolescence, the more likely they are to reduce church attendance and to become nonmembers (H4).

As people grow older, partners may become more important than parents or peer groups. Many people like to discuss religious matters and share their thoughts and ideas with their partners. We assume that a person will be more integrated in a religious community if the partner is a church member as well. Our fifth hypothesis therefore reads: compared to people with religious partners, people with nonreligious partners are more likely to reduce church attendance and to become nonmembers (H5).

The last contextual characteristic we investigate is the province people live in. The Netherlands is divided into 11 provinces. Studies show that religious disaffiliation first showed up in the northern provinces; soon followed by the provinces in the industrialized west of the country. Remarkably, religiosity remained widely spread in the southern provinces until the 1960s and early 1970s.[4] To explain these differences, Staverman (1954), following Durkheim, claimed that religion survives only if most of the population are integrated in a religious community. To put it another way: if more and more people are nonreligious, those who still belong to a church will find it more difficult to maintain their membership. If we apply this idea to the provincial level, the hypothesis runs: the higher the percentage of nonmembers in a province, the more likely people are to become nonmembers in that particular province. This hypothesis was corroborated by Need and De Graaf (1996). However, we think that there may be a spurious relationship, i.e., provincial nonmembership rates and individual nonmembership may be explained by a third factor, namely

rationalization. We will deal with this problem in the next section. Moreover, the assumption Need and De Graaf made is that contextual effects are equal for all people regardless of their age. This, however, is a strong assumption because scholars like Mannheim ([1928] 1964) and Inglehart (1977, 1990) stress that people's formative years' (i.e., adolescence) impressions and experiences have a lasting effect on their behavior, which, as a consequence, cause cohorts or generations to differ. Therefore, if the number of nonmembers in a province has a causal effect on religious disaffiliation, we expect to find this effect particularly among young people (H6).

Individual Characteristics: Denominational Membership

In addition to contextual characteristics, we looked at the type of denomination people belong to. At the time Durkheim wrote *Le Suicide* ([1897] 1967), suicide rates among Catholics were well below those of Protestants. In the last century, the situation was quite different in The Netherlands. Analyzing statistical data, Ultee et al. (1992) found higher suicide rates among Catholics compared to members of "Re-reformed" churches (strict Protestants) since 1937. Furthermore, the suicide rates of Catholics and members of the Dutch Reformed churches (a less strict type of Protestantism) tend to be equal nowadays. According to Durkheimian theory, then, integration among Catholics and among Reformed members must be less strong compared to members of Re-reformed churches, because the first more often break the rule "not to commit suicide." If we assume, in this theoretical line of reasoning, that Catholics and Dutch Reformed members cling less and less to clerical rules, we deduce that Catholics and Dutch Reformed members are more likely to reduce church attendance and become nonmembers compared to members of Re-reformed churches (H7).

Rationalization Causing Disaffiliation

In the Western world an initially unique process of modernization, or more accurately rationalization, took place. This process is characterized by an unprecedented emphasis on effectiveness and efficiency without much consideration for traditional values. According to Weber ([1920] 1972), this emphasis has contributed to the rise of modern capitalism, science, and numerous technical inventions. In Weber's view, Protestant ethics were at least partially responsible for the process of rationalization. According to Berger (1967), these ethics already showed signs of the secularization that was about to begin: in a world without anything "holy" but God, it is just one step further to a world in which nothing is sacred. This step was taken swiftly as the traditional character of religion was considered to be at odds with modern life. Based on these insights, we formulate the following proposition: the more rationalization prevails in a given society, the lesser the influence of traditional elements such as religion. In the next section we will derive several hypotheses from this theory, again considering both contextual and individual characteristics.

