



Ethics and public perception of climate change: Exploring the Christian voices in the US public debate

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ABSTRACT

Climate change raises many questions with strong moral and ethical dimensions that are important to address in climate-policy formation and international negotiations. Particularly in the United States, the public discussion of these dimensions is strongly influenced by religious groups and leaders. Over the past few years, many religious groups have taken positions on climate change, highlighting its ethical dimensions. This paper aims to explore these ethical dimensions in the US public debate in relation to public support for climate policies. It analyzes in particular the Christian voices in the US public debate on climate change by typifying the various discourses. Three narratives emerge from this analysis: 'conservational stewardship' (conserving the 'garden of God' as it was created), 'developmental stewardship' (turning the wilderness into a garden as it should become) and 'developmental preservation' (God's creation is good and changing; progress and preservation should be combined). The different narratives address fundamental ethical questions, dealing with stewardship and social justice, and they provide proxies for public perception of climate change in the US. Policy strategies that pay careful attention to the effects of climate change and climate policy on the poor – in developing nations and the US itself – may find support among the US population. Religious framings of climate change resonate with the electorates of both progressive and conservative politicians and could serve as bridging devices for bipartisan climate-policy initiatives.

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1. Introduction

In the United States, the public discussion of the moral and ethical dimensions of climate change is strongly influenced by religious groups and leaders. In February 2006, for instance, a group of 86 US evangelical leaders, under the auspices of the Evangelical Climate Initiative (ECI), challenged the Bush administration on global warming with their "Evangelical Call to Action" (ECI, 2006). The document states that climate change is an urgent issue that will impact the poor most of all, and calls for stringent emission controls. Other religious groups and leaders, in the US and other countries, have taken similar positions (Wardekker and Petersen, 2008). The (religious-) ethical aspects of climate change are the central theme of their statements. The debate has attracted considerable attention in the media, and some mention in

scientific forums as well (e.g. Nisbet, 2006; Kolmes and Butkus, 2007; Nisbet and Mooney, 2007). Also theologians increasingly reflect on the (religious) challenge of climate change (e.g. McFague, 2008).

Simultaneously, climate change and climate policy have become more prominent in the US political debate, often with moral and religious-ethical¹ connotations. For example, Al Gore notes in his "An Inconvenient Truth" that it is "deeply unethical" to allow the rise in CO₂ emissions to continue (Gore, 2006). The book adds specifically religious discourse to the movie's general ethical discourse, as does Gore's Nobel Peace Prize lecture, where he compares the Intergovernmental Panel on Climate Change's 'Fourth Assessment Report' to a quote from Deuteronomy presenting a choice between life and death ("Therefore, choose life") (Gore, 2007). In the State of the Union of January 2007, President Bush referred to climate change for the first time as a

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¹ The terms 'moral' and 'ethical' are often used synonymously, while others make a distinction for varying reasons and in different ways. This paper will not attempt to expressly segregate the terms, as no distinctions are made within the sources studied.

serious societal issue, noting that technological breakthroughs would allow us to become “better stewards of the environment” (Bush, 2007). And in his presidential campaign, Barack Obama wrote: “My values speak to... the expanse of God’s creation that is warming day by day” (Obama, 2008). Religiously inspired discourse seems to play an important role in the US public debate on climate change.

This paper analyzes the religious voices in the US public debate on climate change in order to typify the various discourses, focusing primarily on the discourse among Christian groups. Jewish groups have been taken into account to a lesser extent. Christian (and Jewish) traditions play an important role in American public and political life, and in the American societal and cultural debate (cf. Hunter, 1991; Guth et al., 1995; Layman, 1997; Habermas, 2006; Lindsay, 2007). This influence may take the form of, for instance, party identification, electoral choices, political cues in preaching, lobbying and activism, and public perception of specific issues. Christian groups have often spoken out on issues that have moral dimensions, and apparently they consider the environment and climate change to have such dimensions as well. Our interest in studying Christian voices in the US public debate is to gain empirical access to how an important segment of the US population perceives climate change and what are considered as the relevant ethical dimensions of climate change. The public voices from Christian groups can be considered as proxies for the views supported by the larger communities.

As should be expected, there is a large diversity of views on the climate change issue both within and among Christian denominations. In the US context, particularly the voice of evangelical leaders is considered to be quite influential among Republicans. A plea for strict climate policy by such leaders may seem remarkable. Evangelicals are thought of as politically conservative, and there appears to be a strong distrust and alienation among evangelicals towards environmentalism and environmental concerns. They link these to liberalism, ‘new age’-like ideas and nature worship (cf. Sirico, 1997; Harden, 2005; Ekklesia, 2006; Hagerty, 2006; EEN, 2007; Ford, 2008). Interestingly, religious sources that plea for strict environmental policies often reframe the topic to ‘creation care’ or ‘environmental/climate stewardship’, avoiding such connotations (Harden, 2005; *The Economist*, 2007c). Some groups specifically present themselves as religiously or politically conservative. Regarding Christian traditions in general, some have argued that the classic ‘dominion’ argument (mankind transcends and has rightful mastery over nature) and anthropocentrism enhance abuse and destruction of nature (e.g. White, 1967; Greeley, 1993; Guth et al., 1995; Schultz et al., 2000; Trevors and Saier, 2006). Others have pointed to ‘End Times thinking’ (dispensationalism) as an additional barrier to support for environmental policy (Guth et al., 1995).

