

Communicative Structure and the Emergence of Armed Conflict

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Dissertation submitted in partial fulfillment of  
the requirements for the degree of Doctor  
of Philosophy in the Department of  
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ABSTRACT

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## Abstract

The goal of this dissertation is to provide a logically coherent and empirically grounded account of the relationships between collective communication, collective loyalties, and collective violence. Drawing on research from an array of disciplines, ranging from psychology to economics and sociology, I develop a new theoretical framework that I term “communicative structuralism.” The central claim of this framework is that the communicative processes upon which the formation of collective identities and loyalties are based are *structurally constrained* in systematic ways. More specifically, it claims that *public communicative structures*, those which transmit synchronized messages and thus generate joint awareness of those messages amongst a collective audience, are central to the development of national, sub-national, and transnational symbolic allegiances because they create communities of shared experience and thereby generate symbolic touchstones which allow individuals to feel connected to a seemingly unified moral community.

To test this theory, I collect data on the structural properties of the most prominent public communicative structures in the contemporary state system – those constituted by the mass media networks of newspapers, radios, and televisions – in 177 countries for the period 1945 – 1999. I then use this data to test the implications of the theory at two separate levels of analysis: (1) at the individual level the theory is tested using cross-national survey data on media exposure and state allegiance from over 30,000 respondents in 38 countries, and (2) at the state level the theory is tested using cross-national time-series data on civil conflict, identity fragmentation, and regime stability. In each case, the central finding is that

mass media structures are fundamentally involved in generating the conditions for the formation of collective audiences (that is, audiences which are composed of members who are jointly aware of themselves as a collective). The dissertation demonstrates that such collective audiences, when constituted on a national scale by dense public communicative structures (i.e. mass media), make individuals more inclined to feel affective attachments to their country, and reduce the propensity to sociopolitical fragmentation thereby lessening the risk of large-scale civil conflict. In making this demonstration, the dissertation attempts to triangulate through the use of a wide variety of quantitative techniques, including multilevel hierarchical linear models, structural equation models, non-parametric tests of predictive accuracy, Bayesian model averaging, social network analysis, and agent-based computational simulations. I also ground the analysis in careful qualitative process-tracing of the disintegration of the Yugoslavian federation.

# Contents

<b>Abstract .....</b>	<b>iv</b>
<b>List of Tables.....</b>	<b>ix</b>
<b>List of Figures .....</b>	<b>x</b>
<b>Chapter 1. Introduction.....</b>	<b>1</b>
1.1 Preface: A Brief Comment on Levels of Analysis .....	1
1.2 Media Narratives and the Disintegration of Yugoslavia .....	7
1.3 Mechanisms: Ancient Hatreds vs. Elite Manipulation.....	12
1.4 Symbolic Security Dilemmas .....	15
1.5 An Alternative Account of Yugoslavia’s Disintegration .....	19
1.5.1 The Monopolization of Media Structures .....	20
1.5.2 The Segregation of Public Arenas .....	24
1.5.3 Media Density and the Vulnerability to Fragmentation.....	31
<b>Chapter 2. A Theory of Communicative Structuralism .....</b>	<b>35</b>
2.1 Introduction .....	35
2.2 Private Social Networks and the Micro-Genesis of Culture .....	39
2.3 Communication and Intersubjectivity .....	47
2.3.1 Intersubjectivity as Common Knowledge .....	48
2.3.2 Intersubjectivity as Collective Knowledge .....	53
2.3.3 Communication as Intersubjective Accomplishment.....	57
2.3.4 The Obelisk and the Crowd .....	62
2.4 Public Communication and the Macro-Genesis of Culture .....	65
2.4.1 Public Communicative Structures .....	66
2.4.2 The Speaker and the Audience .....	71

