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## The Role of Informational Asymmetry in Interfaith Communication During Conflict: A Game Theoretical Approach

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### Abstract

*Interfaith dialogues are platforms to address the issues of common concern for different faiths and beliefs. In this article, we use game theory to draw attention to the tensions between representing one's community and reaching out to the 'other' side in pursuit of a common goal. We investigate the role of uncertainty and trust in interfaith communications, especially in times of political conflict. We propose four dynamic game models of incomplete information classified into two categories. Through our model, we find that even if one participant would prefer a scenario where the other party is cooperative while she herself remains defiant for reputational purposes, as long as she values a mutual solution/cooperation to mutual defection/conflict, the interfaith interaction will be more likely to be successful. Our models also show that the parties will be more tolerant of a 'defiant' looking behaviour if they believe they are dealing with a partner who is sincere and not prone to peer pressure, rather than one who cares more about his reputation than the communication itself. We demonstrate the findings of our models by using the case of the interfaith interactions during the Troubles Period in Northern Ireland.*

**Keywords:** *Interfaith dialogues; issues; concern; different faiths; interactions; troubles period; Northern Ireland*

### Introduction

Interfaith communication can be defined as the interactions between religious or political actors belonging to different traditions who communicate with interlocutors on a particular issue, recognizing the importance of the religious dimension in their interactions. Such communication can alter the opinions of the “other” and allow mutual understanding and respect to develop between parties (Laustsen & Waever, 2000). Parties to these sensitive interactions usually find that their decisions depend on the interlocutor's past, the expectations of the interlocutor's future behavior, and trust levels. In this article, we investigate the role of uncertainty about others' sincerity and trustworthiness in interfaith communication, especially in times of political conflict. We draw attention to the tensions between representing a community and reaching out to “the other side.” We offer a game-theoretical model of asymmetric information where players are unequal in terms of the information they have vis-à-vis each other's preferences over the possible outcomes of their interaction.

Scholars from various disciplines have written on the basic conditions for successful interfaith communication. Just to give some examples, King (2011:106) lists seven types of interreligious dialogue ranging from “official/institutional dialogue between or among elites chosen by their religions as official representatives” to “spiritual dialogue, in which one learns and engages in the

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spiritual practices of another religion.” Lederach (1995) and Gopin (2002) analyze interreligious communication within the context of religious peacebuilding. Focusing on the case of Sierra Leone, Day (2021) argues that interfaith initiatives are more successful when they build on shared cultural ties. Fletcher (2007) investigates interfaith dialogues from theological perspectives. Bender and Cadge (2006), Twiss (2018), and Riitaoja and Dervin (2014) have written at the intersection of the fields of sociology of religion, ethics, and education, respectively. There are also works that address the question of the ideal conditions for interfaith dialogue. Cornille (2013:30), for example, counts humility, commitment, interconnection and hospitality as epistemological requirements for interreligious dialogue. Cilliers (2002) states that justice, reconciliation, forgiveness and truth are the pillars of interfaith dialogue. Orton (2016) poses seven key questions for theory, policy and practice in interfaith dialogue, including “Who is involved?” “Who is missing?” and “What is the dialogue for?”

Overall, the literature on interfaith dialogue and its success rarely discusses the implications of the rationality assumption for interreligious interactions. One reason for this gap might be the belief that rational choice and optimization models are not deemed suitable for studying religion and religious behavior. Contrary to this belief, there are rational choice analyses of religion and secularization in the field. Habel and Grant (2013) use formal theory and simulations to explore “whether demand for religion and government increase in response to security risk”. Young (1997) has investigated how the rationality assumption is used and criticized in studies of religion. Iannaccone (1995: 79–81) has argued that the rational choice method has the virtue of unifying alternative intuitions and explanations. Excluding the rationality assumption prevents researchers from obtaining counterintuitive and engaging results. Iannaccone (1994:1205–1209) has also offered game-theoretical models to explain the competition among churches to expand their membership and demonstrates that the demands for strict loyalty and a rigid adherence to lifestyles these churches impose on their disciples solve problems of free-riding connected with benefiting from religious activities without paying the price. Similar to Iannaccone, in the field of evolutionary religious studies, Sosis and Alcorta (2003) find that costly signals of commitment solve the free-rider problem.

Such rational choice analyses of religion have not, for the most part, explored interfaith initiatives. Those that attempt to use a game theoretical approach to study these initiatives remain rather descriptive. One such example is Malik’s (2013) use of game theory metaphors to study the roots of “A Common Word Between Us,” an open letter from Muslim scholars to Christian leaders. The work that comes closest to our topic of interest is by Vüllers, who argues that “religious actors do interest-based calculations before working for peace” (2019:5) and finds that “representatives of a religious group will engage in formal peace activism if the costs are modest and their identity is threatened by a civil war” (2019: 16). The calculations Vüllers refers to would become a little more complicated under informational asymmetries in a game setting.

In an attempt to complement the works mentioned above, we aim to contribute to the interfaith communications literature by proposing a game model to advance alternative interpretations of interreligious communication cast as a strategic interaction. Our approach opens the door for modeling different priorities of the actors and contexts under which interfaith interactions happen. Not every actor engages in interfaith communication with pure communicative motives. Sometimes, these dialogues are expected to serve political ends and are used to signal commitment to one’s values, rather than reaching an agreement. The same reasoning and modeling can be applied to religious violence, competition among religious organizations, and the policymaking of religious actors including individuals, political parties, and states.



