The Shift in the Jewish Attitude Towards Conversion

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Abstract

The current Jewish narrative is of a segregated club that discourages new members. In the ancient world, however, the Jewish population was not an isolated society, but rather a society imbued with a zeal for conversion. The change in the attitude towards conversion occurred during a period characterized by a drastic decline in the global Jewish population (1st-3rd centuries CE). Surprisingly, the Jewish establishment responded to this crisis by creating numerous barriers discouraging conversion into Judaism. The paper presents this historical puzzle and introduces a model of rational religious conversion that attempts to explain it.

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1 Introduction

Religious conversion has always been a subject of controversy in Judaism. The leading Jewish narrative is of a nation struggling through history while remaining “pure” and resisting the temptation to convert. Two aspects underlie this narrative: (1) Proselytizing is not encouraged, with the Jewish establishment impeding conversion to Judaism;\(^1\) (2) refusal to convert to other religions despite potential economic and personal gains.

Judaism, however, was not always a closed and isolated society. During the first century CE, conversion to Judaism was strongly encouraged by the Jewish establishment, just as it was later in Christianity and Islam (see, for example, Mommsen (1854) and Feldman (1993)). While it is likely that the change in the attitude toward conversion occurred gradually, there is evidence of a dramatic shift in attitude by the 4th century CE.\(^2\)

The shift to norms that discourage conversion to Judaism occurred following a period characterized by massacres, exile and a dramatic decline in the global Jewish population, following the two failed Jewish rebellions against Rome and the destruction of the Second Temple in Jerusalem (70 CE). Intuition suggests that a shrinking society struggling to survive should attempt to encourage newcomers, rather than discourage them. Thus the emergence of a norm discouraging conversion poses an interesting puzzle.

To understand the shift in religious norms we focus on the competition between Judaism and Christianity during the first centuries CE; a competition in ideas and over followers, both Jewish and non-Jewish. This competition is likely one of the earliest stories of religious competition, as Judaism and Christianity were among the first two exclusionary religions.\(^3\) The competition resulting from the monotheistic nature of these religions likely played a central role in shaping the cultural norms, and in particular those related to conversion.

Focusing on the events that occurred in the 1st-7th centuries CE, Botticini and Eckstein (2005, 2007 and 2012) highlight the role of conversion in explaining the decline in the Jewish population during this period.\(^4\) Following the destruction of the Temple in Jerusalem

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\(^1\) Braude (1940, p.3) writes: “At the present time, the prevailing opinion, certainly among the Orthodox, is that Jews want no proselytes.”

\(^2\) For example, in the Talmud Bavli (written around the 4th century CE), a negative attitude towards proselytes is already evident.

\(^3\) In the preceding pagan period, prior to Judaism and Christianity, one could join a religion (and adopt its gods) without abandoning one’s beliefs in other gods.

\(^4\) In the 1st century CE it is estimated that there were approximately 4.5 million Jews in the world. That
the Jewish religion transformed itself from a religion based on sacrifices in the Temple to a religion based on the study of the Torah. As a part of this change, families were required to send their sons to school in order for them to learn to read and thus be able to study the Torah. They suggest that this new religious norm introduced a burden that induced part of the Jewish population to convert to other religions.\(^5\)

Interestingly, examining the Jewish demographic estimates and zooming out of the period of the 1st-4th centuries CE, we observe dramatic shifts that had already begun in the 1st century BCE, with a large increase in the Jewish population. During the 5th-2nd centuries BCE, the Jewish population consisted of approximately 1 million. By the 1st century BCE, the population is estimated at 4.5-8 million.\(^6\) There is a large body of historical evidence suggesting a process of dispersion of the Jews throughout the Hellenistic world during this period, followed by a great wave of conversion to Judaism among the pagan Hellenistic population (see, for example, Feldman (1993)). Was the decline in Jewish population in the 2-3 centuries CE related to the dramatic increase in the Jewish population during the 1st century BCE? The paper argues that these two episodes are in fact closely related, and have shaped the change in Judaism’s attitude toward conversion; a change that has persisted until this day.

Previous literature has viewed the decision to convert as a rational one (see, for example, Iannaccone (1992) and for a recent survey, McCleary (2011)). According to this approach, individuals rationally decide which religion to adopt, carefully weighing the benefits associated with each religion.\(^7\) Iannaccone (1992) models religion as a club characterized by social interaction. Each individual chooses a level of religious activity and derives utility that depends on the average level of activity chosen by the other club members, thus giving rise to a free riding problem. This paper explains the role of various non-market rituals as filtering devices aimed at discouraging less-committed individuals from joining the club. Berman (2000) adopts this approach to explain the puzzling behavior of ultra-Orthodox Jews, who spend many years engaging in religious study while

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\(^5\)This new norm also had a major influence on the occupational choices of Jews until the modern period.

\(^6\)For more details see Baron (1952), DellaPergola (2001), Eben (1969), Harsagor and Stroun (1996), and for a survey of estimates see Botticini and Eckstein (2012, p.16).

