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An afterlife capital model of religious choice☆

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ABSTRACT

This paper uses a modified version of the afterlife capital model to study religious choice. It compares a religious monopoly with various duopolies. The duopolies involve both exclusivist and nonexclusivist religions. Contrary to the supply side literature, it finds that religious choice does not necessarily increase religiosity and in some cases decreases it. It also finds that adopting exclusivist doctrines is a dominant strategy for a religion. Possible extensions of the framework to other issues in the economics of religion are also discussed.

1. Introduction

This paper investigates religious choice using the afterlife capital model. It compares levels of religiosity (measured by religious investments) with a monopoly religion and religious duopolies. The duopolies involve choices between exclusivist religions, nonexclusive religions and between an exclusivist religion and a nonexclusivist religion. Unlike existing models of religious choice which focus on current life consumption aspects of religion, this paper finds that choice does not necessarily increase religiosity but may actually decrease it.

Much of the economic literature on religion focuses on supply side considerations (Cojoc, 2010; Ferrero, 2010; Gallego and Woodberry, 2010; Stark, 2006; Introvigne and Stark, 2005; Gill, 1999; Iannaccone, 1991, 1998; Iannaccone et al., 1997; Zaleski and Zech, 1995; Olds, 1994; Finke and Stark, 1992).[1] The literature places significant importance on competition between religious organizations. Generally, it finds that the more choice there is between religions, the harder religious organizations work to attract members. The greater efforts of religious organizations to attract members lead to a greater degree of religiosity in the population. Typically, it assumes there is little to prevent people from changing religions.

Sociologists (and others) have criticized this approach on a number of theoretical and empirical grounds (Bruce, 1995, 1999, 2000, 2001, 2011; Gooren, 2010; Hill and Olson, 2009; Jerolmack and Porpora, 2004; Voas et al., 2002; Chaves and Gorski, 2001; Olson, 1998, 1999; Spickard, 1998). This paper will focus on the criticism that people cannot change religions

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[1] Some of these authors are not economists (e.g. Rodney Stark) but follow what is widely seen, by themselves and others, as the economic approach to the study of religion. There has been economic research on the demand side of religious markets (Eswaran, 2011; Becsi, 2010; McBride, 2010, 2008; Iannaccone, 1990; Montgomery, 1996). However, it is fair to say that there has been more focus on the supply side of religious markets. When demand is modelled, the good demanded is rarely well defined.

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as easily as economists typically assume. Bruce (1999) articulates this criticism particularly forcefully. Although sociologists do not use a rational choice approach, in the terminology of economics, this criticism amounts to arguing that different religions are not close substitutes from the prospective of potential members. Religions often claim to offer exclusive access to a desirable afterlife (heaven). Moreover, some claim that following other religions will lead to an undesirable afterlife (hell). In addition, there is evidence that followers have a bias towards the claims of the religion they were raised in (Gallego and Woodberry, 2010; Barro et al., 2010; Pew Forum on Religion and Public Life, 2008, 2009a; Kluegel, 1980).

Sociologists, such as Bruce (1999), argue that these considerations discredit the rational choice approach to religion. However, it would be more accurate to say that these considerations question a particular rational choice approach that overemphasizes supply side considerations.[2] Rational choice theory can be used to study religion in a manner conducive to addressing several valid criticisms made by its critics.

To study demand side considerations of religious choice, this paper uses an afterlife capital model of religion. Azzi and Ehrenberg (1975) were the first to use the afterlife capital model of religion. Their paper models church attendance as an investment in an afterlife. It models a continuous distribution of afterlives, determined by religious activity during life. However, few traditional religions offer such a wide range of outcomes.

This paper is more closely related to Pyne (2010) which uses a three-period model. In period 3, an individual is dead. When dead, an individual faces three possible outcomes: (1) the end of existence, (2) heaven, or its equivalent and (3) damnation. In periods 1 and 2, the individual may make costly investments in religious capital. These investments may take any form required or encouraged by his religion such as church attendance, dietary restrictions, prayer, reading religious writings, refraining from blood transfusions and tattoos, etc. The individual believes that these investments determine the probability of a favourable afterlife, if an afterlife exists. Horst (2009, 2010, 2011) and Papyrakis and Selvaretnam (2011) also model the effects of religious investments on destination probabilities.

This paper differs from Pyne (2010) in assuming period 1 religious investment is decided by a parent. In addition, it assumes that period 1 investment determines the period 2 probability the individual places on an afterlife existing. One effect of this probability is on the subjective likelihood the individual places on going to heaven. In other words, the probability placed on an afterlife existing is what religious people often refer to as faith. For exclusivist religions, period 1 investment also affects the subjective probability the individual places on a given religion being the correct religion. This is consistent with empirical evidence that religious upbringing influences religious choices later in life.[3]

The afterlife capital approach of this paper finds that levels of religious investment are usually not lower with a monopoly religion than with the religious duopolies studied. Total religious investments are found to be identical to the monopoly case when choice is between nonexclusive (more specifically pluralist) religions. Given the symmetry assumed, the distribution of the investments between religions is indeterminate. When competition is between a pluralist religion and an exclusivist religion, the total lifetime investments of those brought up in the exclusivist religion are the same as the monopoly case. Those who convert to the exclusivist religion make higher period 2 investments. However, none make period 2 investments in the pluralistic religion. Thus, over time, the exclusivist religion should become a monopoly. When competition is between two exclusivist religions, total religious investments are less than the other cases.

This implies that religions face a prisoner's dilemma, if doctrine is a choice variable.[4] Collective religious investments are highest when both religions adopt pluralistic doctrines. However, becoming an exclusivist religion is a dominant strategy for each religion. Over time, one should only observe either exclusivist or monopoly religions.

In his paper on competition between exclusivist religions, Ferrero (2010) points out that the question of why religions adopt practices of exclusivity is unanswered. By showing that exclusivity is a dominant strategy, this paper provides an answer.

Iannaccone (1990) offers an alternative explanation for many of the same empirical findings this paper explains. Specifically, both papers offer an explanation of the relationships between religious upbringing and religious choices later in life. His explanation involves an agent's previously acquired *religious human capital* influencing "one's ability to produce and appreciate religious commodities". This may be a valid argument for the current life consumption value of religion.[5] However, if an agent also invests in a religion to increase his afterlife utility, he must also believe there is a chance the religion may be the route to that afterlife. This consideration is the major focus of this paper.

Section 2 will present the monopoly case, which will serve as the reference case. In the process, it will also lay out much of the basic framework used in later sections. Section 3 will expand the model to competition between two pluralist religions. Section 4 will further expand the model to competition between a pluralist religion and an exclusive religion. Section 5 examines competition between two exclusivist religions. Section 6 concludes the paper by discussing the results and the possibilities of applying this framework to other aspects of the economics of religion.

[2] McBride (2011) also makes the point that the literature often conflates the way economics has been applied to religion with rational choice theory itself.

[3] Besides previously cited evidence which dealt specifically with the relationship between religious upbringing and the choice of religion, see Ecklund and Scheitle (2007), Brañas-Garza et al. (2011), Hayes and Pittelkow (1993), Iannaccone (1990), Kluegel (1980) for more general effects on adult religious investments.

[4] Alternatively, if doctrine is not a choice variable, exclusivist religions are predicted to grow at the expense of nonexclusivist religions.

[5] For an argument against the validity of this view, see Bruce (2011).