The game-theoretical model accentuates the strategic uncertainty dialogue participants face. As players, they must think about how others would respond when they cooperate and defect; their decisions depend on their expectations of how others will behave. A participant is less likely to engage in cooperation if this contradicts norms of the group, sect, or political party they belong to. If everyone else cooperates, some participants might actually prefer defection, being afraid of peer pressure or wanting to establish a reputation of commitment to their values and not giving in. They might think that if they cooperated and did not challenge the other actor, they would be targets of home-side criticism and face social exclusion. Thus, some interlocutors might prefer to be aligned with exclusive group norms in a dialogue, hurting the possibility of cooperative exchanges with the other. The game identifies strategic conditions that neutralize and outweigh such preferences that are not in the spirit of open and cooperative communications.

The game theoretical approach to interfaith communications—especially in the context of conflicts—assumes only a weak form of rationality; players' preferences over outcomes are consistent and transitive. Thus, here *rationality means consistency*—players have transitive preferences over the outcomes of the interactions and objectives they try to realize by joining interfaith dialogues. Instead of having an objective utility function quantifying agents' preferences and agents' choices of maximizing utility, the key is the consistency of choices as depending on consistent preference orderings. O'Neill (2001: 289) states that:

Rational choice theory refers to the general approach that parties pursue their material self-interest, pay attention to objective likelihoods and maximize their expectations in a conscious, calculated way. In fact, game-theoretical models do not necessarily belong to rational choice theory [...] the only vestige of 'rationality' required now is that players judge likelihoods and pursue goals, and this is a weak connection. Players' goals may be far from self-interest, and their probabilities may be quite unreasonable. [...] People's beliefs must be consistent; their actions must be consistent; and the two in combination must be consistent.

Under the assumption of consistency, the models can be usefully applied in research if they generate informative suggestions and interpretations vis-à-vis interfaith communications considered as strategic interactions.

Against this background, we do not argue that games perfectly correspond to reality. From the scientific realist angle, interfaith dialogues as described and observed constitute the reality; nothing else counts much (Devitt, 1997). We are after interpretations of reality, not explanations. Our view is centrally instrumentalist, and it represents an alternative to the scientific realist approach of providing objective explanations (Friedman, 1953). In other words, our game model is highly idealized. The game rules about players and their preferences, sequences of moves, and information conditions can be considered much like physicists' frictionless planes and surfaces (Cartwright, 2010). Like many game theorists, we assume preferences without exploring their cultural and personal origins—no such goal is feasible in an article-length study. The main feature of the game is simply rigor. The model aims to generate interpretations and further questions with the goal of better understanding interfaith communication, especially considering the different possible motives of the actors.

We deduce equilibria from assumed rules, implying the most logical responses of players in their interaction. Hence, one must read the equilibria and their interpretations of games as consequences limited by the requirements of the mathematical tractability and a condition of weak rationality. The perfect Bayesian equilibria of the games represent how agents make choices based on their preferences under conditions of limited information. Limited or asymmetric information refers to an

interlocutor's uncertainty about the other's sincerity in conducting a dialogue —namely, the other's preference orderings over the outcomes of the interaction.

### **Information Asymmetry in Interreligious Interactions During Conflict**

In strategic interactions, including interfaith ones, interlocutors calculate how much they will concede partly based on their perception of how sincere and committed their counterparts are. Participants usually prioritize survival of their own religious and cultural system (Geertz, 1973). Hence, interfaith dialogues can be troubling for some actors who might think that such interactions will compromise their religious views and social standing. A group member's participation in an interfaith interaction may thus be seen as a breach within a community of the common understanding of "the other" and legitimacy of the other's views (Scott, 2000: 823).

The participants in interfaith interactions indeed operate under different conditions and may have different goals. Ideally, the participants in interfaith dialogue would aim to understand each other, develop relationships of mutual respect and transform their own beliefs in the pursuit of an "ultimate reality" (Neufeldt, 2011: 349). However, some interfaith interactions, which Kolvenbach and Pittau (1999) have called "doctrinal assertive dialogues," might aim at proselytization without the intention of engaging with the other faith on equal footing. The goal of interfaith behavior can also change over time. Takim (2004: 345), for example, draws attention to how increased dialogue and interaction between Muslims and Christians since 9/11 "represents a significant paradigm shift, a shift from attempts at 'conversion of' to [...] a 'conversation with' the other."

According to Iannaccone (1995), religious goods satisfy the spiritual needs and demands of religious consumers. In this sense, interfaith dialogues constitute markets of exchange where principles of supply and demand apply. Naturally, these goods mean different things to different agents interacting with each other. For example, Putnam's (1988) two-level games could be applied to religious leaders' efforts to balance the demands of their community and the need to communicate and work with the representatives of other religious groups. For the outsider, it might be challenging to understand the constraints, perspectives and different personalities within a faith group. In this context, our game theoretical model's central motive is to incorporate informational asymmetries in interfaith communications, which existing studies of interreligious communication have so far not done.

Uncertainties and suspicion in interfaith communications become even more prevalent in conflict settings. Not every actor who participates in interfaith communication has pure intentions to reach out and come to a compromise. In her review of religion, peacebuilding and interreligious communication, Kadayifci-Orellana (2013: 162) notes that "during times of conflict, mutual distrust makes any interaction with the 'other' suspicious." Abu Nimer and colleagues (2007: 67) warn that—especially in conflict settings where there is asymmetric power distribution, like in Israel–Palestine—interfaith meetings can be "perceived as another forum serving majority and cultural domination." Political conflicts can hinder trust between religious communities and leaders. Bunza (2016) states that "the complex nature of the country [Nigeria] in terms of ethnic, tribal, and regional composition, coupled with the political and economic rivalry among these regions and tribes" created conditions of mistrust and prevented effective interreligious (Muslim–Christian) initiatives.