\(^7\)Azzi and Ehrenberg (1975) pioneered this approach; see also Stark and Finke (2000) and Barro, Hwang and McCleary (2010).
sacrificing earning opportunities.\textsuperscript{8} Levy and Razin (2014) develop a model of social signaling of religiosity and compare ritual based signaling with signaling by good behavior or good deeds.

This paper presents a model of religious conversion in which individuals choose whether to convert to a new competing religion, weighing its benefits against the penalty associated with switching. We consider a religious group that consists of two subgroups: an “original” group, and a group of “new converts”. Switching costs correspond to social stigma, which takes the form of social punishment.\textsuperscript{9} The stigma associated with conversion is assumed to be weaker among the population of new converts. We further suggest that this social stigma is subject to a network effect, which implies that when more individuals convert, the stigma associated with conversion weakens, thus reducing the associated switching cost. We analyze the conversion rate of the two subgroups as a function of their relative size, the effect of switching costs, and the distribution of their religious preferences. Interestingly, we show that a large group of new converts who face relatively low switching costs may exacerbate the conversion rate of the original group, or even that of the religious group as a whole.

Returning to our historical puzzle, our model suggests a possible link between the episode of mass conversion into Judaism in the 1st century BCE and the later episode of conversion from Judaism to Christianity. A religious group that proselytizes may at first increase its size, but facing competition from another religious group, this may result in an overall decrease in size in the long run. A large proportion of (possibly less committed) converts implies lower switching costs, facilitating conversion for the original group members as well. Under such circumstances, impeding conversion to Judaism may help to prevent a subsequent decline in the Jewish population. Such a norm would reduce the number of new converts, serving as a filtering device that admits only those more committed individuals.\textsuperscript{10}

The paper is organized as follows. Section 2 provides the historical background on

\textsuperscript{8}According to Berman (2000), these rituals serve as a filtering device. Club members benefit from access to a remarkably generous mutual insurance network of charities. The various rituals signal the commitment to the religious club and filter out the less committed individuals, thus allowing the club to exclude free riders.

\textsuperscript{9}For example, it may reflect a negative attitude from friends and family, or exclusion from business networks. See Greif (1993) for evidence of the importance of such networks.

\textsuperscript{10}That is, barriers to entry would permit conversion only to those individuals who benefit the most from joining the religious group. These new members are in turn more unlikely to switch again when facing competition from another religion.
which our discussion builds. Specifically, it provides an overview of Jewish demography during the period between the 1st century BCE and the 4th century CE, presents historical evidence for the magnitude of conversion into Judaism during the 1st century BCE, and explores the changes in the Jewish norm with respect to proselyte activity. Section 3 discusses the effects of religious norms on rational conversion decisions. Section 4 presents a model of endogenous conversion in which two populations face different conversion stigmas, which are subject to a network effect. Section 5 concludes.

2 Historical Background

2.1 Jewish Demography (1st BCE – 4th CE)

Estimates of the global Jewish population in the 1st century CE range from 4.5 to 8 million. The difficulty in arriving at a more precise estimate partly stems from the difficulty in defining Jewish identity. While even today this question is heatedly debated, during this period the definition was even more ambiguous. For example, Cohen (1999, p.3) writes that “Jewish identity in antiquity was elusive and uncertain . . . .there was no single definition...” He claims (1999, p.51) that “A register for converts before the second or third century CE is impossible to conceive; a register for converts after the second or third centuries CE is conceivable but undocumented.” Nonetheless, according to various estimates, the Jewish population accounted for approximately 10% of the population of the Roman Empire and of the Persian Empire, and 20%-25% of the total population in the eastern Mediterranean (see, for example, Baron 1952, pp.161-171, Eben 1969, p.104, Harsagor and Stroun 1996, p.63). Of the total Jewish population, 2-3 million resided in the Kingdom of Judea. For example, it is estimated that in the famous city of Alexandria 40% of the population was Jewish (see Eben 1969, p.104). Philon, the famous Jewish philosopher from Alexandria (20 BCE to 50 CE), wrote that in the beginning of the 1st century there were a million Jews in Alexandria. While this is likely to be an exaggeration, it provides an indication of a large number of Jews in the city. In the first century BCE, Jewish communities

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\[1\] Botticini and Eckstein 2012, p.16 survey the different estimates in the literature and provide a table with estimates of the Jewish population in different regions. According to their definition, Jews differed from Pagans in three different ways: (1) they believed in one god, (2) their religious and social life was shaped by the Torah (eating kosher food, observing the Sabbath etc.) and (3) the practice of male circumcision.

\[2\] The name of the Kingdom of Judea was changed to Palestine by Hadrianus only after the second Jewish rebellion in 133 CE.
Importantly, the total Jewish population of that period consisted of a number of heterogeneous groups, varying in their Jewish identity as well as their commitment to the religious rituals they practiced. For example, alongside the mainstream Jewish population, there was interesting group called “God Fearers” (see Klausner, 1944 pp. 40-47 and Feldman 1993, pp. 342-382, Moore 1954 p.325 and Cohen 1999, p.172). This group consisted of individuals who had only partially converted to Judaism, accepting its core monotheistic philosophy, but without any formal conversion. For example, Josephus states that Poppaea (Sabina) the Queen and wife of Nero, was “a Worshiper of God.” Klausner (1944 p. 40-41) provides a number of examples of famous individuals in the Roman Empire who were “God Fearers”, and cites various references to this group. He describes the group as follows: “The phenomenon itself is natural and understandable. Between thorough Jews and thorough pagans there were necessarily to be found, standing in a middle position, some who accepted Judaism as a great and beautiful ideal, who observed a part of its customs, but who did not become complete Jews.” The “God Fearers” were allowed to attend services both in the temple in Jerusalem and in synagogues (see Cohen 1999, p.53). While there are no estimates of the number of “God Fearers”, the numerous references to them is an indication of the group’s size.