However, to directly relate religious beliefs to environmental attitudes seems too simplistic. Greeley (1993) and Schultz et al. (2000) argue that, while studies have found a negative relation between Christian beliefs and pro-environmental attitudes, this relation is often small and may be due to political and moral conservatism rather than religion itself. Nonetheless, different religious views do seem to be related to *what type* of concerns people hold. For example, Schultz et al. (2000) found that respondents expressing more literal beliefs in the Bible scored lower on ecocentric environmental concerns, but higher on anthropocentric environmental concerns. Such different bases for environmental concerns could result in different views on the nature of an environmental problem, as well as on the desirability of various policy strategies to counter it.

Climate change is an interesting issue in this respect, as it can be framed (cf. Nisbet and Mooney, 2007) not only as an environmental problem, but also as a development problem.

Illustratively, the main motivation in the evangelical “Call to Action” is the impact of climate change on the poor, particularly in developing countries. This developmental frame has strong *human*-ethical connotations. It involves issues of distributive justice; how equitable is the distribution of costs (e.g. climate-change impacts) and benefits (e.g. economic growth) of emissions, and who is responsible for the problem and for taking policy action (Jamieson, 1992; Grubb, 1995; Brown et al., 2006a; Gardiner, 2004, 2006; Singer, 2006)? For instance, Grubb (1995), Gardiner (2004), and Groenenberg and Van der Sluijs (2005) provide extensive discussions of the ethical aspects of various approaches to assigning emission-reduction targets. Other ethical issues regarding climate change include: responsibility for damages, cost to national economies, procedural justice (who may participate in policymaking and how?), dealing with uncertainties (who should bear the burden of proof? should we act despite remaining uncertainties; when and how?), atmospheric targets, independent responsibilities to act, specific research approaches (e.g. cost-benefit analysis/discounting), and policy strategies and new technologies (e.g. geoengineering) (Jamieson, 1996; Brown et al., 2006a,b; Singer, 2006; Toman, 2006; Gardiner, 2007).

Complex and uncertain issues such as climate change raise many questions with strong moral and ethical dimensions that are important to address in climate-policy formation and international negotiations (Brown, 2003; Brown et al., 2006a; Gardiner, 2006). Such issues cannot be solved by simply calculating an ‘optimal solution’. Rather, they invoke fundamental questions on how we ought to live and how humans should value and relate to each other and non-human nature (cf. Rolston, 2006; Hogue, 2007). Religious groups have been at the forefront of public debate on ethical issues on many occasions, and should be in a good position to evaluate the linkages between environment, climate change, development, and human behaviour. Considering the large influence of religion on public life in the United States and the important ethically charged choices that will need to be made in the coming years concerning international climate policy, the views of vocal US Christian groups merit further study. This paper explores their perceptions and positions in the US public debate on climate change and climate policy, and why they consider these issues a religious challenge. Following from that, this paper presents some possible implications for policymaking, relevant for the United States as well as actors involved in the global climate debate. In the near term, religious voices seem particularly relevant for assessing the possibilities of bipartisan climate-policy making under the Obama administration.

2. Methodology

2.1. Approach

Different (social) understandings of the world lead to different social actions: within a particular worldview, some forms of actions become natural whereas others become unthinkable (Jørgensen and Phillips, 2002; Runhaar et al., 2006). This paper analyzes the Christian voices in the US public debate on climate change by means of argumentative discourse analysis (Majone, 1989; Fischer and Forester, 1993; Hajer, 1995, 2005; Jørgensen and Phillips, 2002; Runhaar et al., 2006). Argumentative discourse analysis explores patterns in written or spoken statements and related practices in order to identify the representations of reality that are employed. For Hajer (1995), the ‘discourse coalitions’ that form around lines of argumentation (‘storylines’) are meant to represent a particular definition of the environmental problem, on which the decision-making critically depends. In this paper, we combine two frameworks to analyze and typify these storylines or



Fig. 1. Worldviews. Source: MNP (2005), modified after Rob Maas in Wardekker and Van der Sluijs (2006).

narratives: worldviews, on the one hand, and value mapping and argumentative analysis, on the other hand.

The worldview framework employs a quadrant of four ideal-typical discourses regarding sustainability issues (Fig. 1), developed by the Netherlands Environmental Assessment Agency (MNP, 2005; De Vries, 2006; Petersen et al., 2006; De Vries and Petersen, 2009).² These worldviews are used as a heuristic framework to organize the various opinions on sustainable development, in order to assess where the discourses are located within this ideal-typical space. This is a type of framing analysis (cf. Gray, 2003; Nisbet and Mooney, 2007), analogous to analyzing 'social control frames' using Cultural Theory (Gray, 2003). This does not imply that discourses are simply labelled with a particular worldview. Individuals and groups often cannot be easily placed within one 'box', and factors other than ideological positions influence expressed policy preferences (Wardekker and Van der Sluijs, 2006). Rather, discourses are compared to the set of worldviews, and the elements they use from various worldviews are used to structure the debate. The worldviews are used as a soft framework to scan for storylines/narratives in the debate.

Fischer's (1995; Van der Sluijs et al., 2003) 'Value Mapping and Argumentative Analysis' framework is used to segregate and compare the arguments used, and to analyze what things various policy actors agree or disagree on. The framework discerns four levels of possible agreement/disagreement: (1) ideological view, (2) problem setting and goal searching, (3) problem solving, and (4) outcomes and fairness. The ideological view is the deepest level where disagreement can occur and can lead to very different views of whether there is a problem or what it is. Ideological argumentation focuses typically on ideology and alternative societal orders. On the next level, problem setting and goal searching, groups may agree on the existence of a problem, but not on identifying precisely what the problem is, how to formulate it, and what the end goal or solution point should be. On the level of

problem solving, groups may agree on the existence of a problem and on policy goals but disagree on the strategies and instruments required to reach the goal. At the fourth level, outcomes and fairness, groups can hold different views on what constitutes fair outcomes. Fairness argumentation focuses typically on public interest, unexpected societal side effects, and distributive justice.