Similarly, Perica (2001: 58–61) notes that the suspicion between the Serbian Orthodox Church and the Croatian Catholic Church, coupled with the nationalist ideologies associated with each church, prevented them from forging a long-lasting alliance against their common enemy, communism. There may also be a tension between "the demands of political activism (in which it may be desirable to

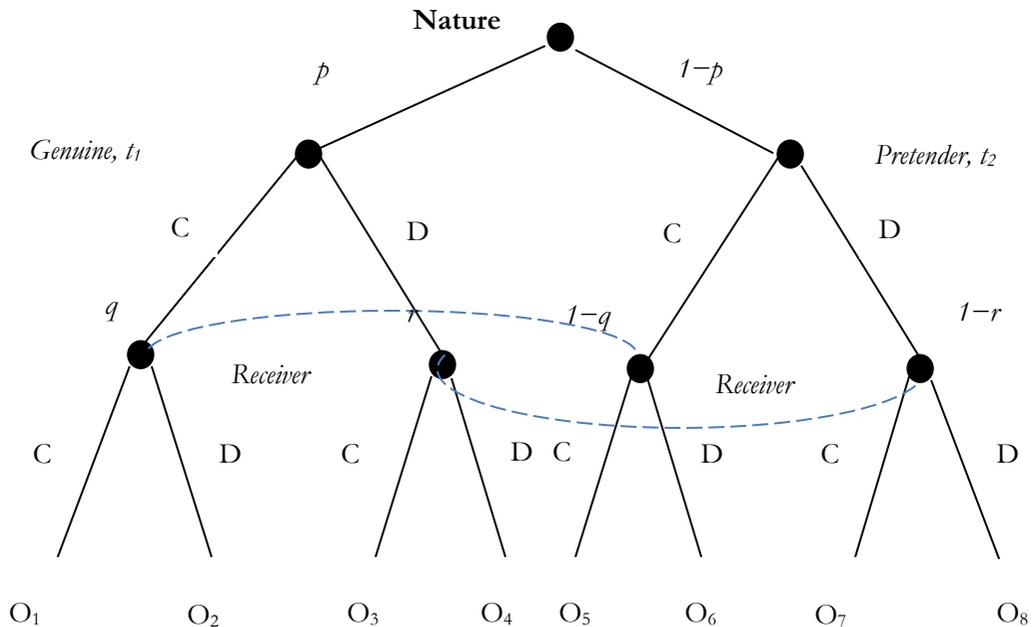


minimize difference with potential allies) and religious recruitment (which may require the magnification of differences)” (Jelen, 2001:21). This tension has been the concern of religious and political actors, who might consider joining interfaith or ecumenical initiatives, yet end up not doing so due to the fear of negative reaction from their own communities.

Religious communities are socially constructed entities with rules and related practices. In this spirit, religious leaders vary in their boundaries and sensitivities. Haddad and Fischbach (2015: 433), for example, in their study of interfaith dialogue in Lebanon, emphasize that “religious leaders in Lebanon have first and foremost an interest in preserving clear boundaries for their communities.” With a desire to protect such boundaries, the participant would be concerned about striking a balance between being involved in a genuine dialogue with representatives of different religions and accountability to fellow followers of the religion. The participant might “pretend” that they are interested in communications with others and then instrumentally use these interfaith interactions to solidify their standing and further their goals in their own religious community. Therefore, in our particular game, we take into account the possibility of both motives—namely, a genuine desire to cooperate with the other toward achieving a goal, or pretending that the participant is interested in communications, only to use the interactions for instrumental motives and rather than a desire to understand and work with the partner. Once again, this is a critical distinction that has not been studied in the relevant literature, and through our modeling, we are working toward filling this gap.

### An Interfaith Asymmetric Information Game

Figure 1. The Game Tree



The game stylizes interactions between participants in an instance of interfaith communication. It simplifies the reality of participants who can choose numerous moves by modeling only two players having two actions at their disposal. **The Sender** starts the dialogue by selecting either cooperation or defection. **The Receiver** reacts to the Sender with either defection or cooperation. The sequence

of moves leads to four categories of outcomes: 1) the Sender and the Receiver cooperate, generating the outcome of mutual cooperation; 2) the Sender cooperates but the Receiver does not (which indicates the unilateral cooperation and commitment of the Sender); 3) the Sender defects but the Receiver cooperates (which indicates the unilateral cooperation and commitment of the Receiver), and; 4) the Sender and the Receiver defect leading to the outcome of mutual defection. The game ends when each player takes an action, and an outcome is reached.

### Informational Asymmetry

The game assumes the existence of two sets of people involved in the dialogue. The first set of actors sincerely care about cooperation and a genuine exchange of views. The second set mostly cares about political gains and establishing a reputation of being inflexible (to reiterate/signal their commitment to their religious/political values). The Receiver and the Genuine Sender (**the Genuine**) come from the first set, as represented in different faith traditions. The Sender with ulterior political motives (**the Pretender**) belongs to the second set.

The game presents an informational asymmetry based on this division. The Receiver observes the Sender's cooperation or defection but is uncertain whether the cooperation or defection reflects the action of the Genuine or Pretender version of the Sender. She knows that the Sender's cooperation does not prove that he is, in fact, genuine. If she reciprocates the Sender's cooperation, she might also reach an understanding with the Pretender, even with the Pretender's ulterior motives. Thus, the Receiver does not know what exact outcome the Sender prefers in the interaction, making her open to the Sender's manipulations. Both the Genuine and the Pretender know the Receiver's preferences over the outcomes of the interaction. The Receiver is well informed that both the Genuine and the Pretender are informed of her preferences and her limited information.

What can the Receiver do to prevent being cheated by the Sender? She can try to decipher the Sender's move to assess whether she is facing the Genuine or the Pretender based on her beliefs about the Sender's preferences. The Receiver is assumed to entertain such beliefs before she observes the Sender's move, yet these beliefs in the form of likelihoods remain unchanged after her observation. If, for example, the Receiver believes that she is facing the Pretender or the Genuine with an 80 percent and a 20 percent chance, respectively, before the Sender moves, then the Receiver will continue to hold the belief that she is interacting with the Pretender or the Genuine with the same respective chances after she observes cooperation or defection by the Sender.