Contextual Characteristics: Exposure to Parents, Municipality, and Province

According to some (e.g., Roof 1974), people will take a more liberal point of view on religion the more contact they have with the modern rationalized world. This contact is intensified, for instance, through higher education and/or a "modern" occupation. Since parents' influence on their offspring is fairly high during adolescence, we hypothesize that the higher parents' educational and occupational attainment during adolescence of their children (i.e., our respondents), the more likely the latter are to reduce church attendance and to become nonmembers (H8a/H8b).
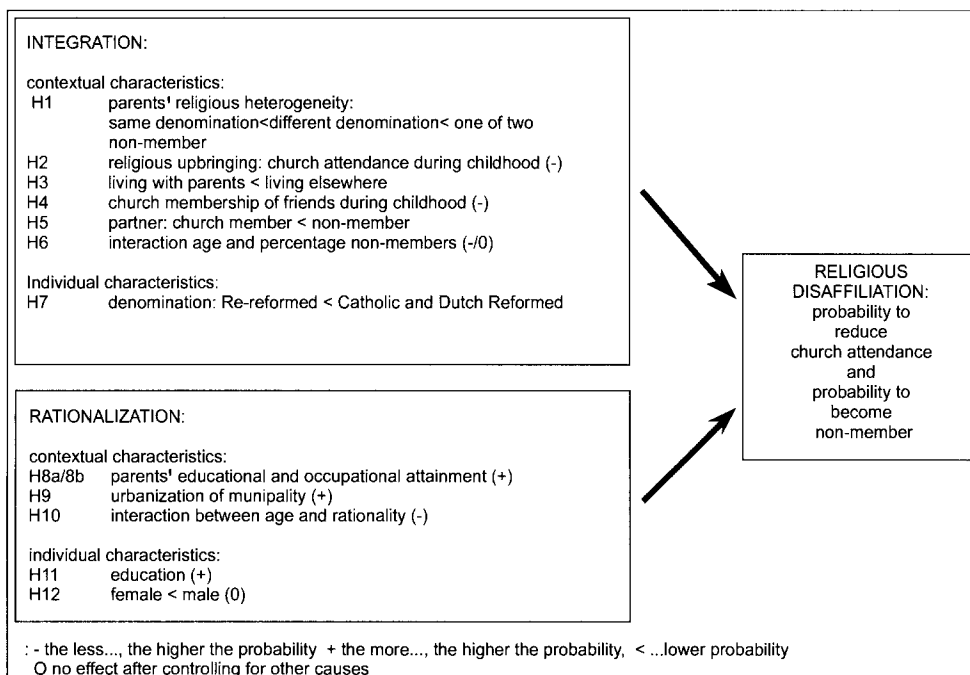
According to others, it is modern city life that brings people into contact with rationalization and everything that goes with it (Wilson 1982). From this we deduce that the larger a municipality, the more likely its inhabitants are to reduce church attendance and to become nonmembers (H9).[5]

In the previous section we mentioned the possibility of a spurious relationship between the percentage of nonmembers in a province and religious disaffiliation at the individual level. This spuriousness may be due to rationalization. If we assume that a higher level of rationalization makes it more likely for an individual to reduce church attendance and become a nonmember, then by the same token a higher level of rationalization causes higher nonmember rates at the provincial level.[6] Furthermore, again following the arguments of Mannheim ([1928] 1964) and Inglehart (1977, 1990), we take the hypothesis one step further by again proposing that rationalization will have its strongest impact on young people and, consequently, will be much weaker for older people (H10).

Individual Characteristics: Education and Gender

If an individual's religiosity is affected by parents' educational level as we hypothesized, it seems reasonable to expect similar effects regarding respondents' education. So, our next hypothesis is: the higher respondents' educational level, the more likely they are to reduce church attendance and to become nonmembers (H11).[7] We end this section with a particular relationship often found between gender and religiosity, namely, men are less religious compared to women (e.g., Argyle and Beit-Hallahmi 1975). Possible explanations are: different religious upbringing, different occupational levels, and different educational levels. We will first measure the differences between men and women regarding the likelihood of reduced church attendance and nonmembership. Subsequently, we will try to explain these differences in terms of religious upbringing and education (H12). We summarized all hypotheses in Figure 1.

FIGURE 1
HYPOTHESES TO EXPLAIN RELIGIOUS DISAFFILIATION IN THE NETHERLANDS

INTEGRATION:

contextual characteristics:
H1   parents' religious heterogeneity:
            same denomination<different denomination< one of two
            non-member
H2   religious upbringing: church attendance during childhood (-)
H3   living with parents < living elsewhere
H4   church membership of friends during childhood (-)
H5   partner: church member < non-member
H6   interaction age and percentage non-members (-/0)

Individual characteristics:
H7   denomination: Re-reformed < Catholic and Dutch Reformed

RATIONALIZATION:

contextual characteristics:
H8a/8b   parents' educational and occupational attainment (+)
H9   urbanization of munipality (+)
H10   interaction between age and rationality (-)

individual characteristics:
H11   education (+)
H12   female < male (0)

RELIGIOUS DISAFFILIATION: probability to reduce church attendance and probability to become non-member

: - the less..., the higher the probability + the more..., the higher the probability, < ...lower probability
  O no effect after controlling for other causes

DATA AND MEASUREMENTS

To test our hypotheses, we used a two-stage random sample from the Dutch population aged between 18 and 70 conducted in 1995 (Eisinga et al. 1999). The first stage is a stratified random sample of 70 municipalities, represented according to region and level of urbanization. Stage 2 is a random sample of 3,920 individuals drawn from these municipalities, of which 2,019 individuals participated. To examine the representativeness of this sample, several sample-to-population comparisons were made for region, level of urbanization, gender, age, and marital status. According to these comparisons, the sample closely corresponds to that of the national population.