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13For example, Cicero, the famous Roman orator (106-43 BCE), complained of the large number of Jews and of their unity and influence (see Stern, 1980, p.197).

14Klausner (1944) points out that circumcision was a key barrier to full conversion.
The increase in the Jewish population in the 1st century BCE, followed by the dramatic decline during the 1st-3rd centuries CE, are illustrated in Figure 1. \(^{15}\) During the 1st century BCE there was a rapid increase in the Jewish population, with an increase from 1 million to 4.5 million (other estimates are as high as 6-8 million).

Estimates indicate that the global Jewish population declined in the 3rd century to approximately 1.2 million. This drastic decline was typically attributed to massacres and exile following the Jewish rebellions in Judea, as well as in the Jewish diaspora. However, as pointed out by Botticini and Eckstein (2007), massacres, exile and epidemics leave unexplained between 30% and 60% of the Jewish population decline. The remainder is a result of voluntary conversion (mainly to Christianity).

### 2.2 Conversion to Judaism during the Antiquity Period.

Klausner (1946, p. 32), in his famous book “From Jesus to Paul”, writes: “One could not explain the great number of Jews in the Diaspora near the time of the destruction of the Second Temple without bringing into account a considerable addition of male and female proselytes.” Josephus (Toldot II p. 183), in describing the massacre of Jews in Damascus (66-7 CE), wrote that the men who participated in the massacre kept this fact hidden, fearing the reaction of their Greek wives, “all of whom, with few exceptions had been brought over to the Jewish religion” (see Klausner 1944, p.37).

To understand the phenomenon of conversion to Judaism, it is important to remember that conversion in the antiquity period was relatively effortless, unlike the modern process of conversion. Feldman (1993 pp. 288-415) claims that the large global Jewish population in the 1st century CE cannot be explained by the natural birthrate, but was due in large part to conversion. During the first century BCE, there was a massive influx of immigrants into Judea that was made up of Hellenistic pagans who had converted to Judaism. Many came from the Roman elite, including senators. These immigrants were welcomed by the Jewish establishment (see Smallwood (1976, p.206)). In describing the Pathelomite period (198-301 BC), Harsgor and Stroun 1996, p.55 write that: “At this period there was a great settlement movement of Jews in the entire Hellenistic world that was followed by a great wave of conversion of the pagan Greek population” (see also Eben 1969, p.104 ).

Conversion to Judaism was popular among Roman nobility. Moore (1954, p.347) writes: “Some of the most eminent schoolmen of the second century were or are reputed to have

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\(^{15}\)The two sharp population declines in Figure 1 relate to the two failed Jewish rebellions against Rome.
been, of proselyte ancestry.” Perhaps one of the most famous of such scholars is Onkelos, who later became one of the most famous Biblical commentators. Other important figures in Jewish history who converted to Judaism at that time include John of Giscala (aka Yohanan from Gush-Halav) and Shimon Bar-Giora. These two individuals were two of the most famous and fanatic leaders of the great Jewish rebellion against Rome, and are until today considered by many to be heroic figures. Another example on this list of important converted figure in the antiquity period is Queen Helena of Adiabene (aka Heleni Hamalka).

Conversion to Judaism was not always a voluntary act. The Hashmonite kings were in fact very active in forced conversion. The most famous example is the conversion of the Edomites by Yohanan Horkanus, who ruled Judea in the period 104-134 BC (see Eben 1969, p. 78, Moore 1954, p. 336). Neusner (1984, p. 28) claims that: “The Hasmoneans used Judaism imperially, as a mean of winning the loyalty of the pagan Semites in the region of Palestine they conquered”.

2.3 The Jewish Norm with Respect to Proselytizing

Conversion is relevant only in an exclusive religion. Polytheism, by definition, tolerates many gods and therefore conversion in the ancient world, prior to the arrival of the monotheistic religions, was largely meaningless. Feldman (1993, p.288), for example, writes that the only ancient religions with an idea of exclusionary conversion were

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16 Originally a Roman noble, Onkelos converted during the first century CE. He was the first to translate the Torah into Aramaic. His translation is known as “Targum Onkelos” and his Biblical commentary has been and is still studied and debated by Biblical scholars.

17 Some claim that it was critics of Shimon Bar-Giora who spread this rumor about himself. Even so, there would have to be a large population of converts for such a malicious rumor to appear credible.