This means that priors are equal to posteriors per game theory jargon. If both types choose C, then the Receiver's information set is reached via two distinct paths. Nature picks the Sender Type 1 with probability  $p$  and the Type 1 chooses C by certainty. Hence, we have  $p$  as the likelihood of the first path. Similarly, the second path's probability is the multiplication of  $1-p$  and the likelihood of the Type 2's choice of C by certainty. The Receiver's belief that she is at the left node of her information set is the ratio  $\frac{p \cdot 1}{p \cdot 1 + (1-p) \cdot 1} = p = q$ . The Receiver's belief that she is at the right node of her

information set then becomes  $1 - q = \frac{(1-p) \cdot 1}{(1-p) \cdot 1 + (p) \cdot 1} = 1 - p$ .

### Strategies

The Sender and the Receiver have four strategies in their mutual communications. The Sender's strategies are as follows: "cooperate regardless of what my preferences are," "cooperate if I am the Genuine, defect if I am the Pretender," "defect if I am the Genuine, cooperate if I am the Pretender,"



and “defect regardless of what my preferences are—that is, regardless of whether I am the Genuine or the Pretender.” The Receiver does not condition her strategies upon her type. The strategies of the Receiver are “cooperate regardless of the Sender’s action,” “cooperate if the Sender cooperates and defect if the Sender defects,” “defect if the Sender cooperates and cooperate if the Sender defects,” and “defect regardless of the Sender’s action.”

The Sender strategies of “cooperate regardless of what my preferences are” and “defect regardless of what my preferences are” are labeled “pooling” because each type of Sender takes the same action. The Sender’s strategies of “cooperate if I am Genuine, defect if I am Pretender” and “defect if I am Genuine, cooperate if I am Pretender” are labeled “separating” because they prescribe different actions for each type.

## Payoffs

Payoffs quantify interlocutors’ preferences over the outcomes. Where do these preferences come from? A general reply is that they “emerge from social interactions in defending and opposing different ways of life; shared values legitimating different patterns of social practices” (Wildavsky 1987: 5). In an interaction, they measure players’ concerns about being marginalized and excluded by their communities while they are communicating with participants of other faiths in pursuit of common goals. These concerns ultimately relate to the interlocutors’ social environments formed on their inclinations to interact with people and assessments of how people interact with them (Wildavsky 1987: 5). If one defects, this common pursuit with the other community is sacrificed to the concern of acceptance by co-religionists. If one “cooperates,” one takes the risk of being criticized or excluded by one’s own community but takes a step toward the common goal in cooperation with the other communities. Or, in Thomas Schelling’s words, one obtains the value of a “meeting of minds” and “shared clues” (Schelling, 1960: 96).

The game contains eight outcomes: the first four stem from the actions of the Genuine and the other four result from the actions of the Pretender. This appraisal implies that there are  $4! = 24$  possible preference orderings for each type of the Sender and  $8! = 40,320$  orderings for the Receiver who evaluates, for example, whether mutual cooperation with the Genuine is preferable to mutual cooperation with the Pretender, and whether her unilateral defection in interacting with the Pretender is more valuable than the one in interacting with the Genuine and so on. To deal with this complexity, we will make preference assumptions based on players’ ideas stemming from their presupposed prior experiences during the interaction since we cannot address each of these preference orderings.

## Equilibria

Equilibria of asymmetric information games are labeled “Bayesian” because the uninformed player updates her beliefs via Bayes’ rule about the type of player who moves first. There are four possible perfect Bayesian equilibria in the game. They are (1) “pooling on cooperation” where the player with superior information takes the same action so that both types cooperate; (2) “pooling on defection,” which means that both types defect; (3) “separation” with the Genuine playing cooperation and the Pretender playing defection; and (4) “separation” with the Genuine playing defection and the Pretender cooperation (Gibbons, 1992: 186).

## Pooling on Cooperation

Suppose that both the Genuine and the Pretender cooperate. The Receiver relies on her initial beliefs about the preferences of the Sender, as she gets no additional information about exactly which type

has cooperated. Her initial beliefs about the Sender's type remain unchanged. We first propose a set of preferences for the Receiver to support the equilibrium. We assume that the Receiver prefers to reciprocate cooperation observing the Sender's cooperation. The Receiver could respond with defection, but that would end the dialogue.

As a result of the Receiver's reciprocation, the Genuine and the Pretender receive the payoffs of mutual cooperation. These payoffs are not equal as the Genuine and the Pretender evaluate mutual cooperation differently. Hence, to determine whether both types are really willing to cooperate, we need to specify how the Receiver would respond to deviation from cooperation to defection by the Genuine and the Pretender. There would be no pooling equilibrium were the Receiver to respond to any deviation that benefits one or both of them.

If the Receiver reacts to defection by cooperation, then the Genuine and the Pretender respectively earn their payoffs emanating from the Receiver's unilateral cooperation. We assume that the Genuine assesses mutual cooperation with the Receiver as more valuable than the Receiver's unilateral cooperation. The priority of the Genuine is supposed to be mutual agreement and cooperation. Hence, the Genuine would not deviate from cooperation to defection. As for the Pretender, he prefers the Receiver's unilateral cooperation gesture to mutual cooperation because he can increase his reputation in his community of being a "tough participant who defends the community's faith and beliefs" who has successfully elicited a compromise from the other side. Thus, the Pretender would deviate from cooperation to defection, were the Receiver to cooperate.