In this paper, the worldviews will be used to typify the policy narratives and the value mapping and argumentative analysis framework will be used to segregate the arguments within these narratives. The approach chosen here yields a somewhat different type of results as compared to, for instance, Stone's (1989) concept of causal policy stories and Roe's (1989, 1994) approach of narrative analysis. Causal policy stories focus on the problem definition in terms of causal mechanism (empirical) and blame (normative), while our approach is more extensive. In addition to causal theories, it examines different lines of reasoning concerning solutions, as people adhering to the same causal story may come to different conclusions regarding policy options. Additionally, it explicitly discusses the ideological and ethical issues that may underlie a policy controversy, which is of particular importance to this study. Compared to Roe's (1989, 1994) approach of narrative analysis, the present approach examines the arguments,³ where Roe examines the structural differences of narratives. The latter can yield interesting insights in the dynamics and power-aspects of a policy controversy. The approach used in this paper yields insights in the perceptions, arguments, and positions. In the case studied, this information can be more straightforwardly related to the perceptions within the overall Christian community, as well as to the secular debate.

2.2. Data collection

The study started with obtaining a 'helicopter view' of the discourse by examining online news coverage on the topic. After this initial assessment, the study was broadened to include materials such as opinion documents, press releases, formal resolutions, informative materials and 'frequently asked questions' sections on websites of religious groups, speeches, blogs, and additional online newspaper articles. Sources were collected using both Internet searches and snowball sampling. Sources were selected based on their accessibility, relevance, and coverage of opinions, religious groups, and topics within the debate. In total, approximately 100 documents have been analyzed. These materials provided a representative sample of the US religious public debate on climate change as it is currently taking place in the media and on the Internet.

2.3. Sample

This study focuses primarily on Christian groups, taking into account Jewish groups to a lesser extent. The Jewish sources analyzed presented a discourse that was similar to the Christian discourses on the argumentative level, although differences were apparent in the symbols and language used. These differences are not examined in this paper. Several joint Christian–Jewish opinion documents and coalitions have also been included in the analysis. The Christian (and Jewish) groups are politically the most influential in the United States, as noted in the introduction, and therefore their views are relevant for formulating climate policy. Additionally, it became apparent during data gathering that these groups are also the most vocal and visible in the US public debate. Internationally, other religions and beliefs, such as Islam and Buddhism, seem fairly active on the topic.⁴ In the US however,

² Note that these worldviews are inspired by, but not the same as, the worldviews used in 'Cultural Theory' (e.g., Douglas and Wildavsky, 1983; Dake, 1991; Steg and Sievers, 2000).

³ The study assesses what the arguments are, not their scientific validity.

⁴ For overviews on various religions' perspectives, see e.g. Climate Institute (2006) on climate change specifically and FORE (2004) on ecology in general.

Table 1
Christian religious discourses in the US climate debate.

Discourse	Description	Worldviews
Conservational stewardship	Creation has been created 'good'. This 'garden of God' should be preserved, as it was created, as well as possible. Technology and development are possible threats	Global solidarity and caring region
Developmental stewardship	We are called to fill and subdue the earth, and turn the wilderness into a garden, as it should become. Technology and development are a necessity for this task	Global market and safe region
Developmental preservation	Creation is 'good' and changing; progress and preservation should be combined. God has granted us the creativity to find solutions. Technology and development can present challenges as well as help us in this task	Global market and global solidarity

opinion material from other religions was found relatively scarce. A considerable amount of analyzable opinion material was available for US Christian discourse, allowing for data triangulation and better coverage of the spread of opinions and arguments. Therefore, the decision was made to limit the study to these groups. Analyzed documents originated from religious groups/churches, associations and umbrella organizations of such groups, religious environmental groups and platforms, and individual leaders. Denominations covered (as self-identified by the sources) include: interfaith (joint Christian and Jewish), interfaith/ecumenical (multiple Christian dominations), Jewish (generic), Reform Jewish, Orthodox Jewish, Evangelical (generic), Catholic, Baptist, Presbyterian, Episcopal, Methodist, Unitarian Universalist, Quaker, Evangelical Lutheran, Reformed, Church of the Brethren, United Church of Christ, and Salvation Army. Denominations that could be identified among signatories of public statements/calls and participation in organizations that made such statements also included: Pentecostal, Orthodox, Mennonite, Church of the Nazarene, and Swedenborgian. For a complete list of organizations and people that were included in the analysis the reader is referred to the [supplementary material](#).

3. Christian religious discourses in the climate debate

In the material studied, religious groups presented cases in favour, or against, stricter policies on global warming from a variety of standpoints, using a variety of arguments. These arguments span all four of the worldviews summarized in [Fig. 1](#). Aside from more generic reasoning on the suitability and acceptability of various policy strategies, several points emerge in relation to these worldviews. Religious discourse which fits in the 'Safe Region' worldview typically emphasizes mankind's right to use the earth, which was granted as a gift to mankind. Discourse related to the 'Global Market' worldview focuses on mankind's duty to develop itself and creation. 'Global Solidarity'-related discourse deals with the commandment to care for one's neighbour. And discourse related to the 'Caring Region' worldview focuses on values such as moderation and humility (mankind as being only a small part of creation). However, the vast majority of opinion documents do not express only a single worldview. Instead, they express viewpoints and arguments from several worldviews.