18 While many believe that Queen Helena was a Hashmonite queen (the Hashmonean dynasty was the ruling dynasty of Judea and surrounding areas between 140 BC and 37 BC), she was in fact queen of Adiabene (aka Hadyab; Adiabene was an ancient kingdom in the area of north Iraq). The names of her family members and the fact that she was her husband’s sister indicate an Iranian, Zoroastrian or Magian origin. Queen Helena converted to Judaism around the year 30 CE (as described by Josephus in “Kadmoniot”, 24(3). See also Moore 1954, p.349.). Part of her royal family converted with her. Queen Helena moved to Jerusalem and built many famous buildings in the city. She died in 56 CE and she and her family, including other kings of Hadyab, are buried in Jerusalem in the “Tomb of the Kings”, one of the most famous and extravagant burial sites in Jerusalem, and a tourist attraction for centuries. There is a main street in Jerusalem named “Heleni Hamalka” (Queen Helena).

19 The famous king Herod the Great came from a family of Edomites who had converted to Judaism.

20 According to Eben 1969 p.78, this was the only incident of forcible conversion in Jewish history.
Judaism and Christianity.

The contemporary Jewish narrative is one of a self-segregated religious club that does not wish to mix with other religious groups. The general practice of the Jewish establishment today is to make conversion to Judaism a long and complicated process. 21

Two thousand years ago, the Jewish norm towards conversion was very different. The historical evidence suggests that the Jewish community welcomed and even encouraged conversion. The famous historian Mommsen, in his famous book “The History of Rome” (1854), writes that Judaism in the ancient world was not at all an isolated and closed society. On the contrary, it was imbued with a zeal for conversion no less than Christianity and Islam which followed it. Feldman (1993) claims that the Jewish establishment in the ancient world, like all the other religions, encouraged conversion.22 Moore (1954) explains this phenomenon arguing that “The conviction that Judaism as the one true religion was destined to become the universal religion was singularity of the Jews . . . .led to efforts to convert the gentiles to the worship of the one true God and to faith and obedience according to the revelation he had given.” Moore (1954, p.323).

The historical debate is not whether Judaism welcomed converts, but whether it was a missionary religion. While asserting that “Judaism was the first great missionary religion of the Mediterranean”, Moore (1954, p. 324) explains that the use of the phrase “missionary religion” does not imply that the Jews sent out missionaries. Braude (1940, p.8) suggests that, “There appears to be no evidence that Jews sent missionaries into partes infidelium to bring about mass conversion.” The characterization of Judaism as a missionary religion is explained by Moore (1954, p.324) as follows: “Their religious influence was exerted chiefly through the synagogues which they set up for themselves, but which were open to all whom interest or curiosity drew to their services.”23 Alon (1984, p.329) further addresses this debate, claiming that “The Jewish population grew by the influx of converts to Judaism... Historians are divided in their view of this development. There are those who believe that the Jews deliberately set out to preach their religion to the pagans. Others deny the existence of any Jewish proselytizing effort. ...There is probably a measure

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21The difficulties faced by converts to Judaism do not end with the conversion procedure, but often continue afterward. For example, new converts find it difficult to marry into the Orthodox Jewish community.

22Chapters 9 and 10 of his book are devoted to the Jews’ successful proselytizing activities and are entitled “The success of proselytism by Jews in the Hellenistic and early Roman world” (Chapter 9) and “The success of Jews in winning ‘sympathizers’” (chapter 10).

23Cohen (1999, p.55) writes that “the synagogues of the Roman diaspora were open to gentiles, and some—perhaps many—gentiles actually attended services. This was true for Asia Minor in the first century.”
of truth in both these views."

It is difficult to pin down precisely when the positive attitude towards conversion emerged. Harsagor and Stroun (1996, p. 33) claim that during the period of King David (10th century BC), simply accepting the monotheistic ideology was sufficient to become a Hebrew (the term “Jewish” came into use later). They claim that during this period, if an individual felt that he was a Hebrew, then he belonged to the Hebrew nation. During the late Persian period, conversion to Judaism was welcomed. Indeed, documents found in the Sumerian city of Nipur contain many examples in which fathers had typical Babylonian names; while their sons had a typical Hebrew ones (see Sand, 2008, p.150). Biblical evidence of the attitude towards conversion can be found in the book of Esther, written in the late Persian period (or the beginning of the Hellenistic period, 3rd or 4th century BCE). It clearly describes how widespread conversion to Judaism was at the time: "And in every province, and in every city, whithersoever the king’s commandment and his decree came, the Jews had joy and gladness, a feast and a good day. And many of the people of the land became Jews; for the fear of the Jews fell upon them.” (Esther 8:17).

The ease of conversion during the 1st century BCE is exemplified by the famous story of Hillel (who was the head of the Sanhedrin, the Jewish high court), who explained to a candidate for conversion that Judaism can be capsulized as follows: “What is hateful to you, do not do to your fellow man. The rest is commentary – go and learn.” (b. Shabbat 31a). By the time of Josephus, it appears that in order to convert an individual had to “[change their way of life, accepting the Judean customs and laws.” (Against Apion II:10).