However, if we assume that the Pretender prefers mutual cooperation to the Receiver's retaliation against defection, the Pretender will stick to cooperation. Why would the Pretender regard mutual cooperation as preferable to mutual defection? One possible answer is that the Pretender prefers mutual cooperation to mutual conflict at this stage to achieve bigger gains at a later stage. The Pretender might also think that mutual defection will be perceived as a gross failure among peers compared to the gain that would be derived from the unilateral cooperation of the Receiver. Therefore, the Receiver must reciprocate cooperation and retaliate by choosing defection against defection for both types to cooperate for the equilibrium to be established. Yet there is a problem: how would the Receiver know that the moves are coming from the Genuine or the Pretender?

The Receiver does not know whether defection comes from the Genuine or the Pretender when she observes defection. We assume that the spirit of dialogue prevails in the Receiver's mind when she believes that she is interacting with the Genuine. The Receiver would perceive the Genuine's defection as an exception to the norm, caused by extraordinary circumstances and would give him the benefit of the doubt. Thus, the Receiver prefers unilateral cooperation to mutual defection in her interaction with the Genuine. Yet if she believes that the defection is coming from the Pretender, she prefers to retaliate. She sees mutual defection as more rewarding and less costly than her unilateral cooperation in an encounter with the Pretender.

Which beliefs of the Receiver lead to her reaction to defect? The answer comes from the comparison of expected payoffs. The belief prompting the Receiver to retaliate is that it is somewhat unlikely that the defective move comes from the Genuine so that it is smaller than or equal to a specific ratio.<sup>3</sup>

Suppose that this belief condition is fulfilled. As the Receiver retaliates by choosing defection observing defection, the Genuine and Pretender obtain their mutual defection payoffs. The Genuine is assumed to prefer mutual cooperation to mutual conflict for the sake of a healthy dialogue, while

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<sup>3</sup> See Appendix 3 for the ratio and its computation from expected payoffs of the Receiver.



the Pretender evaluates mutual cooperation as more preferable than mutual defection. The peer pressure the Pretender faces is in the direction of establishing superiority over the Receiver, not in the perpetuation of conflict. The Pretender thinks that future rounds of communication may offer opportunities to recruit the Receiver's unilateral cooperation anew. The Pretender then has an incentive to deviate from defection to cooperation given that the Receiver retaliates. The result is a perfect Bayesian equilibrium: pooling on cooperation.

### **Pooling on Defection**

Let us suppose now that the Genuine and the Pretender both defect. The Receiver relies again on her initial beliefs about the Sender as she does not get any additional information about which type has defected. Her initial beliefs about whether she is interacting with the Genuine or the Pretender remain unchanged. We have already found that the Receiver's best response to defection is defection when her belief that defection comes from the Genuine is smaller than or equal to a specific ratio. If the Genuine moves to cooperation, the Receiver reciprocates as assumed. The Genuine then earns his cooperation payoff, which is higher than the payoff stemming from conflict with the Receiver. As a result, he prefers cooperation. The equilibrium then collapses.

If, however, the Receiver's belief that defection comes from the Genuine is higher than a specific ratio, then she still responds by cooperation. The Genuine is assumed to value mutual cooperation more than the Receiver's unilateral cooperation. Hence, he will deviate from defection to cooperation while the Pretender is happy with the unilateral cooperation of the Receiver. The pooling on defection equilibrium again collapses as the Genuine cooperates. Therefore, there is no pooling equilibrium in which both types defect.

### **Separation, with the Genuine Defecting and the Pretender Cooperating**

When the Genuine defects and the Pretender cooperates, then the Receiver becomes certain that the one who cooperates is the Pretender and the one that defects is the Genuine. The Pretender obtains his mutual cooperation payoff as the Receiver reciprocates his cooperation. If he deviates to defection, the outcome will be mutual defection, something he seeks to avoid. Hence, he has no incentive to leave his equilibrium action. Yet the Genuine would deviate. The Receiver prefers to cooperate when she is certain that she is interacting with the Genuine. Thus, the Genuine earns the value of the Receiver's unilateral cooperation. As the Genuine evaluates cooperation with the Receiver more than the Receiver's unilateral cooperation, the Genuine would deviate from defection to cooperation. Thus, there is no perfect separating Bayesian equilibrium where the Genuine defects and the Pretender cooperates.

### **Separation, with the Genuine Cooperating and the Pretender Defecting**

Similarly, when the Genuine cooperates and the Pretender defects, the Receiver becomes certain that the one who cooperates is the Genuine and the one that defects is the Pretender. As the Receiver prefers to reciprocate cooperation but retaliates against defection, the Genuine and the Pretender obtain their payoffs of mutual cooperation and mutual defection, respectively. It remains to check whether both the Genuine and the Pretender find their actions as optimal, given the replies of the Receiver. If the Pretender deviates to cooperation, then he obtains mutual cooperation, which he values more than mutual conflict. Thus, the Pretender has an incentive to deviate from defection to cooperation. As a result, there is no perfect separating Bayesian equilibrium where the Genuine cooperates and the Pretender defects.

## Interpretations

The game implies conditions for successful interfaith dialogues deriving largely from a Receiver and the Genuine who has genuine intentions to communicate and find solutions to existing problems. Yet, the Receiver's interest in reaching out to others by cooperation is limited. She defects if she believes that the Sender prefers her unilateral commitment to strengthen his own reputation in his faith group. The Pretender's preferences are pivotal here, as even a slight change in those preferences would open new doors, leading to alternative equilibria. The Pretender hides his true intentions and waits for another round where he might reach his objective if the Receiver's unilateral cooperation is obtained. The Pretender pushes his luck to dominate the Receiver by not settling down with the status quo. Having a strong faith in a mutual understanding, the Genuine values mutual cooperation as preferable to any other outcome—to the extent of shunning the Receiver's unilateral cooperation. The Pretender, while he has an incentive to “show off” to his community, regards mutual cooperation as a better option than a failure of the communication through a mutual defection. Under different circumstances than those modeled in this game, he could possibly prefer a mutual defection, generating a separating equilibrium.