Within the diverse body of Christian opinions on climate change, three discourse coalitions – henceforth called 'religious discourses' – can be discerned. Each is related to two of the worldviews used in this study ([Table 1](#)). Religiously inspired opponents of strict climate-policy express views that could be described as 'developmental stewardship'. Proponents of strict climate-policy express views of 'conservational stewardship' and 'developmental preservation'. *Conservational stewardship* opposes developmental stewardship in the worldview graph ([Fig. 1](#)). *Developmental conservation* expresses many of the same values and

beliefs as conservational stewardship, but with the important difference that it expresses a more positive portrayal of mankind. Although not all sources contain sufficient information to be able to categorize them into one of the discourses, for each of the discourses, sources can be discerned that can be wholly categorized under them. It is found that there is no simple relation between denominations and the discourses: a large majority of the denominations represented in our sample feature more than one discourse and many denominations (e.g., evangelical, catholic and Jewish) feature all three discourses. In the remainder of this section, we further typify the three discourses and provide specific examples.

3.1. *Conservational stewardship*

Core values in the conservational stewardship discourse relate to preserving creation, of which mankind is a part, and (related to this) care for the poor. Core beliefs are that climate change, its impacts, and human influence on it are large and temporally close (often: already occurring). Views on the fragility of nature are usually not made explicit, but are a mix of considering nature as fragile and as tolerant within limits. Discourse on mankind is often negative, framing mankind as 'culprit'. Climate change is seen as a threat to the well-being of creation, including the poor.

3.1.1. *Ideological view*

Creation has been created 'good'. This 'garden of God' should be preserved, as it was created, as well as possible. The commandment of stewardship entails a "sacred obligation to preserve and protect the earth in all of its majesty, this garden with which we have been entrusted, for those who will follow" ([Stone, 2008](#)). The need to protect nature follows from our interdependence with nature, and an extension of the commandment to love one another as well: "We must see the whole creation as our neighbor." ([ABC, 1991](#)) and "we believe that Jesus Christ came as a brother to all created reality" ([Sisters of St. Francis, 2008](#)). Some sources focus on development, overconsumption and wasting of resources as a threat to creation; one author even refers to this as 'decreation': "We are engaged in the swift and systematic decreation of the planet we were born onto. And does God look at our actions and pronounce them good? I doubt it." ([McKibben, 1999](#)).

3.1.2. *Problem setting and goal searching*

Climate change leads to a destruction of habitats, vanishing of species or ecosystems, and decline in biodiversity. These issues concerning the impacts of climate change on nature underlie the call for 'conservational stewardship'. Many sources address a multitude of threats, for instance: "From the rapid melting of glaciers to the bleaching of coral reefs and from the spread of tropical diseases and invasive species to increasing frequency

of extreme weather event of all kinds, we know that a virtual Pandora's Box of woes and disasters has been released that is sure to change life on earth for generations to come." (QEW, 2007, preface). When the air "is poisoned and polluted (Isaiah 24:5–6), we and all creatures are harmed" (ABC, 1991). "Like Adam, we have been warned and cannot plead ignorance" (Stone, 2008). Vision and strength are needed.

3.1.3. Problem solving

While change will be difficult, action is urgent, because impacts are already occurring. "The first step is the most difficult. We must begin to look at the issues. In doing this, we acknowledge our faith that much can be done. . . . Acknowledge the complexity of the issues, and that solutions will be both difficult and partial. Make individual and corporate small steps. One Friend does not drive on the first Friday of the month, nor does she invite people to drive to her. Another is setting up a data base for carpooling." (Street, 1999). Various options to reduce emissions are available. They range from governmental regulations to community action, technological innovation, adaptation, and behavioural change. The suggested solutions are similar to those suggested by developmental preservation (cf. below). Opinion documents usually present fairly generic ideas, such as 'increasing energy efficiency', 'energy from renewable sources', and 'technologies that emit little CO₂'. One source, though, notes that "Any responses to this crises that focus simply on technological solutions are bound to fail" (QEW, 2007, preface). Educational documents aimed at their own community mention more specific options and present 'tips' and 'success stories' of churches, individuals and companies. Religious communities take an active stance. "In the case of the environment, the church's leadership is absolutely mandatory. There is no other force left in our society that is able to say: Some things are more important than endless economic growth" (McKibben, 1999). National and regional topical networks and church associations organize public campaigns, releasing statements, attracting media attention and developing commercials, and influencing other actors by lobbying. They also organize workshops and prepare and distribute informational and educational materials on climate change and energy saving to local churches, so they can educate themselves and their members. They urge churches and religious leaders to set a good example. Interesting examples include national campaigns to replace congregations' light bulbs with energy efficient ones, such as 'How Many Jews Does It Take to Change a Light Bulb?', and religious green energy suppliers/campaigns, such as 'The Regeneration Project' and 'Interfaith Power and Light'.

3.1.4. Outcomes and fairness

Developed nations should reduce emissions and limit further climate change. Few sources related to conservational stewardship discuss fairness, however. Their position on, for instance, whether (and in what way) developing nations should contribute to limiting climate change is not as clear as in developmental preservation (see below). QEW (2007, article 2) notes that "Simple justice requires industrial nations, and the U.S. in particular, to take the first steps to slow global warming. . . . Let us begin to remove the plank from our own eye so we can see more clearly how to help our neighbors consider the speck of sawdust in theirs." This seems to imply some responsibility for developing nations in the long run. McKibben (1999) suggests that developed countries should enable developing countries to develop in a sustainable way: "And we need to spread those technologies abroad, with a giant program of international aid and cooperation, so that the developing nations do not follow our energy path."