Following the second Jewish revolt against Rome (130 CE), new restrictions were imposed on the Jewish population in Palestine (the change in name from Judea to Palestine was one of them). This included the prohibition of Jews from engaging in any act of conversion (penalized by death). The Jewish population complied with the new rules, and some Rabbis even suggested replacing circumcision with baptizing in the Mikve (a bath used for Jewish purity rituals). Eventually, a rapid conversion process was allowed, requiring no previous interview or the presence of witnesses (see Harsagor and Stroun 1996, p.75 and Avi-Yonah 1976, p.81). The fact that the Romans viewed the prohibition of conversion as an important penalty to be imposed on the Jewish community and that Rabbis were willing to risk a death penalty in order to engage in acts of conversion, indicate

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24 Talmon (1963, p.453) suggests that the Book of Esther is set during the period of Xerxes (485-465 BCE).
25 See also Moore (1930, p.337).
the importance of conversion to the Jewish establishment at the time.26

As mentioned above, the norm encouraging conversion is not widely accepted in contemporary Judaism. Today, conversion to Judaism is a difficult process and is certainly not encouraged. It is not clear precisely when this change took place. It was most likely the result of a gradual cultural change. Braude (1940, p.5) considered this issue: “Did proselyting come to a stop in the Talmudic era? The majority of Christian scholars affirm it and a few Jewish scholars deny it. The latter contend that it weakened but did not stop.”

An important clue as to when this cultural change might have taken place can be found in the following famous quote from the Talmud Bavli: “Apostolates are difficult to Israel like a sore” (Talmud Bavli: Masseket Yevamot, Volume 1 chapter 13).27 It was written between the beginning of the third century and the fifth century CE. Thus, during this period, there seems to have already been a negative attitude towards conversion. Klausner (1944, p.45) provides further examples of the negative attitude toward conversion in the Talmud.28

Surprisingly, the change in the norm regarding conversion appears to have taken place in a period of a large decline in the Jewish population, while intuition suggests that a shrinking society would attempt to encourage newcomers, rather than discourage them.

3 Rational Choice and Religious Conversion

Several works have studied rational models of religion choice.29 Iannaccone (1992) presents a model of rational choice of religious activity in which individuals are free to choose their religion and the extent to which they practice it. This paper explains anomalous non-market activities and seemingly bizarre and inefficient rituals. Religion is modeled as a club that provides benefits to its members. There is social interaction between members of the club, and the benefit to each club member depends on the average religious activity of the other club members. The collective nature of religious activity results in a

26At the same time, it is likely that the failed rebellions against the Romans affected the willingness of Pagans to convert.
27The exact reference to “sore” in the Hebrew version of the Talmud is to a skin disease.
28For example: “It has been taught: R. Eliezer the Great said: “Why did the Torah warn against a proselyte in thirty-six, or as other say, in forty-six places? Because he has a strong inclination to evil.” (Baba Metzi’a 59b).
free riding problem. The cost of inefficient rituals screens out individuals whose religious activity level would be relatively low, thus discouraging the less committed individuals from joining the club.

Iannaccone’s (1992) setup focuses on the choice of a religious club, but does not address the issue of rational conversion (i.e., switching between religious clubs). Casual observation indicates that in actuality most individuals remain within the religion they are born into. One of the reasons for this phenomenon lies in the various types of switching costs associated with religious conversion (see Barro, Hwang and McCleary (2010) for a model of rational conversion with fixed switching costs). These costs may take the form of direct economic costs (e.g., the need to move to a different neighborhood, or to give up one’s social network), or social costs (e.g., no longer being fully accepted by members of the former group).

Importantly, we have to distinguish between the switching costs imposed on an individual who converts by the religious club she chooses to exit, with those imposed by the religious group she chooses to join. Most religious groups adopt a negative attitude towards those who leave it. Some groups go so far as to condemn to death those who dare to do so, while others impose various types of social penalties, exclusion or social stigma. In some cases, the penalty for conversion is imposed on the entire family of the convert. For example, Orthodox Jews impose collective punishment on the families of those who leave the group. This may include creating difficulties for family members (even beyond the immediate ones) to marry within the group. Religious clubs also differ in their attitude towards individuals joining the club. While certain religions view attracting new converts as pillars of the faith (e.g., forced conversion may be a command), others discourage or prohibit conversion into the religion, supporting cultural of segregation. For example, the Samaritans and the Yazidis do not accept converts at all, despite their shrinking numbers.

Imposing strong penalties on those who wish to leave a religious club contradicts the filtering argument of Iannaccone (1992). If the members of a religious club intend to include only committed members in their club (for example, in order to guarantee a high level of religious activity) they should allow less committed individuals to leave the club. However, the existence of strong penalties on those who wish to leave the club may discourage individuals from leaving it. A possible explanation for such norms is that in

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30 The degree of the social stigma may depends not only on the religion the individual leaves but also the specific religion she chooses to adopt instead. For example, it is possible that a Protestant’s conversion to Judaism is viewed differently than a conversion to Islam.
some religions one of the fundamental commands is to “spread the word”; members are expected to engage in missionary activity. Typically, such a religious groups impose very severe penalties for leaving the group, while at the same time creating difficulties for those who wish to join the group.

Switching costs between religions are not necessarily fixed. In many cases, when more individuals convert from a religious club, the stigma against conversion weakens, making it less costly for others to follow.