Our game assumptions imply how changes in the Pretender's mindset during the dialogue can produce a cooperative, successful interaction. The Pretender, even taking into account his prospective political gain, must be at a point to prefer reciprocated cooperation to mutual defection for a successful interfaith dialogue to occur. Similar to the Receiver, such a Sender type must have a sense of the worth of mutual cooperation, even though he is interested in his own reputation; otherwise, if the Pretender prefers mutual defection to cooperation, then separation—with the Genuine choosing cooperation and the Pretender defection—becomes the only equilibrium. Thus, such a change in the Sender's preferences results in a shift in the equilibrium, implying a polarized communication with one group engaged in a genuine communication unlike the other.

More complicated interpretations are also possible. For example, one can evaluate cooperative moves either by the Genuine or the Receiver as related to motives of not being evaluated as selfish by others (Dana, Cain, & Dawes, 2006). Similar to the peer pressure, the Pretender is subject to, the Genuine and the Receiver might be coerced under group pressure to give in to cooperation. Thus, they might not genuinely care about the success of the dialogue, but they might be after a reputation of being collaborative.

We must also discuss the implications of the Receiver's belief threshold when she observes defection. The threshold gets progressively smaller and approaches zero if the Receiver evaluates the value of her unilateral cooperation and mutual defection in her interaction with the Pretender as being almost equivalent. In a sense, the Receiver does not evaluate these outcomes as being too different; they are almost equally attractive. Thus, under this condition and observing defection, the Receiver's inclination to think that defection emanates from the Pretender grows, prompting her retaliation. The Receiver's learning of the Sender's preferences during previous interactions or from other experiences is of utmost importance. The more often the Receiver encounters the Pretender and learns how participants in communication can pursue personal objectives rather than a genuine interfaith exchange, the smaller she will evaluate the difference between the value of mutual defection and that of a cooperative response to defection, and the more likely she will be to defect, with the belief that she is interacting with the Pretender.

The game provides valuable insights concerning interfaith dialogue, where participants remain uncertain about preferences. We have to decide which empirical traits can be evaluated as fruitful for



further work on interfaith dialogue. We cannot derive universal statements from only one game model or a finite number of observations, but we are interested in sharpening our perspectives on what venues and perspectives provide possibilities in interfaith communication. Nor do we claim that all interfaith dialogues are in harmony with the game and its equilibria we propose. One can tell different stories to direct and enrich understanding of the observed interactions, as different interpreters' interests and prior beliefs can yield alternative assessments. It is possible to change payoff assumptions and deduce new equilibria that can enrich our insights through alternative readings and interpretations.

Next, we provide snapshots from a prominent case study of interfaith interactions during conflict, complementing our model of interfaith communications regarding the role of intentions and trust.

### **Snapshots of Interfaith Communications During Conflict: Northern Ireland**

As a case study, we chose Northern Ireland against the backdrop of the “Troubles” from the late 1960s to the late 1990s. We do so since, despite a period of intense conflict and distrust, we could locate significant patterns of cooperation and interfaith communication that contributed to the 1998 Belfast Peace Agreement (Sandal, 2017). The “Troubles” is the name given to the period of intense conflict between the Loyalist segments (mostly Protestant) and the Republican segments (mostly Catholic) of the Northern Irish society between 1968 and 1998. The division arguably started in the early 17th century when Protestant colonists from Scotland and England took control over the local Gaelic and Catholic population and land. The Protestant community desired to keep the union with Britain whereas the Catholic population wanted autonomy. This dichotomy became especially violent, starting in the late 1960s and continuing until the 1998 Good Friday Agreement.

Although space limitations mean we cannot detail the causes and underlying dynamics of the conflict, scholars have pointed to competing ethnonational claims (McGarry and O’Leary, 1995), religious differences (Hickey, 1984; Bruce, 1994), colonialism (MacDonald, 1986) and economic inequality (Smith and Chambers, 1991) as possible sources for violence. The religious peacemaking efforts and communications in Northern Ireland were mostly “individualized” until the 1990s, in a manner where “personal motivation” interacted with “opportunities and constraints” on the ground (Brewer and Teeney, 2015: 3663).

Northern Ireland was not an easy environment to operate in as a peacemaker or a religious leader who wanted to engage in dialogue. Wells (2005: 11) notes that the level of distrust between the two communities was such that close to one-third of the Protestant adult male population in Northern Ireland were members of the Orange Order, which “requires adherents to strenuously oppose the fatal errors and doctrines of the church of Rome.” In his recounting of the famous interfaith relationship between the Fitzroy Presbyterian Church and the Clonard Ministry, Wells (2005) emphasizes the level of personal friendship and trust between the church leaders (Ken Newell and Gerry Reynolds) and how the leaders agreed early on to assume a long-term view, “not ask too much too soon of their peoples” (p. 51), and how “even in the hard times of discouragement [...] they would always keep trying” (p. 106).

The remarks by Newell and Reynolds exemplify senders and receivers who are genuinely interested in mutual cooperation. Yet they would not erase any element of suspicion each side might have had about each other Wells’ remark refers to. Given one-third of Protestants would likely reject any meaningful cooperation with the Catholics due to their belief system, this would affect how a Catholic leader would perceive any Protestant he might interact with. In general, when the two communities

are engaged in a dialogue through two representatives, one can assume that either side might have suspicions about their preferences. The model also explains the absence of any interfaith communication with some political actors, such as the evangelical Ian Paisley. During the initial years of the Troubles, Church of Ireland Bishop Richard Hanson (1973) cautioned that

“there are those in public life who style themselves ministers of religion and wear clerical collars, but who bring nothing of the message of religion to politics. They merely stand for a section of the Protestant community and only serve the identification with politics.”