2.4.3 Subjectivity, Intersubjectivity, and the Constitution of Groups .....	75
2.5 Communication, Conflict, and Political Stability.....	78
2.5.1 Communicative Power and Structural Strength .....	81
2.5.2 Intersubjective Inference and Collective Violence .....	85
2.6 Moving Forward .....	86
<b>Chapter 3. Mass Communication and Mass Mobilization: An Agent-Based Model of Sociopolitical Fragmentation.....</b>	<b>90</b>
3.1 Introduction .....	90
3.2 Agent-Based Models.....	92
3.3 Simulating Loyalty Fragmentation.....	97
3.4 Results .....	112
3.5 Discussion .....	119
<b>Chapter 4. Mass Media Structure and the Micro-Logic of National Attachments.....</b>	<b>123</b>
4.1 Introduction .....	123
4.2 Media Effects: Subjective Attitudes .....	125
4.3 Media Effects: Sociotropic Judgements .....	129
4.4 Theories of Group Loyalty .....	134
4.5 Communicative Structuralism Revisited .....	138
4.6 Data and Methods.....	143
4.7 Results .....	151
4.8 Discussion .....	156
<b>Chapter 5. Mass Media Structure, Economic Development, and the Emergence of Civil Conflict.....</b>	<b>159</b>
5.1 Introduction .....	159
5.2 Structural Causes of Civil Conflict .....	165

5.3 Nationalism and the Structures of Mass Communication .....	168
5.4 Communicative Structuralism Revisited .....	171
5.5 Mass Media and National Fragmentation .....	175
5.6 Empirical Tests .....	177
5.6.1 Data and Methods .....	177
5.6.2 Main Models.....	180
5.6.3 Media Density vs. Economic Development .....	182
5.6.4 Testing Alternative Specifications .....	186
5.6.5 Testing the Causal Mechanism .....	190
5.6.6 Structural Bias and Conflict Type.....	194
5.6.7 Structural Bias and Media Freedom.....	200
5.7 Discussion .....	206
<b>Chapter 6. Conclusion .....</b>	<b>208</b>
<b>References .....</b>	<b>214</b>
<b>Biography.....</b>	<b>232</b>

## List of Tables

Table 1: Network Statistics.....	105
Table 2: Survey Data Availability, By Country .....	147
Table 3: HLM – Individual-Level Effects.....	152
Table 4: HLM – Cross-Level Interactions .....	153
Table 5: Logit Regressions - Civil War Onset.....	181
Table 6: Civil War Structural Equation Models .....	192
Table 7: Secessionist vs. Centrist Civil Wars .....	198
Table 8: Media Freedom and Civil War .....	204

## List of Figures

Figure 1: Media Density vs. Severity of Violence .....	33
Figure 2: Nested Levels of Loyalty Aggregation .....	80
Figure 3: Lattice Topology .....	100
Figure 4: Circular Network.....	101
Figure 5: ABM - Attitudes vs. Convictions .....	114
Figure 6: ABM - A1 Homophylic Social Network.....	116
Figure 7: ABM - C1 Homophylic Social Network.....	117
Figure 8: ABM - Public Dimensionality .....	118
Figure 9: ABM - Size of Largest Group .....	120
Figure 10: ABM - Fractionalization .....	121
Figure 11: National Loyalty Histogram .....	144
Figure 12: Conditional Mass Media Effects .....	155
Figure 13: Civil Conflict - Substantive Effects.....	183
Figure 14: Civil Conflict - ROC Curves .....	185
Figure 15: Civil Conflict - Bayesian Model Averaging .....	188
Figure 16: Civil Conflict - Structural Equation Models.....	191
Figure 17: Secessionist vs. Centrist Civil Wars .....	199
Figure 18: Media Freedom Interactive Effects .....	205

# Chapter 1. Introduction

## **1.1 Preface: A Brief Comment on Levels of Analysis**

Not long ago, Kuhn (1962) noted the cyclical nature of scientific revolutions, centered on shifts in the paradigms that underlie progress during periods of so-called "normal science." Normal science was that slow, incremental, but progressive development of knowledge made possible through the sacralization of certain inviolable assumptions which formed the stable core of a mature and coherent science. Paradigms, then, are the shared assumptions, the theoretical scaffolding which allow sciences to reach towards ever greater heights of knowledge accumulation. But paradigms come in many forms. Some paradigms are clear, objective, and transparently visible. A set of assumptions open for all to see. Other paradigms, however, float invisibly below the surface, or more accurately one could say that they *are* the surface. They are the water which makes a swimming fish so consistently wet that it probably has no concept of either wet or dry. They are the assumptions, schemas, and categorical frameworks that we as political science do not recognize as 'wetness' despite the fact that they are deeply ingrained in our discourses and practices. The difficulty in challenging such a paradigm, hence, is that one must first manage to reveal the existence of the paradigm, to allow practitioners of political science to feel *wet*, before one can move on to the suggestion of alternatives.