The questionnaire we used allowed for time-related measurements of both dependent and independent variables.

Measurements: Time-Related Dependent Variables

To measure a reduction in church attendance, we first asked respondents the following question: How often do you attend church nowadays? Subsequently, we asked how often they attended church when they were between 12 and 15 years old. Furthermore, we asked those who used to attend church on a regular basis in their adolescence (at least once a month) but at the time of the interview did not, or on an irregular basis, at what age they had reduced their church attendance.

In a similar way we measured a switch from church member to none.[8] We first asked our respondents about their current church membership and subsequently about their church membership at age 12 to 15. Then, we asked those who used to be church members during adolescence but became nonmembers later on in life at what age this switch took place.[9]

Measurements: Time-Related Independent Variables

Besides the two time-related dependent variables, we have information on several independent variables for each respondent. This information was available from age 12 onwards. For instance, we know at what age people left their parental home, at what age they completed any educational level, and at what age they met their current partner. As we have already mentioned, this gives us an advantage over cross-sectional survey data making causal inferences: we know whether or not the independent event preceded the dependent event.

To test our hypotheses regarding parental influence, we used the following variables. Parents' religious heterogeneity was constructed by questions about church membership of both parents during the respondent's adolescence years (information given by respondent). We distinguished three categories: both parents belong to the same denomination (1), parents belong to different denominations (2), and one or both parents is a nonmember (3). To measure parents' educational attainment we decided to take the highest parental educational attainment, regardless of whether it was the mother or the father who had attained it. Parental occupational status was measured by taking the occupation of the father at the time the respondent was 12 years old. Religious upbringing was indicated by the respondents' church attendance at age 12 to 15. It was measured in four categories: once a week (1), once a month (2), a few times a year (3), and almost no church attendance (4). We also asked at what age people left their parental home. Religious heterogeneity of best friends during adolescence was measured by asking how many of the respondent's closest friends were church members at the time he or she was aged 12 to 15. We have four categories for this variable: all friends were church members (1), most of them were church members (2), some of them were (3), and none (4). To measure the effect of a nonreligious partner, we asked our respondents at what age they met their partners. Furthermore, we asked whether this partner

belonged to a church at the time of the interview. If the partner did not belong to a church we asked at what age he or she became a nonmember (information given by respondent). We also know the level of urbanization for the municipality in which the respondents lived before they left their parental home, the first municipality they lived in after leaving their parental home, and the municipality they lived in at the time of the interview. We obtained this information on the municipalities' level of urbanization in the 1937–1995 period from governmental statistics.[10]

The individual characteristics were obtained in the following way. The exact age (in years) was calculated from the year of birth. Denomination was measured with the use of the two-stage question. There are four categories: Catholic (1), Dutch Reformed (2), Re-reformed (3), and none (4).[11] We tried to capture the respondents' educational careers by asking them to state the educational levels they completed (with a maximum of six) and the educational levels they did not complete (with a maximum of two). From all these levels, we know at what age respondents entered and at what age they left the educational system.

To measure contextual effects on the level of provinces, we calculated the percentage of nonmembers for each province and each year from 1937 on. These calculations are based on census data from 1930 and 1947 (Statistics Netherlands) and survey data from 1960 (Faber et al. 1970), 1966 (Zeegers, Dekker, and Peters 1967), 1970, 1975, 1980, 1985, 1990 (SCP), and 1985, 1990, 1995 (Eisinga et al. 1992, 1999). To measure the theoretical concept of rationalization we opted for the average educational attainment of newcomers in the labor market in a specific year and province (Statistics Netherlands' census data from 1960, 1977, 1985, and 1992). From a theoretical point of view we think it is most reasonable to use this indicator. For it seems quite contradictory to speak of a society as being rationalized in which, on the one hand, efficiency is very important, whereas, on the other hand, there is not a sufficient number of highly trained employees. Furthermore, there are some empirical arguments. Our indicator is part of a more detailed scale used to measure rationalization (De Graaf and Luijkx 1992). Other indicators of this scale are: the number of farmers proportional to total labor force, gross national product per capita, and consumption index per capita. Including these variables in our analyses would have been of little use because they are all highly correlated (>0.90). Also, these indicators are not available for all years in all provinces.