3.2. Developmental stewardship

Core values in the developmental stewardship discourse reflect a human mission to use creation's resources to develop the world, and (related to this) care for the poor. Core beliefs are that climate change, its effects, and human influence on it are limited, and (implicitly, but related) temporally distant. Nature is seen as robust. Discourse on mankind is very positive, framing man as 'co-creator'. Strict climate policy is seen as a threat to development. An important implicit assumption – consistent with their core beliefs – is that climate change will not significantly hamper development.

3.2.1. Ideological view

Mankind's task is to "fill and subdue the earth" and to "turn the wilderness into a garden" (Spencer et al., 2005), referring to a more 'landscaped' view of this garden as compared with the view of conservational stewardship to keep the garden as it was created by God. Mankind is placed above nature and nature's role is to serve mankind. While mankind should take care of nature, "human beings come first in God's created order . . . And that primacy must be given to human beings and for human betterment. If that means that other parts of nature take a back seat, well then they take a back seat" (Land, 2006). Mankind is viewed as a 'co-creator' and human development and population growth are considered a blessing and mission, rather than a threat. God would not have created nature so fragile that mankind could easily destroy it, and God would not have intended healthy nature and human development to be incompatible: "Just as good engineers build multiple layers of protection into complex buildings and systems, so also the wise Creator has built multiple self-protecting and self-correcting layers into His world" and "The Noachic Covenant implies God's continuing preservation of the Earth . . . this ought to make Christians inherently sceptical of claims that this or that human action threatens permanent and catastrophic damage to the Earth" (Spencer et al., 2005).

3.2.2. Problem setting and goal searching

The leaders that present this discourse often display 'climate sceptical' views on climate change, arguing that climatic changes will be minor and largely due to natural causes, rather than large and due to human activities (for an overview of 'sceptical' climate discourse, see e.g. Antilla, 2005; Sudhakara Reddy and Assenza, 2009). As far as there is a problem, that problem is a lack of development of the poor, not the impacts of climate change. Developed nations are better able to adapt to climatic changes and weather extremes, and have more money to spend on the environment as well. Thus, "it matters little how well we mean, if what we do actually harms those we intend to help." (ISA, 2007). The problem is typically framed as follows: "Whether or not global warming is largely natural, (1) human efforts to stop it are largely futile; (2) whatever efforts we undertake to stem our small contributions to it would needlessly divert resources from much more beneficial uses; and (3) adaptation strategies for whatever slight warming does occur are much more sensible than costly but futile prevention strategies." (ISA, 2007).

3.2.3. Problem solving

The best way to cope with climate change, if any occurs at all, is to decrease vulnerability through economic development, adaptation, and technological innovation. "If the aim is to help the poor, what matters from the policy point of view is supporting the development process by which countries acquire greater ability to deal with adverse economic, climatic, and social conditions, regardless of cause." (Beisner et al., 2006). Richer nations have more resources to devote to improve environmental quality. Therefore sources note that stimulating economic development

would be beneficial for the environment as well. Others are more positive on the possibility of non-harmful emission-reduction policies: “Government tax and regulatory policies can foster more rapid emission reductions and air quality improvements by encouraging research and development” and “By exporting advanced technologies, developed nations would help developing countries improve their environmental quality and enable their people to become wealthier, healthier and safer. As a bonus, global greenhouse gas emissions would decline significantly.” (Spencer et al., 2005).

3.2.4. Outcomes and fairness

Drastic steps to prevent/limit further climate change will be very harmful to the poor, both in the US and in developing countries. “The Kyoto climate treaty and other ‘solutions’ would do almost nothing to stabilize greenhouse gases or reduce global warming. However, they would send energy prices soaring. In future cold snaps and heat waves, thousands could die, because heating and air conditioning would become unaffordable for many, especially minorities and the elderly” (Beisner and Lapin, 2004). Opponents of strict climate-policy note that they have the same motive for their perspectives: concern for the poor. However, they assert that limiting greenhouse gas emissions would slow economic growth and increase the cost of energy, ultimately resulting in increasing prices for other goods and services, including basic necessities. The wealthy can afford such increased costs, but the poor cannot – the burden would weigh most heavily on them. With respect to developing countries, any call for strict policy “asks the poor to give up or at least postpone their claims to modern technology that is essential for a better future for themselves and their children” (Beisner et al., 2006). This is described as a type of ‘eco-imperialism’. “Over two billion Africans, Asians and Latin Americans still do not have electricity, and activists tell them they must be content with wind generators, or little solar panels on their huts because fossil fuel plants would cause global warming, hydroelectric plants would dam up scenic rivers, and nuclear power is simply taboo” (Beisner and Lapin, 2004).

3.3. Developmental preservation

The developmental preservation discourse is similar to the conservational stewardship discourse except for that it holds a much more positive view on mankind. It presents a belief in (God-granted) human ingenuity and technological and entrepreneurial capacity to prevent conflicts between development and preservation. Climate policy should not hamper developing countries: the developed countries have the responsibility to take action. Views on the fragility of nature are not always made explicit, but can be described as considering nature as tolerant within limits. The approach this discourse takes to stewardship seems akin to a concept such as ‘ecosystem services’, although the term itself is not mentioned. As compared with conservational stewardship, developmental preservation seems much more appealing to political conservatives (while both discourses find support among political progressives). The recent evangelical initiatives mainly display this type of discourse.

3.3.1. Ideological view

Creation is ‘good’ and changing; progress and preservation should be combined. In this discourse, the value of solidarity comes to the fore. For instance, one source states: “Catholic teaching calls us to embrace the common good and the virtue of solidarity. The climate is a clear example of a good we hold in common. God embraces all of humanity: our well-being is tied to every other person. We have an obligation to respond charitably to those in need and seek justice for those without a voice.” (CCCC, 2008). There is a strong focus on ingenuity and progress: “Together, the

people of the world can, and must, use our God-given gifts to develop innovative strategies to meet the needs of all who currently dwell on this planet without compromising the ability of future generations to meet their own needs.” (JCPA, 1997).