Intuition suggests that a religious club that wishes to maximize its size should encourage individuals to join it, while discouraging members from leaving. This intuition is based on the assumption that the outflow and the inflow from the club are independent. But when the two are interdependent, this basic intuition need not apply. In order to explain this interdependence we consider a model in which a religious group consists of two segments: “original members” and “new converts”. We assume that individuals (from both segments) are able to convert to a competing religion, and that conversion is subject to switching costs. These switching costs reflect a stigma associated with conversion that is subject to network effect. In particular, the conversion stigma is assumed to be weaker for new converts. Consequently, a large segment of new converts implies that faced with competition from another religion, new converts are more easily persuaded to switch. Given that the conversion stigma is subject to a network effect, the conversion of these less committed individuals in turn reduces the conversion stigma, thus making it easier for others to convert as well. Under such circumstances, a link is created between the attitude towards conversion into a religious group and the attitude towards conversion from that group.31

4 Model

There are two religions, A and C. Religion A consists of two groups: \(A^O\) – the “original members” and \(A^N\) – the “new converts”. Members of A may choose either to convert

31 Note that the norm requiring Jews to send their sons to schools in order to learn to read (Botticini and Eckstein (2007)) may have contributed to the different patterns of conversion among different groups of the Jewish population. Neusner (1984) emphasizes that this new norm of learning and schooling was more difficult for the group of new converts and claims that: “The religious beliefs of recently converted people could not have encompassed ideas and issues requiring substantial study, elaborate schooling, and a well-established pattern of living.”
to religion C or to remain in A. The benefit from religion A (for members in either \( A^O \) or \( A^N \)) is uniformly distributed over \([0, B]\). We normalize the number of individuals in religion \( A^O \) to 1 and the number of individuals in religion \( A^N \) to \( g \), where \( g \leq 1 \). The benefit from religion C is constant, given by \( b^C \geq 0 \).

Conversion is subject to switching costs, which may be associated with a stigma relating to conversion. This stigma is assumed to be lower for members of \( A^N \) and is subject to a network effect. Specifically, we let \( 1 - q^O (1 - q^N) \), be the share of individuals from \( A^O \) (\( A^N \)) who convert to religion C, where \( q^O, q^N \in [0, 1] \). The stigma for members of \( A^O \) who choose to convert to C is given by

\[
S^O \frac{q^O + gq^N}{1 + g},
\]

where \( S^O \geq 0 \) is the social stigma factor for members of \( A^O \), and \( \frac{q^O + gq^N}{1 + g} \) is the share of individuals from A who choose to remain in A. Similarly, let

\[
S^N \frac{q^O + gq^N}{1 + g}
\]

be the stigma for members of \( A^N \) who choose to convert to C. Note that this formulation implies that the social stigma is decreasing in the share of individuals from A who convert to C. Members of \( A^N \) face a lower social stigma, that is, we assume \( S^O \geq S^N \).

Conversion is a rational decision. An individual \( j \) converts when her benefit from conversion, \( b^C - b_j \), is greater than the conversion stigma. Therefore, a member \( j \in A^O \) will convert to C iff

\[
b^C - b_j \geq S^O \frac{q^O + gq^N}{1 + g}.
\]

Similarly, an individual \( j \in A^N \) will convert to C iff

\[
b^C - b_j \geq S^N \frac{q^O + gq^N}{1 + g}.
\]

An equilibrium is given by \( ((b^O, b^N), (q^O, q^N)) \), where \( (b^O, b^N) \in [0, B]^2 \), \( (q^O, q^N) \in [0, 1]^2 \) such that:

1. Given \( (q^O, q^N) \) and the resulting conversion stigma, all individuals in \( A^O (A^N) \) with \( b_j \leq b^O (b_j \leq b^N) \) choose to convert to C.

\[^{32}\text{For convenience, we ignore the possibility of conversion from C to A.}\]

\[^{33}\text{It is of course plausible that members of } A^O \text{ would primarily be concerned with conversion out of } A^O \text{ rather than } A^N, \text{ however, as long as their conversion stigma is affected by the conversion of individuals out of } A^N, \text{ the intuition of the analysis remains intact.}\]
2. The proportion of individuals who convert is consistent with individuals’ optimal conversion decision, i.e., $1 - q^O = b^O/B$ and $1 - q^N = b^N/B$.

An interior equilibrium threshold $(b^O, b^N)$, $b^O, b^N > 0$, must therefore satisfy the following conditions:

$$b^O = b^C - S^O B - b^O + g(B - b^N)$$
$$b^N = b^C - S^N B - b^O + g(B - b^N)$$

Equations (1) and (2) reflect the interdependence between the conversion decisions of members of religions $A^O$ and $A^N$. It is convenient to define the function $b^O(b^N)$ as the threshold $b^O$ derived from the optimal conversion decision of members of $A^O$, when the share of converts from $A^N$ is given by $b^N/B$. Similarly, define the function $b^N(b^O)$.

$$b^O(b^N) = \frac{b^C - S^O (1 - \frac{g b^N}{B(1+g)})}{1 - \frac{S^O}{B(1+g)}}$$
$$b^N(b^O) = \frac{b^C - S^N (1 - \frac{b^O}{B(1+g)})}{1 - g S^N}$$

The functions (3) and (4), depicted in Figure 2, are linear and increasing. An intersection of (3) and (4) within $[0, 1]^2$ constitutes an interior equilibrium. Otherwise, the equilibrium is one in which the members of $A^O$ ($A^N$) either all convert or all do not convert. We focus on the more interesting case in which the equilibrium is interior, such that only a part of the population converts.