On the basis of these data we constructed "person-period" data files: in these files we stored information on respondents' life from age 12 up to the age religious disaffiliation took place (if a respondent did not disaffiliate, his or her information continued up to the person's age in 1995). This was done in a dynamic way: each year from age 12 was treated as a single unit (or record). This enabled us to follow respondents as they grew older and their environment changed slowly (The Netherlands became more rationalized over the years), or quite rapidly (people left their parental home or got married). Of course, we know also at what age religious disaffiliation took place and this enables us to put the events in chronological order.[12]

We found that Dutch people became disaffiliated particularly between the ages of 14 and 26. Striking is a strong peak at age 18/19 regarding the reduction of church attendance: for every 100 respondents of that age, eight of them reduced church attendance from regular (once a month or more) to irregular (once a year at best). Interestingly, all age groups (except for age 12/13) are more likely to end regular church membership than to become a nonmember. This illustrates the order of events in The Netherlands: it is quite common to reduce church attendance but the final step of becoming a nonmember is taken less easily.

MULTIPLE TIME-DEPENDENT LOGISTIC REGRESSION ANALYSES

To measure the effect of all independent events, we applied logistic regression analyses to our person-period data (Yamaguchi 1991). In these analyses, we have as a time-dependent variable

a conditional probability to become disaffiliated at a given point in time. This probability (often spoken of as the "hazard rate") is made log-linearly dependent on a set of time-related covariates. Expressed in a formula:

$$\log \frac{p_{1(t)}}{p_{0(t)}} = \alpha + \sum \beta_{yx} \, X_{(t)}$$

The $p_{1(t)}$ in the formula is the probability of becoming religiously disaffiliated at a given point in time while $p_{0(t)}$ is the probability of staying religiously affiliated. The β_{yx} in the formula tells us how much the logarithmical transformation of p_1/p_0 (or "logit") will increase if X has a 1-unit increase. Statistically this is correct, but it is far from being practical or understandable. Instead, we use exponential β (often referred to as $\text{Exp}(\beta)$). This parameter tells us how much the ratio p_1/p_0 changes with a 1-unit change of X. Because of the specific time-dependent structure of our dataset, p_0 is very close to 1 and $\text{Exp}(\beta)$ can therefore be read as the number of times the probability of becoming disaffiliated increases ($\text{Exp}(\beta) > 1$) or decreases ($\text{Exp}(\beta) < 1$) with a 1-unit increase of X.

Some of the relationships about which we formulated hypotheses may well be explained by other events. For instance, it seems worth investigating whether the percentage of nonmembers in a province is a causal factor in the individual process of religious disaffiliation as it seems safe to assume that rationalization causes disaffiliation on both the individual and the contextual level. Therefore, we performed multiple time-dependent (logistic) regression analyses with all variables included. Results of these analyses can be found in Table 1.

Social Integration

From Table 1 it is clear that, after taking into account all other relevant variables, people with at least one parent a nonmember are 1.66 times more likely to reduce church attendance and are 2.01 times more likely to become a nonmember compared to people whose parents belonged to the same denomination. Respondents whose parents belong to different denominations are slightly, however nonsignificantly, more likely to reduce church attendance (1.14 times) or to become a nonmember (1.31 times) again compared to respondents whose parents belong to the same denomination. Our hypothesis in which parental religious heterogeneity was proposed to increase the likelihood of disaffiliation (H1) is therefore only valid in cases where one parent was a nonmember. A striking result regarding church attendance during adolescence is apparent in Table 1: monthly church attendance during adolescent years makes disaffiliation later on in life less likely compared to those who visited services on a weekly basis. Although this disconfirmes our hypothesis (H2), we want to stress that people who rarely went to church in their adolescence have the highest likelihood of becoming nonmembers.

We hypothesized that people who lived with their parents were less likely to become disaffiliated compared to those who lived elsewhere. Although the particular parameters point in the direction we expected, they are nonsignificant. Therefore we have to disconfirm our hypothesis (H3).

Our hypothesis in which nonmembership of close friends during adolescence was expected to increase the probability to disaffiliate (H4) has to be disconfirmed as well because none of the parameters is significant.

Respondent's partners have a profound influence on disaffiliation. Respondents whose partners are already nonmembers are 7 times more likely to reduce church attendance and are 12 times more likely to become nonmembers themselves, compared to respondents with a religiously affiliated partner. This clearly corroborates our hypothesis (H5). We want to add that respondents without a partner are also more likely to disaffiliate compared to respondents with a religious partner.

Our hypothesis (H6) about a specific age-related effect of the percentage of nonmembers in a province on disaffiliation is nonsignificant and thereby disconfirmed.

According to the parameters in Table 1, Catholics and Dutch Reformed Protestants are indeed more likely to disaffiliate, compared to Re-reformed Protestants, as we hypothezised (H7), while Catholics have the highest likelihood in this respect.