3.3.2. Problem setting and goal searching

Climate change has strong negative consequences for particularly the poor, both at home and in developing nations. Impacts of climate change on developing nations are seen as morally unacceptable, for two reasons. Firstly, the developing nations are harmed, and receive the most severe impacts, through a problem that up till now is caused mostly by the developed nations (“do unto others. . .”). This appeals not only to harming others, but even stronger: to ‘the rich’ harming ‘the poor’. An occasional source adds to this that this harm is done in the process of becoming even richer. “Current North American energy-rich and overly consumptive lifestyles are being subsidized by the poor and by future generations” (RCA, 2008). Secondly, the statements remark that the developing nations are also the most vulnerable, and the least able to adapt to climate change. The United States bears a special responsibility: “Because of the blessings God has bestowed on our nation and the power it possesses, the United States bears a special responsibility in its stewardship of God’s creation to shape responses that serve the entire human family.” (CCCC, 2008).

3.3.3. Problem solving

Action on climate change is necessary and urgent, and certainly doable if we make the effort. Deadly impacts are already occurring and decisions we make today will fix the emissions for some time, due to the long life-expectancy of technologies. “Climate change is the latest evidence of our failure to exercise proper stewardship, and constitutes a critical opportunity for us to do better (Gen. 1:26–28)” (ECI, 2006). The proposed solutions are similar to those suggested by conservational stewardship. Politicians and companies are called upon to demonstrate vision and leadership on climate change. Those that do so are commended and referred to as examples of good practice. With regard to options for governmental action, recent initiatives point to ‘market based cost-effective mechanisms’, such as ‘cap-and-trade’, in particular. Proposals in Congress for cap-and-trade schemes are supported. Such schemes reduce emissions through “a business-friendly cap-and-trade program that would spur investments in energy efficiency and renewable energy, making our U.S. economy more efficient and reducing our dependence on foreign sources of energy” (EEN, 2005). The connection with energy dependence and national security is often made. Technology is seen as an important tool. In fact, “if our country does not invest in the new technologies, we are likely to be left in the technological development dust as other countries cash in on the boom” (Lewis and Carlyle, 2002). Developed countries should assist developing nations in developing in a sustainable way (‘authentic development’; USSCB, 2001) and in adapting to climate change. Some sources offer suggestions for people to personally contribute, such as fuel efficient and hybrid cars, efficient appliances and light bulbs, writing letters to politicians and business leaders, and influencing companies through shareholder initiatives. Examples of initiatives set up by religious groups include the “What Would Jesus Drive?” campaign and shareholders initiative “Interfaith Center on Corporate Responsibility”.

3.3.4. Outcomes and fairness

Developed nations are responsible for reducing greenhouse gas emissions. “In this situation, the United States has both responsibility and opportunity. With 4% of the world’s population, we have contributed 25% of the increased greenhouse gas concentration which causes global warming. Moreover, we uniquely possess

technological resources, economic power, and political influence to facilitate solutions” (NRPE, 2004). Climate policy should not inhibit the development of developing nations, as “Developing nations have a right to economic development that can help lift people out of dire poverty” (USCCB, 2001). Thus, “In seeking an appropriate balance between consumption and the equitable use of global resources, we need to make a distinction between the ‘luxury emissions’ of the rich and the ‘survival emissions’ of the poor. ‘From everyone to whom much has been given, much will be required’ (Luke 12:48)” (RCA, 2008). Many sources remark that poverty results in environmental degradation as well. Few sources discuss the consequences of climate policy for the poor in the United States itself. Of course, this could be related to their positive expectations regarding the economic effects of strict climate policy. An occasional source does suggest supporting the poor in their energy expenses, for instance by increasing funds for a Low Income Energy Assistance Program (Lewis and Carlyle, 2002).

4. Discussion

The present study analyzes the Christian voices in the US climate-change debate by examining published sources. This section reflects on the findings. Firstly, the similarities and differences among the observed discourses are outlined. Secondly, the timeline is discussed. Thirdly, the ways uncertainties are addressed in the discourses are investigated. Fourthly, it is assessed in what respects the religious voices studied differ from secular voices in the climate-change debate. And fifthly, the specific impact of these religious voices on this societal debate and on political decision-making is discussed.

4.1. Comparing the discourses

The three discourses use strikingly similar concepts and images. All three discourses describe God as being the owner of the world, and of nature. They regard mankind as stewards with the task of tending to “God’s garden”. Mankind should have gratitude for the ‘gift of creation’ and pass it on to future generations. However, the discourses employ very different interpretations of these concepts and images. For instance, conservational stewardship emphasizes that God created the earth as ‘good’ and mankind should preserve it in its original state. Developmental stewardship, on the contrary, emphasizes that mankind should turn the wilderness into a garden, or a ‘garden city’ – implying a much more cultivated/landscaped image of the garden. The discourses of conservational stewardship and developmental preservation are similar in their views on the problem and the goals. Both are ‘green’ religious discourses. However, important differences can be found in their portrayal of mankind and the relationship between man and nature, and their perspectives on the solutions. Conservational stewardship seems to hold much in common with mainstream environmental concerns, and even with ‘green romanticism’ (cf. Prelli and Winters, 2009). Developmental stewardship holds more in common with ‘sustainable development’ discourses and presents a narrative that seems much more appealing to political conservatives than does conservational stewardship.