**Proposition 1** A larger population of new converts (i.e., a higher $g$) generates a higher conversion rate of members of both $A^O$ and $A^N$.

**Proof.** The functions $b^O(b^N)$ and $b^N(b^O)$ are depicted in Figure 2.\(^{34}\) Denote the intersection of the functions $b^O(b^N)$ and $b^N(b^O)$, which defines an (interior) equilibrium, by $(b^{O*}, b^{N*})$. Since $S^O > S^N$, the intersection must satisfy $b^{N*} > b^{O*}$.

An increase in $g$ implies that both $b^O(b^N)$ and $b^N(b^O)$ tilt clockwise around their intersection point with the 45° line, with the resulting functions denoted by $b^O_g(b^N)$ and $b^N_g(b^O)$, respectively. To see this, consider the effect of an increase in $g$ on $b^O(b^N)$. At the symmetric point $b^O = b^N$, the share of converts from the $A^O$ is identical to that from $A^N$. Therefore,

\(^{34}\)Note that $b^O(0) > 0$ and $b^N(0) > 0$ and that the functions are linear and increasing.
Figure 2: Interior equilibrium and an increase in $g$
a change in $g$ does not change the share of converts from group $A$; the conversion stigma thus remains unchanged, as does the optimal behavior of individuals in $A^O$. Consider the change in $b^O(b^N)$ in the region below the 45° line. In this region, the conversion rate within $A^O$ is larger than within $A^N$. An increase in $g$ therefore implies that the overall conversion rate from $A$ decreases, which implies a higher conversion stigma, resulting in a lower incentive for individuals in $A^O$ to convert. The curve $b^O(b^N)$ therefore shifts to the left. In the region above the 45° line, a similar argument implies that an increase in $g$ results in a shift of $b^O(b^N)$ to the right. An analogous argument applies for $b^N(b^O)$. An increase in $g$ therefore results in a new equilibrium (the intersection of $b^O_g(b^N)$ and $b^N_g(b^O)$) with higher conversion rates from both $A^O$ and $A^N$.

The intuition of Proposition 1 is simple. Since $S^O > S^N$, members of $A^N$ face a lower conversion stigma, and therefore in equilibrium, $b^N > b^O$; that is, the share of individuals that convert from $A^N$ is higher than that from $A^O$. Therefore, a higher proportion of new converts in the population implies a higher average conversion rate in the entire population $A$, and a lower conversion stigma for both $A^O$ and $A^N$. The lower stigma encourages conversion from both these groups.

Coming back to our historical puzzle, Proposition 1 implies that a higher proportion of new converts in the Jewish population during the 1st century CE might have led to an increased conversion rate to Christianity, even among the original Jewish population.

The focus of the analysis so far has been on the conversion stigma towards those converting from $A$ to $C$. We now also consider the effects of the attitude regarding conversion into $A$. This attitude determines the switching costs (or the entry cost) of joining group $A$ and therefore the size of $A^N$ and the characteristics of its members. Religious norms restricting conversion into $A$ may have two effects:

- A *quantity effect*, resulting in a smaller $g$;
- a *filtering effect*, admitting into $A^N$ only the more “committed” individuals, i.e., those with a higher benefit from $A$.

The filtering effect may formally be captured by allowing the distribution of $A^N$ members’ benefit from $A$ to be shaped by the filtering policy. While so far we have assumed that this benefit is uniformly distributed over $[0, B]$, we now assume that it is uniformly distributed over $[\beta, B]$, where $\beta$ is determined by the filtering policy. Specifically, a higher switching cost associated with conversion into $A$ is captured by a higher $\beta$. 17
The equilibrium now depends on the filtering policy, $\beta$. Thus, denote by $(b^O_\beta, b^N_\beta)$ an equilibrium with the modification that, given $b^O$ and $\beta$, only members $j \in A^N$ with benefit $b_j \leq b^N_\beta$ convert to $C$, as opposed to remaining in $A$. Similarly, given $b^N$, $\beta$, only members $j \in A^O$ with $b_j \leq b^O_\beta$ convert.

Although $S^O > S^N$, the filtering of individuals into group $A^N$ now implies that the rate of conversion to $C$ from $A^N$ may be lower than that from $A^O$. In particular, when $\beta > b^N$ there is no conversion out of group $A^N$, as all members of $A^N$ choose to remain in $A$.

We now turn to consider the effects of a change in the attitude towards conversion into $A$, as reflected by a slight increase in the filtering level $\beta$.

**Proposition 2**

1. If $b^N_\beta < \beta$, a further increase of $\beta$ results in a higher conversion rate from $A^O$.

2. If $b^N_\beta > \beta$, a conversion stigma increasing the filtering level into $A$ (i.e., a higher $\beta$) results in a new equilibrium with a lower rate of conversion out of both $A^O$ and $A^N$.