TABLE 1
MULTIPLE TIME-DEPENDENT LOGISTIC REGRESSION ANALYSES, PROBABILITY TO REDUCE CHURCH ATTENDANCE (n = 24,233) AND PROBABILITY TO BECOME NONMEMBER (n = 32,066) AT ANY POINT IN TIME AS DEPENDENT VARIABLES, PARAMETERS EXPRESSED AS EXP(β)

	Dependent Variables	
Independent Variables	Probability to Reduce Church Attendance	Probability to Become Nonmember
INTEGRATION		
Contextual characteristics:		
Parental influence		
Religious heterogeneity:	*	*
Both parents same denomination	reference	reference
Parents member of different denominations	1.14	1.31
One of the parents is a nonmember	1.66#	2.01#
Religious upbringing: church attendance at age 12 to 15	*	*
Weekly	reference	reference
Monthly	0.40#	0.55#
Yearly		1.13
Rarely		2.09#
Living with parents	reference	reference
Living elsewhere	1.06	1.22
Peer group's influence		
Religious heterogeneity of friends during adolescence:		
All friends church members	reference	reference
Most of them are church members	1.08	1.25
Some of them are church members	1.07	1.31
None	1.81	1.01
Partner's influence	*	*
Partner is a church member	reference	reference
Partner is a nonmember	7.01#	11.90#
No partner	1.50#	2.53#
Provincial influences		
Percentage nonmembers (effect for age 12–13)	1.00	1.01
Interaction between age and percentage nonmembers	1.00	1.00
Individual characteristics:		
Denomination:	*	*
Re-reformed Protestant	reference	reference
Catholic	5.21#	2.11#
Reformed Protestant	3.51#	1.72#

TABLE 1.—Continued

Independent Variables	Dependent Variables	
	Probability to Reduce Church Attendance	Probability to Become Nonmember
RATIONALIZATION		
Contextual characteristics:		
Parental influence		
Parents' education	0.99	0.99
Father's occupation:	*	*
Professional	1.53[#]	2.17[#]
Routine nonmanual	1.76[#]	2.13[#]
Small proprietors	1.45	1.69
Skilled manual workers	1.71[#]	1.71[#]
Unskilled manual workers	1.48[#]	1.97[#]
Farmers	reference	reference
Municipal influence		
Level of urbanization:	*	*
Less than 5,000 inhabitants	reference	reference
5,000–10,000	1.12	0.96
10,000–20,000	1.18	1.24
20,000–50,000	1.31	1.28
50,000–100,000	1.67[#]	1.15
100,000–400,000	1.56	1.71[#]
More then 400,000 inhabitants	1.66[#]	1.09
Provincial influence		
Average educational attainment(effect for age 12–13)	8.73*	3.02*
Interaction between age and average educational attainment	0.77*	0.86*
Individual characteristics:		
Education	1.00	1.02
Gender:		*
Female	reference	reference
Male	1.13	1.35[#]

* Significant contribution to model fit ($\Delta\chi^2 > 3, 86, \alpha = 5\%$).

Significant compared to reference ($\Delta\chi^2 > 3, 86, \alpha = 5\%$).

Rationalization

Table 1 shows no significant effect of parents' educational attainment. This implies that we have to disconfirm Hypothesis 8a.

In addition to educational attainment, we expected occupation to have its influence. This appeared to be true only for farmers. Farmers' sons and daughters appeared to be less likely to disaffiliate. This means that Hypothesis 8b is disconfirmed.

People living in urbanized areas are indeed more likely to become disaffiliated (H9), but the effect is small. The likelihood to reduce church attendance increases significantly if someone lives in a city with a population of 50,000–100,000 or lives in a city with more than 400,000 inhabitants. The effect on nonmembership is only detectable for people living in cities with 100,000–400,000 inhabitants.

The average level of rationalization, i.e., the average educational level of newcomers in the labor market, influences the likelihood of becoming disaffiliated as predicted. As society becomes more rationalized, the likelihood that young people (between ages 12 and 13) disaffiliate is substantially increased. Because the interaction parameter is below 1, the effect of rationalization decreases for older people. These outcomes show that rationalization has a considerable effect on religious disaffiliation. Furthermore, if we take "time" (ranging from 1937 until 1995) as a variable substituting rationalization, which is of little theoretical interest of course, our model fit is weakened. From all this we derive that our way of measuring the theoretical concept of rationalization has been fruitful at both the theoretical and empirical level.

Like parents' educational level, the effect of the respondent's education is not found in multiple regression analysis. This clearly disconfirms our hypothesis H11.

From Table 1 we learn that men are more likely to become nonmembers than women, even after taking into account relevant variables such as religious upbringing and educational attainment. So we have to disconfirm our last hypothesis (H12) as well.