Three specific ethical themes are at the forefront of the debate: the effects on nature, the implications for future generations (intergenerational equity), and the implications for the poor. They can be found in all three discourses. The most prominent issue in recent debates is the implications for the poor. It is emphasized in developmental stewardship and developmental preservation. Conservational stewardship particularly emphasizes effects on nature. Regarding implications for the poor, developmental preservation and – albeit to a lesser extent – conservational

stewardship are concerned about the impacts of climate change on the poor in developing countries and in the United States itself. Developmental stewardship is more concerned about the effects of climate policy on these poor. To some extent, these positions could be explained by whether groups believe that human-induced climate change is real and significant. However, proponents of strict policy also voice concerns regarding the effects of policy on the poor (most strongly in developmental preservation). Keeping the implications of climate policy on the poor in mind seems to be a common issue for all discourses. In addition, at least some sources in developmental stewardship seem to support development- and technology-oriented approaches to mitigation. Finally, assisting the poor in adapting to climate change is supported in all discourses, although few sources emphasize it.⁵

4.2. Timeline and priority

Climate change seems to have attracted considerable attention in the US Christian communities during the past few years. However, the topic is not new within these communities. Statements on climate change used in this study date back to the 1990s. An early example is a resolution by the American Baptist Churches USA (ABC, 1991). Evangelicals spoke out on environmental protection in general (EEN, 1994). More position and opinion materials appear over the late 1990s and early 2000s. Knickerbocker (1998) already describes climate change as an important part of theological teaching and activism for a growing number of clergy and congregations. What is remarkable regarding the past few years, however, is the emergence of a strong conservative evangelical climate discourse, with the ‘Call to Action’ in February 2006 (ECI, 2006) as a prominent event. The texts do not indicate a reason for this timing, but it is probably no coincidence that the increased attention arose shortly after Hurricane Katrina (August 2005). Still, Abbasi (2006) notes that religious communities have embraced climate change over varying time frames and that this process “just takes time”. It is not surprising that it would take more time among conservative evangelicals. Prelli and Winters (2009) suggest that evangelical support is likely to increase due to an ongoing generational shift. High media coverage on climate change during 2006⁶ and onwards (Boykoff, 2007; Boykoff and Mansfield, 2009) may have enhanced the success of this new discourse. And, as noted above, the discourse managed to reframe the topic of climate change in such a way that it is now appealing to religious conservatives.

Survey research indicates that climate change is considered a serious problem among US Christians (Pew Forum, 2006), but the weight relative to other issues is also relevant. A majority supports strict environmental regulations, even if this would cost jobs or result in higher prices (Green, 2004, 2008). In terms of voting priority, however, the environment ranks well below the economy and terrorism, but, for all but white evangelicals, higher than abortion and much higher than gay marriage (Pew Forum, 2004). Nearly half of US Christians report that their clergy address the environment; slightly less than gay marriage and less than

⁵ The reasons for this limited emphasis on adaptation could be rhetorical; sources aim to urge the US to increase emission-reduction efforts (or argue against these). However, other reasons could play a role as well. The World Council of Churches notes that their current ‘dual focus’ (both mitigation and adaptation) was not obvious: “To work on adaptation had been seen as a weakening of resolve on the possibilities of mitigation and hence a weakening of the WCC’s solidarity with victims” (Robra, 2006). Robra (2006) notes that conceptualizing the transition to a dual focus required collaboration with religious relief and development agencies, and that building these relationships “has not proceeded as quickly nor engaged as many agencies as had been initially hoped.”

⁶ Media coverage in 2006 peaked in March (e.g., US release of An Inconvenient Truth) and November (e.g., Stern Review, COP12, mid-term Congressional elections, prominent state-level actions) (Boykoff, 2007).

abortion, but more than evolution/intelligent design and stem cell research (Pew Forum, 2006).

4.3. Discourse on uncertainty

As noted in the introduction, complex and uncertain issues such as climate change raise many ethically charged questions. One of the key questions here is how to deal with uncertainties.

Most opinion documents that plea for stricter climate-policy emphasize certainty, rather than address uncertainty. Statements often start with the claim that there is scientific consensus on human-induced climate change and on its large and negative consequences. Interesting exceptions are groups such as the US Conference of Catholic Bishops (USCCB), which explicitly address uncertainty and connect it to its implications (cf. Wardekker et al., 2008). Uncertainty is placed in the context of a religious (or religiously inspired) frame: the 'virtue of prudence'. "Prudence is not, as popularly thought, simply a cautious and safe approach to decisions. Rather, it is a thoughtful, deliberate, and reasoned basis for taking or avoiding action to achieve a moral good" (USCCB, 2001). Pope Benedict XVI describes acting prudently as a discursive process: "being committed to making joint decisions after pondering responsibly the road to be taken" (CCCC, 2008).

Opponents of strict policy often emphasize uncertainty, arguing that a sufficient basis for strict policy is absent, while consequences of such policy would be significant. Some sources suggest that it is certain that human-induced, large and negative climatic changes and impacts will not occur. Instead of investing resources to prevent uncertain climate change, many opponents of strict climate-policy emphasize the importance of (economic) development. This can be regarded as a 'human development' approach to climate-change adaptation (cf. Dessai and van der Sluijs, 2007).

To support their claims, both parties refer to scientific reports, institutes, and scientists whom they consider reliable. Occasionally, sources stress the religious background of the latter, for instance, when scientists are claimed to belong to their group. In the recent debate, both groups have also actively formed coalitions with scientists.

4.4. Religious versus secular voices

From the analysis of 'religious' discourses in the climate-change debate identified in this paper, we can conclude that, particularly when expressing ideological views, religious imagery is dominant in these discourses. The religious discourses add a deeper dimension to the public debate on climate change, and seem to resonate with large audiences. This is what makes religious discourse powerful and an important object for study in the context of climate-policy analysis.