Under these conditions, it was to be expected that dialogue attempts between Ian Paisley and mainstream church leaders would fail, as church leaders did not trust Rev. Paisley’s motives, and there was no common interest in sight that would make Ian Paisley prefer cooperation to mutual defection. Both Ian Paisley and the leaders of the four main churches (Roman Catholic, Church of Ireland, Presbyterian, and Methodist) like Richard Hanson signaled that they did not trust each other’s motives and there were no common interests between Paisley and the other church leaders to make any communication meaningful.

Even in the interactions among the four main churches and their leadership, given the tensions and theological divisions, it was expected that the religious leaders would be wary of how efforts at interfaith communication would be received. Norman Taggart (2004:94), former President of the Irish Council of Churches and the Methodist Church in Northern Ireland, once averred that the church leaders did not want to be seen as reaching out to the other side and expressing an opinion on societal issues during the initial years of the Troubles, because “it was felt that this was the most effective and appropriate way of proceeding in the circumstances, on account of the suspicion in which ecumenism was held.”

In such situations, as our model shows, looking tough becomes more important than sustained communications unless there are concrete common interests to work on. Hence, the initial successful examples of interdenominational cooperation during the Troubles—when religious leaders had yet to become familiar with each other’s communication styles in a tense period of conflict—included functional and politically less sensitive issues such as housing, unemployment, and economic development. In instances where the participants are not sure of each other’s motives and commitment levels, starting the communications with clear common goals will likely help even the leaders in the Pretender category who feel the need to consolidate their reputations within their own communities and lack an interest in a genuine understanding of the other.

Our model also maps out the balancing concerns about reaching out to the other versus remaining a representative of a tradition. “For generations,” Gallagher and Worrall (1982:202) say, “Protestants were taught that Roman Catholic theology and devotion are unscriptural” and “Roman Catholics have been taught that Protestants were contumacious heretics destined for hell.” In that sense, bold theological steps (despite the threat of protest from one’s own community) taken by the sides were well received and created trust, and there were attempts to reciprocate, as our model would predict. For example, Protestant churches in Northern Ireland felt a need to revisit their centuries-old doctrines after the Second Vatican Ecumenical Council (1962) affirmed that an individual could be saved, regardless of his or her religious status. Given that “theological Protestantism and anti-Catholicism can lay claim to a longer unbroken historical pedigree in Ulster than any other still-existent ideological rival” (Morrow, 1997), it was challenging for the Protestant faith leaders to eschew hostilities without compromising their own religious identity. The Presbyterian assembly challenged a core document of the tradition, the Westminster Confession of Faith (1646), which regarded the



Pope as “the Antichrist, the man of Sin, and the son of damnation.” Delegates argued that this interpretation was not manifestly evident in Scripture. John Dunlop (1993), former leader of the Presbyterian Church in Northern Ireland, in a later speech recognized the importance of the Second Ecumenical Vatican Council in creating trust across the denominations:

Since God cannot be privatized to only one of our two communities, or to the European Community of which our two countries are members, the challenge is to listen and speak across the frontiers and not to become the private chaplains of only one community. This has become easier since the end of Vatican II when the people in the churches are frequently now in frank discussion with one another.

In short, as the model shows, once actors see the genuine desire of the other side to reach out or to ameliorate relations, they are themselves more willing to engage in ambitious discussions and forgive instances of “defection” in individual interactions.

As the model also shows, for interfaith communications to succeed, the parties should either trust each other’s motives or have common interests that require them to cooperate. A particular threat to a faith tradition might come from another tradition or from the establishment of a secular public sphere that excludes religious doctrines. For example, Cardinal Cahal Daly of Northern Ireland once stated that secularism is “more anonymous and more subtle than either Nazism or Communism were” as a threat to faith (quoted in *The Irish Times*, 2000). This common “threat” posed by secularism fits into the model of what game theorists call “the dilemmas of common aversions,” when “actors with contingent strategies do not most prefer the same outcome but do agree there is at least one outcome that all want to avoid” (Stein, 1982:309). In other words, the leaders of two different faith traditions might cooperate to prevent a secular order from taking hold of the public sphere.

Obviously, not all interfaith arrangements aim to find faith-based solutions to replace secular arrangements. Some patterns of interreligious cooperation would fit better with “dilemmas of common interests,” in which all actors prefer a given outcome, such as environmental protection or eradication of hunger. One factor contributing to the consolidation of ecumenical activities and a more rigorous faith-based agenda of conflict resolution in Northern Ireland was the increasingly secular approach to public issues. The secular arrangements created competition by posing an alternative perspective for disillusioned members of society and endangered religious leaders’ prestige. Therefore, in several instances, religious leaders stated that their greatest concern was secularization rather than challenges posed by “the other.” Rev. Patrick McCafferty (1997) stated that

the opinions of anti-Catholic extremists do not reflect the beliefs of the vast majority of our Protestant fellow-Christians in Northern Ireland. We must be united in our common witness for the truth against the real enemy: the forces of nihilism, hedonism, secularism, and godlessness.