We want to stress that we included age in the analysis (broken down into 10 dummy variables to fit the multiple age-curve best), but we did not show the parameters in Table 1. This would have been of little use because these dummy variables reflect the age effect in the year when rationalization was at its lowest, which is 1937. It may suffice to say that these parameters were very close to 1, because in 1937 religious disaffiliation had only just begun. In the next section we will show how all this changed during the years that followed.

Disconfirmed Hypotheses

In our analyses several hypotheses were disconfirmed. Because some of these hypotheses were corroborated in a first-step simple regression model including time-dependent variables, we performed more detailed analyses in which we started off with a simple regression model and then in a stepwise procedure included other relevant variables. The outcomes will briefly be described below.

In a simple analysis we found that, contrary to our expectations, people who lived with their parents were *more* likely to become disaffiliated compared to those who lived elsewhere. After we included age in the model, the differences were indeed as expected. Then we included level of urbanization, and this made the difference disappear. The idea that leaving the parental home as such would make disaffiliation more likely, is therefore not correct. To say that this likelihood increases after people move from their parental home to large cities, controlling for age, is more accurate.

Our hypothesis in which the religiousness of friends during adolescence was expected to have an impact on religious disaffiliation was corroborated in a first-step simple analysis, but was disconfirmed after the inclusion of rationalization. The effect of provincial percentage of nonmembers was indeed as expected in a simple regression model, but turned insignificant after the inclusion of rationalization. These two examples lend support to our assumption that rationalization causes disaffiliation on both the individual and the contextual level

In a simiar vein, rationalization accounts for the relationships between respondents' and parents' educational attainment and religious disaffilation. This would imply that it is not the higher educated people and/or people whose parents are highly educated as such who are more prone to disaffiliate.

FIGURE 2
AGGREGATED AND FITTED PROBABILITIES TO REDUCE CHURCH ATTENDANCE AND TO BECOME NONMEMBER IN THE NETHERLANDS DURING 1937–1995
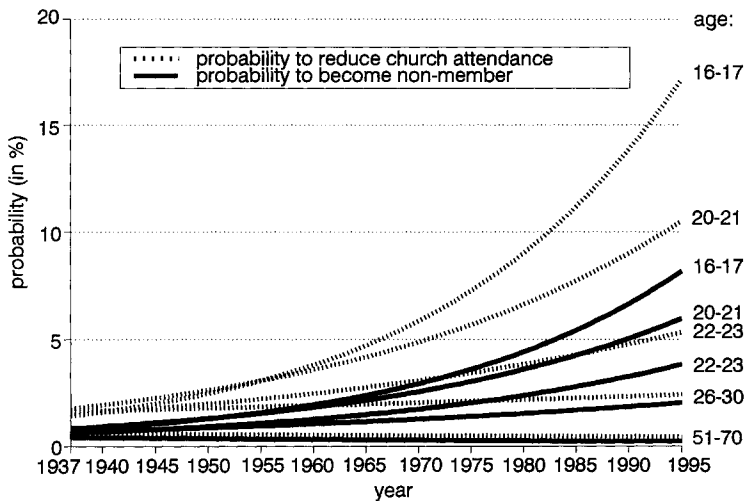
RELIGIOUS DISAFFILIATION BETWEEN 1937 AND 1995

Having presented our parameters in Table 1, we will now show in what way these parameters contributed to the rise of religious disaffiliation in The Netherlands. In this way we link our micro-outcomes to macro-trends. From Table 1 we know that the effect of rationalization was strong during adolescence. We also know from previous studies that rationalization in The Netherlands accelerated from the 1950s onwards (De Graaf and Luijkx 1992).

The effect of having a nonreligious partner is also likely to have its influence on the macro-trend because the number of nonreligious partners increased over the years. To show how all of this worked out at the macro-level, we calculated the aggregated probability to reduce church attendance and the probability to become a nonmember for five age groups in the 1937–1995 period. The outcomes of these calculations are summarized in Figure 2.[13]

Figure 2 shows that in 1937 it was very unlikely that someone, no matter his or her age, would become disaffiliated (i.e., reduced church attendance or become a nonmember). The likelihood increased only very slowly over the years to follow. Acceleration, however, can be found in the 1955–1960 period, especially for those between 16 and 20 years of age. Our analysis showed two factors to be responsible for the trends in Figure 2: increasing rationalization and the increasing number of nonreligious partners. The influence of these two factors is small for those who are relatively old: for people who are over 51 years of age and who are still church members and/or attend church regularly, it is very unlikely that they will become disaffiliated. The interaction between age and rationalization may best be viewed as a cohort effect (Glenn 1977) and not as an age effect. There are two reasons in favor of a cohort effect. First, rationalization has its effect at a time when people are relatively young and levels of rationalization were low at the beginning of this century. Second, disaffiliation appears to be a one-way process in The Netherlands (cf. note 8). As a result, in The Netherlands people from older cohorts (i.e., people born earlier last century) attend church more often and are more likely to be church members compared to those from younger cohorts.