Still, many of the *arguments* put forward in the religious discourses figure in secular discourses as well: these arguments can be considered as generic (i.e. not specifically religious) ethical arguments. In most of the documents analyzed, it indeed appears difficult to distinguish religious from secular lines of reasoning.

From a deliberative democracy viewpoint, the question thus becomes relevant whether the political arguments put forward in the religious discourses are either *inspired* (considered allowed) or *justified* (considered problematic) by religion (cf. Shields, 2007). From this viewpoint, religious arguments should not be allowed to carry additional force in the (secular) debate that should remain pluralistic. This becomes even more pressing when dealing with absolutist (religious) positions: sometimes such positions are not allowed to enter the discourse, for those who put forth such opinions are not willing to criticize their own positions.

4.5. Impact on societal debate and political decision making

While it remains to be seen what effects these religious contributions to the public debate will have on climate policy in the United States, several clues for their potential influence can be found. The recent initiatives are attracting attention in the media and among scientists, corporations, NGOs, etc. Furthermore, the initiatives do not stand alone in their calls for stricter climate policy; in fact, the religious initiatives are actively forming coalitions with these other parties. Calls for stricter policy are emerging from many other sectors of society, ranging from state and city governments and national politics to corporations, farmers, and 'security hawks' (The Economist, 2007a,b). Coalitions are formed, including between 'unlikely' partners. For instance, Gunther (2006) reports on joint media campaigns by evangelicals, Fortune 500 companies, and the environmental movement. As such, the religious initiatives should not be seen in isolation, but as part as a larger societal debate on climate change, which has led to domestic pressures on the US government to participate more fully in international climate policy. In particular, religious environmental initiatives seem to be making environmental care more accessible to the conservative side of the political spectrum. Where the conventional environmental movement is strongly distrusted among evangelicals and conservatives, these church-based initiatives have reframed climate change from an environmental issue to a religious one. This new frame is much closer to their perceptions and way of life (cf. Nisbet and Mooney, 2007). In fact, religious environmental initiatives seem to take upon themselves roles similar to those of conventional environmental groups.

Opposition to strict climate policies can also be found among US Christian (and Jewish) groups. While they consider nature valuable, considerably more weight is given to mankind. This makes supporters of this 'developmental stewardship' discourse particularly unsupportive of policy proposals that are perceived to be detrimental to the poor. They may be less opposed to development-oriented proposals.

To conclude, the Christian voices in the US public debate on climate change have added to the societal support for climate-policy efforts. Progressive as well as conservative politicians can find support among their electorate for policy proposals aiming to limit climate change. Furthermore, while different worldviews can be distinguished among the Christian groups, common imagery and concerns are present as well. Potentially, these similarities could serve as bridging devices for bipartisan policy initiatives.

5. Conclusion

Over the past few years, the issue of climate change has received an increasing amount of attention within religious communities in the United States and in the rest of the world. Recent initiatives have attracted considerable attention in the media. Calls to politics to take more notice of the issue originate from a multitude of religious movements. In the United States, Christian groups play a prominent role. Some Christian opposition to these initiatives exists as well. Several US groups have organized counter-initiatives, criticizing religiously inspired advocacy of strict climate policy.

Within the diverse body of opinions and arguments that various Christian (and Jewish) groups put forth, three narratives ('religious discourses') can be discerned: 'conservational stewardship', 'developmental stewardship', and 'developmental preservation'. Each of these discourses presents a consistent storyline, using similar concepts, images and motives, but holding different interpretations of these.

Conservational stewardship holds that God created the earth as 'good', and that this 'garden of God' should be preserved as it was

created. Mankind is part of nature and has the sacred task to protect the earth. Climate change threatens creation and is therefore morally unacceptable. Change will be difficult, but it is urgent and each person and company should take small steps towards reaching this common goal. Religious communities take an active role, by setting an example, educating their members and lobbying.

Developmental stewardship places nature in a more serving position to mankind. Rather than preserving creation as it was created, mankind should turn the wilderness *into* a 'garden', as it should become. Strict climate policies will inhibit mankind from fulfilling this role, from developing and from reducing its burdens (poverty, disease, malnutrition, etc.). The poor, in the US and in developing countries, would have to bear the heaviest burdens of such policies. Rather, economic and technological development should be promoted, thus enhancing societies' capability to deal with environmental and other problems.

Developmental stewardship considers creation to be 'good' and changing. Progress and preservation should be combined, and God has granted mankind the creativity to find solutions. The poor will face the most severe impacts of a problem that the rich have created, while they are the most vulnerable and least able to adapt. Developed nations have the moral duty, as well as the opportunity, to prevent this. Various options are proposed, ranging from regulations to technology, adaptation and behavioural change. Recent initiatives favour cap-and-trade schemes in particular.

The religious voices in the US public debate on climate change emphasize the moral dimensions of the issue. Three ethical themes are at the forefront of the debate: the effects of human-induced climate change on nature (creation care; environmental/climate stewardship), the implications for future generations (care for one's children; intergenerational equity), and the implications for the poor (environmental justice; interregional equity among other things). Many recent initiatives stress the latter. Observing the religious discourses, a robust policy strategy (regarding support in US Christian communities) would have to pay careful attention to the effects of both climate change and climate policy on the poor in developing countries and the United States itself. Religious groups have added to the basis of societal support for both progressive and conservative politicians and the religious framings of climate change could contribute to bipartisan climate-policy efforts.

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Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at doi:10.1016/j.goenvcha.2009.07.008.

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