Although Northern Ireland's population retained its reputation as one of the most “religious” communities in Europe, the level of practice had fallen during the late 1980s and early 1990s (*Irish News*, 1991). Methodist President Norman Taggart (1998), for example, stated the importance of religion in the public sphere: “We today need relevant visions arising from our own circumstances. Political Protestant and political Catholics, secular Catholics and secular Protestants need to be truly converted to Christ.” The Bishop of Derry and Raphoe, James Mehaffey (1997), urged church leaders to take a more active role in stamping out sectarianism: “People will demand to know and to be informed. Advances in the information technology field will need to be matched by far greater

openness and by effective channels of information within the churches and outward to society.” Trevor Morrow (2000), Moderator of the Presbyterian Church, commented that a combination of consumerism and individualism meant the church is treated more like a restaurant or supermarket “than as an essential expression of a person’s identity.” The Catholic Bishop of Clogher, Joseph Duffy, and his Church of Ireland counterpart, Bishop Michael Jackson (both quoted in *Belfast Telegraph*, 2007), also stated that the Irish people needed to reassess their values, and holidays like Christmas provide an opportunity to do this. They claimed that “society has suffered due to a slide toward secularism, and there is currently great anxiety about a loss of the sacred” (ibid). As predicted by our model, such common goals as increasing the overall interest in religion can bring religious leaders together in interfaith initiatives even if they have no knowledge of each other’s levels of credibility and trustworthiness.

## Conclusion

Interfaith interactions involve asymmetric information, expectations, and levels of trust. Religious actors enter interreligious communication for different purposes as rational actors. We use two ideal types in our model: (1) a participant who is interacting with “the other” because he believes this is the right thing to do in pursuit of a common goal and is not vulnerable to pressure from his own community, and (2) a participant who interacts with the other but is highly influenced by reputational concerns and peer pressure, and wants to use interfaith communication to further his own political standing. Our model shows that a positive outcome is possible in both scenarios, although some outcomes are preferable to others in the long term. Although some of the insights -especially the ones related to reputational concerns- can be applied to other communications that involve ethnic and racial identity, the model we use is most helpful to further understand the dynamics of interfaith interactions.

According to our model, for interfaith communications to be successful, the participants must fulfill two criteria. First, religious actors should clearly prefer mutual cooperation to mutual defection and conflict, which requires them to have a clear common goal. Even if one participant prefers a scenario where the other party is cooperative while herself remaining defiant for reputational purposes, as long as she values a mutual solution/cooperation to mutual defection/conflict, the interfaith interaction will likely be successful.

Second, trust matters. The parties will be more tolerant of defiant-looking behavior if they believe they are dealing with a partner who is sincere and not prone to peer pressure, rather than one who cares more about his reputation than the communication itself. That is why it is critical for parties to the interfaith interaction to convey their genuine interest in dialogue and make clear that they are not vulnerable to external pressure. Bishop Cahal Daly (1989) once recommended that “Catholic seminarians and Protestant candidates for the ordained ministry should have opportunities for joint contact and discussion and, where possible, shared sessions and seminars.” Such points of contact and iterated interactions can help with successful interfaith communications and interactions even in times of conflict.

In this study, we modeled a particular type of interfaith interaction and we do not claim that our model’s insights are relevant to every single interfaith scenario. There has been no scholarly attempt to systematically model different interfaith communication scenarios. Therefore, to our knowledge, this is one of the very first steps toward understanding the parameters of interreligious interactions. Although game theory is used in almost every sphere of international relations theory and political science, it is surprisingly underutilized when it comes to interfaith communication. Further



development of research and models will be helpful to understand interfaith interactions under additional constraints and conditions. We encourage taking more advantage of the game theoretical models to investigate dynamics of cooperation and conflict among the religious actors. Future research agenda in this respect should address the multiple reasons why religious actors -with various priorities and values- participate in organizations, rituals, and other initiatives with insights into their concerns and interests. Interfaith communications, as this paper has shown, will continue to be a topic of interest for future scholars of game theory. Any investigation that includes religious leaders' and organizations' public relations concerns can also be part of this research agenda.

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## Appendix 1

### *Pooling on Cooperation*

If  $rU^R(O_4) + (1-r)U^R(O_8) \geq rU^R(O_3) + (1-r)U^R(O_7)$ , playing D is optimal for the Receiver observing D. If we solve the inequality for  $r$  under these assumptions, we obtain the Receiver's belief condition to play D following D:

$$r \leq \frac{U^R(O_8) - U^R(O_7)}{U^R(O_8) - U^R(O_7) + U^R(O_3) - U^R(O_4)}.$$

Assume that  $r$  satisfies the above weak inequality condition. As the Receiver plays D against D under this condition, the Genuine obtains  $U^1(O_4)$  and the Pretender obtains  $U^2(O_8)$  if both types shift from C to D. We assume that  $U^1(O_1) > U^1(O_4)$  and  $U^2(O_5) > U^2(O_8)$ . Therefore, we obtain a perfect Bayesian equilibrium pooling on cooperation denoted as:

$$[\{C, C\}, \{C, D\}; r \leq \frac{U^R(O_8) - U^R(O_7)}{U^R(O_8) - U^R(O_7) + U^R(O_3) - U^R(O_4)}]$$

### *Pooling on Defection*

Suppose that both types defect. Bayes' rule implies that  $r = p$ . We have already found that the Receiver's optimal response to defection is defection if:

$$r \leq \frac{U^R(O_8) - U^R(O_7)}{U^R(O_8) - U^R(O_7) + U^R(O_3) - U^R(O_4)}$$

Suppose that the belief condition holds. Thus, the Genuine obtains  $U^1(O_4)$  and the Pretender obtains  $U^2(O_8)$ . If the Genuine deviates to C, the Receiver responds by C, therefore earning  $U^1(O_1)$ . We have  $U^1(O_1) > U^1(O_4)$  by assumption. So, there is no pooling equilibrium in which the Sender plays  $\{D, D\}$ . However, if  $r \geq \frac{U^R(O_8) - U^R(O_7)}{U^R(O_8) - U^R(O_7) + U^R(O_3) - U^R(O_4)}$ , so that the Receiver responds to defection with cooperation, the Genuine obtains  $U^1(O_3)$ . Given assumption  $U^1(O_1) > U^1(O_3)$ , the Genuine has an incentive to deviate from D to C. Consequently, there is no pooling on D equilibrium.