One last remark about Figure 2: for every age group, the probability of reducing church attendance is well above the likelihood of becoming a nonmember. This illustrates once more

our point that the process of religious disaffiliation is two-staged: people first reduce their church attendance and eventually become nonmembers.

CONCLUSIONS AND DISCUSSION

In this article we set out to describe and explain the process of religious disaffiliation in The Netherlands. We ascertained religious disaffiliation in two ways. First, we ascertained to what extent people seriously reduced their church attendance at some stage in life. Second, we ascertained to what extent people in The Netherlands leave their church for good and become nonmembers. It turned out that individual religious disaffiliation starts with a reduction of church attendance and eventually ends with nonmembership.

To explain these two aspects of religious disaffiliation, we elaborated on social factors related to declining social integration and increasing rationalization. By doing so, we expanded studies done previously, especially those of Need and De Graaf (1996). To measure the impact of possible causes, we considered not only individual characteristics, such as the respondents' educational attainment, but contextual characteristics as well. At a theoretical level, this approach has been advocated by, for instance, Dobbelaere (1993) and Tschannen (1991).

We tested our hypotheses using a time-dependent multiple logistic regression model. It turned out that respondents do not disaffiliate more often when their parents belonged to different denominations. This runs counter to an often-heard statement that religiously mixed couples would do no good to their offspring's religiosity. Second, we found that people who attended church on a monthly basis in their adolescent years are less likely to disaffiliate compared to people who attended church weekly. Obviously, too strict a religious upbringing turns out to be religiously counterproductive, at least in The Netherlands.

Leaving the parental home had its impact, although the causal mechanism is somewhat different from what we expected. Leaving one's parental home as such does not trigger a process of religious disaffiliation. Only leaving the parental home and subsequently moving to large modern cities seems to induce disaffiliation. Although urbanization had an effect, it was rather small. So, the idea of modern city life having a serious impact on disaffiliation has little empirical foundation, at least in The Netherlands.

We found that the effect of rationalization made a number of social factors explaining disaffiliation spurious: the effects of provincial percentage of nonmembers, parents' and respondents' educational attainment, and religiousness of close friends disappeared after we took the level of rationalization into account. Need and De Graaf (1996) found effects of education and the provincial percentage of nonmembers to be significant, but these findings are clearly disconfirmed in our study after we took rationalization into account. We indicated the process of rationalization with the use of the average educational attainment of newcomers in the labor market in a certain province in a certain year. This turned out to be a more fruitful approach to the inclusion of time as an effect.

The gender effect was ambiguous: against our prediction, men and women had an almost equal probability of reducing church attendance, but women were indeed less likely to become nonmembers. This effect was found after we took into account differences between men and women regarding religious upbringing and educational attainment. This may imply women's deeper felt religiosity. It could also indicate women's reluctance (for instance because of social imperatives) to label themselves as nonmembers. The relationship between partners' denomination and disaffiliation was not spurious, even after we took rationalization into account. This means that partners do have an independent influence on respondents' religious (dis)affiliation.

Another important finding is the interaction between age and rationalization: young people are more likely to disaffiliate than older people, which is due to the level of rationalization to which they are exposed in their formative years. This has nothing to do with growing older (an age effect), for it is related to the fact that people born in the 1930s and 1940s experienced much

lower levels of rationalization during adolescence compared to people born in the 1970s and 1980s. According to authors such as Mannheim and Inglehart this eventually leads to cohorts with different opinions and behavior. All this is perfectly in line with the current situation at Sunday services in The Netherlands: fewer people attend church and those who still do are relatively old.

Increasing religious disaffiliation appeared to be caused by the ongoing process of rationalization and the ever-growing number of nonreligious partners. Of course, rising numbers of nonreligious partners do not come out of the blue. It seems safe to assume that this is caused by rationalization, too. If so, increasing rationalization is mainly responsible for religious disaffiliation in The Netherlands. This eventually means that rationalization theory, which goes back as far as Max Weber's writings, appears to be more fruitful in explaining disaffiliation in The Netherlands as compared to the Durkheimian theory of declining social integration. Of course, the effect of rationalization as part of the well-known "secularization thesis" has been, and still is, highly debated (Swatos and Christiano 2000). Authors who are in favor of this proposition take the situation in Europe as a proof. Others think the proposition is disconfirmed altogether, referring to the American case (widely rationalized and still relatively low disaffiliation rates). We would opt for the suggestion made by Dobbelaere (1981) following Luckmann (1967) in which American religion is said to be more adapted to the needs of modern life than religion in large parts of Europe.