**Proof.** Consider first the case of $b^N_\beta < \beta$. In this case, the filtering policy is sufficiently high to prevent conversion from $A^N$ to $C$. Therefore, a small increase of $\beta$ implies a higher overall conversion rate from $A$. This, in turn, reduces the conversion stigma, which encourages conversion from $A^O$. The resulting equilibrium is depicted in Figure 3a, in which, as a result of the increase in $\beta$, the curve $b^O(b^N)$ shifts to the right and $b^N(b^O)$ shifts upwards due to a reduced conversion stigma. At the new equilibrium the rate of conversion from $A^O$ is higher.

Next, consider the case in which $\beta < b^N_\beta$. An analogous argument shows that a small increase in $\beta$ implies an increase in the conversion stigma and thus discourages conversion from $A^O$. This case is depicted in Figure 3b. The curve $b^O(b^N)$ shifts leftwards and $b^N(b^O)$ shifts downwards, resulting in a new equilibrium in which there is lower rate of conversion from both $A^O$ and $A^N$. □

We now re-examine the effect of a policy that directly restricts the conversion into group $A$ (that is, a lower $g$), in the presence of a filtering policy $\beta$. The analysis is similar to the one above, and therefore we describe the main intuition without a proof. Let $(b^O_\beta, b^N_\beta)$ be an equilibrium, and consider the case in which $\beta$ is sufficiently small such that the rate of conversion from $A^O$ is smaller than that from $A^N$, i.e.,

$$\frac{b^O_\beta}{B} < \frac{b^N_\beta}{B - \beta}.$$
In such an equilibrium reducing $g$ implies a lower relative size of $A^N$ in $A$, which translates into a lower overall conversion rate to $C$ and implies a higher conversion stigma and a lower conversion rate from $A^O$.

On the other hand, when $\beta$ is sufficiently high such that at $(b^O_\beta, b^N_\beta)$ the conversion rate is lower in $A^N$, i.e.,

$$\frac{b^O_\beta}{B} > \frac{b^N_\beta}{B - \beta'}$$

an analogous argument shows that a small reduction in $g$ implies a new equilibrium in which there is a higher conversion rate in the original group $A^O$. We can summarize this effect as follows:

**Proposition 3**

1. When $\beta$ is sufficiently small a conversion policy that results in a lower $g$ implies a lower conversion rate among the members of $A^O$.

2. When $\beta$ is sufficiently high a lower level of $g$ implies a higher conversion rate among the members of $A^O$.

Returning to our historical puzzle, Proposition 1 provided an illustration that restricting conversion into $A^N$ is effective in discouraging conversion out of $A^O$. Propositions 2 and 3, however, point out that in the presence of a filtering policy, this conclusion depends on the level of filtering in place. When this level is relatively low, the policy of reducing $g$
is more effective. However, if there is a high level of filtering, such a policy may prove to be counterproductive.

So far we have considered the effects of conversion norms on the conversion rate of individuals in \( A^O \). When the focus is on the survival of the entire group \( A \), however, the relevant objective is the overall number of individuals that choose to remain in \( A \). Let \( (b^O_{\beta,g}, b^N_{\beta,g}) \) denote the equilibrium given \( \beta \) and \( g \). The overall population that remains in group \( A \) is given by

\[
B - b^O_{\beta,g} + g(B - \max\{\beta, b^N_{\beta,g}\}).
\]

A conversion norm that reduces \( g \) has two effects.\(^{35}\) First, there is a direct effect, as a lower \( g \) reduces the size of \( A^N \) and hence the size of \( A \). Second, there is an indirect effect, as a lower \( g \) reduces the conversion rate to \( C \) when the filtering effect is relatively small. The overall effect of any conversion norm that affects \( g \) is a combination of these direct and indirect effects. When \( \beta \) is small, and the indirect effect is stronger than the direct effect, i.e., when

\[
\left( B - b^N_{\beta,g} \right) - \left( \frac{\partial b^O_{\beta,g}}{\partial g} + g \frac{\partial b^N_{\beta,g}}{\partial g} \right) < 0,
\]

a conversion norm that reduces \( g \) results in a higher population that remains in \( A \), without converting to \( C \). We can therefore conclude that:

**Corollary 1** A norm that discourages conversion into \( A \) may contribute to the overall size of \( A \).

## 5 Concluding Remarks

The norm that calls for impeding conversion to Judaism has persisted from the 3rd and 4th centuries CE until the present. Indeed, norms may persist for a long time, even when they are no longer useful.\(^{36}\) As long as Jews were a minority community focused on survival in an environment with a strong majority group, it was important to discourage members from leaving the community in favor of other religions. As argued above, in order to effectively support a norm against conversion out of Judaism it was important to discourage conversion into it. Interestingly, in modern Israel, a society with a Jewish majority,

\(^{35}\) A similar analysis can be done with respect to the filtering policy.

\(^{36}\) In particular, this may occur when the punishment for deviating from the norm remains part of the culture.
the Orthodox establishment continues to maintain the historical norm that discourages conversion.

References