It is of course difficult to tell Dutch religion's future. However, we could not disconfirm rationalization theory in this respect and it seems unlikely that rationalization will turn into de-rationalization. So, our prediction would be that as long as institutionalized religion stays at odds with modern rationalized life in The Netherlands, its churches will continue to be in Dutch.

NOTES

1. This study was presented at the Midwest Sociological Society Meeting, Kansas City, April 2–5, 1998. It is based on a chapter of the University of Nijmegen Ph.D. dissertation of Manfred Te Grotenhuis. We would like to thank Nan Dirk De Graaf, Durk Hak, Jan Lammers, and Ariana Need for their help. We would also like to express our gratitude to the staff at Statistics Netherlands for all the information on municipalities, to Maarten Wolbers who provided a data set to calculate average educational attainment for the 1937–1995 period, and to Theo Van Der Weegen for the data set of 400 municipalities in the 1935–1980 period.

2. If one sticks to the macro-level, two major problems arise. First, macro-trends of religious disaffiliation do not tell the whole story at the individual level. One example is the Catholic case in The Netherlands: at the macro-level church membership rates were fairly high, but this did not imply that religious disaffiliation was rare among Catholics. Looking at the proper individual level, there was much more disaffiliation than suggested by macro-data. This paradox is solved by the finding that Dutch Catholic families in the past had more children than average. Second, posing explanatory research questions at the macro or national level can often be misleading due to "ecological fallacies." In this case we cannot be sure whether disaffiliation is caused by another macro-trend, such as increasing rationalization, if we do not know that this relationship exists at the individual level.

3. Completing one's educational career before disaffiliation takes place may not be as unlikely as it seems. We have evidence that at least in The Netherlands many people become disaffiliated at a relatively young age (18 and even younger).

4. Interestingly, in these provinces most people are Catholic. According to economical-based theory on secularization, as advocated by Stark and Bainbridge (1987) for instance, we should find high levels of religious disaffilation because of a religious monopoly. At least for The Netherlands this is not the case as in these provinces religious disaffiliation started at a time when there was already large-scale disaffiliation in nonmonopoly provinces.

5. It would have been logical to connect the concept of integration with urbanization because one may assume that integration or solidarity in rural areas is far stronger compared to city life, which may result in less religious disaffiliation. Unfortunately we do not have the proper indicators in our data to test this hypothesis.

6. The hypothesis that it is rationalization causing disaffiliation and not the percentage of nonmembers could not be tested by Need and De Graaf (1996) due to problems of multicollinearity (Belsley 1991).

7. An individual's occupational attainment may be an explanation as well, but we do not have the proper data to test this additional hypothesis.

8. We would like to stress that as far The Netherlands is concerned, there is almost no denominational switching as there is almost no case in which nonmembers turn into church members again or start attending church again.

9. Asking people about events that happened in the past may cause problems of reliability and validity. However, our nonresponse on the retrospective question on church membership and church attendance is fairly low: less than 1 percent. Moreover, we found that studies by Faber et al. (1970) and Need and De Graaf (1996) revealed the same age-distribution regarding religious disaffiliation as we have found. Finally, according to our 1995 data, about 19.3 percent of the people aged 51 to 70 became disaffiliated before 1967. So in a 1966 data file we should find this percentage among the people who were between 22 and 41 of age. According to survey data from 1966 (Zeegers, Dekker, and Peters 1967), the percentage of nonmembers among people between 22 and 41 years old is 20.6 percent. This small difference does not indicate that people could not properly recall the exact year they disaffiliated.

10. The way we measured urbanization, however, is not exactly what we had in mind. We would have liked to focus on crowded municipalities, but municipalities may have many inhabitants spread over a large area. We think that an inhabitants-to-area ratio measurement would have been a better idea. We tried to construct such a variable but it resulted in a poor model fit. Probably this was due to a lot of annexations during this century: many municipalities expanded into large areas.

11. Re-reformed and Reformed are types of Protestantism found in The Netherlands. It is of no use to categorize any other denominations because in The Netherlands these are extremely small and therefore hard to detect in a sample survey.

12. Respondents tended to tell us rounded off ages such as 20, 25, 30, and so forth. We therefore decided to use the following age groups 12–13, 14–15, 16–17, 18–19, 20–21, 22–23, 24–25, 26–30, 31–35, 36–40, 41–50, and 51–70.

13. We calculated these aggregate probabilities by first calculating for each respondent their individual probabilities given his or her contextual and individual characteristics and given the parameters in Table 1. Subsequently we calculated from this the average probability for each year and each age group. On the basis of this, we estimated the best fitting curve for each age group.

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