That project necessarily begins with naming, the demarcation of those assumptions which students of both domestic and international politics have taken as

given in nearly every instance of their production of normal science. Fortunately, the most central of these assumptions, the paradigm that lies at the core of political science, has already been given a name: *methodological individualism*. It is the belief, some might say ideology, which holds that all valid and coherent social science explanations must at some level be reducible to the thoughts, intentions, and actions of individual humans (Little 1991). While at first glance this may seem to represent a relatively harmless presupposition on which to base the scientific study of the human species, it in fact stands in the way of progress that may be made by challenging this assumption from two directions; but more on that later.

First, note that by “reducible” I mean to communicate an epistemological rather than ontological claim. One phenomenon is ontologically reducible to another when the first is composed entirely and exclusively by instantiations of the second. In this sense, any claim of ontological irreducibility on the part of humans or any complex objects is absurd on its face. Humans could be accurately characterized as nothing more than a collection of cells, which could in turn be accurately characterized as nothing more than a collection of simple and complex molecules, and so on down the chain. The claim of methodological individualism, then, is certainly not for the ontological irreducibility of human individuals. The claim is epistemological. It is that our knowledge and understanding of human affairs will be maximized by theories which adhere to the core paradigmatic assumption of political science: that everything relevant and important about human interactions can be explained through narratives that at some atomic level are composed of individuals and their individual minds.

Note that this claim is not resolvable through direct reference to observable facts about the world. The claim concerns not the facts (ontology), but rather the narrative forms through which we come to explain and understand those facts. Methodological individualism is an epistemological claim for preference to be given to a particular *style* of causal narrative. And to be clear at the outset, that style has certainly generated substantial advantages for the study of the political interactions. Few reasonable observers could deny that the past few decades have witnessed dramatic increases in our knowledge and understanding of strategic interactions, bargaining procedures, relations of accountability, voter psychology, and a wide variety of other empirical domains which have progressed forward on the basis of the paradigmatic foundation provided by methodological individualism.

Indeed, mature sciences are usually, at some level, based on epistemological claims of irreducibility, narrative styles which demand focus on entities at particular levels of aggregation. Hence the physicist claims that all scientific causal theories are reducible to the fundamental constituents of matter and energy, but the chemist responds that important elements will be missed if we do not instead speak in terms of interactions between larger aggregate molecules, and the neuroscientist responds that brain activity can only be understood on the basis of even larger aggregates in the form of individual neurons or even neural pathways composed of thousands of neurons, and the psychologist responds that human attitudes and behavior must be explained through reference to mental states as properties of entire human minds, and the evolutionary ecologist responds that the dynamics of Earth's biosphere can only be understood in terms that aggregate an entire species or even an entire continent into the relevant objects of analysis. In each case, the claim is for the

epistemological superiority of a particular style of causal narrative; a superiority which is necessarily conditional on the nature of the questions that one wishes to answer.

Thus, when I say that the claim of irreducibility of human individualism can be challenged from two directions, I mean both from below and from above. From below, there is mounting neurological evidence that our image of the united and autonomous individual is a fiction which we use to maintain our own tenuous hold on the tensions of the human condition. In fact, substantial evidence indicates that various aspects of our selves are actively arrayed *against* each other, biases counterbalancing biases in a vast recursive network of associations. There are thus ample grounds on which to challenge methodological individualism from below, on the basis of neural sub-units whose ability to process independently of each other renders unitary stories incapable of accounting for an array of human behaviors which arise from the internal divisions which divide our selves against themselves (Sperber and Wilson 1986; Sperber 1996) .

While this represents a very promising path for future research to explore, it is not the path to be explored here. Instead, my challenge to methodological individualism is launched from above. The claim that a science of human collectives can exist, is simultaneously a claim that there exists an epistemological irreducibility to human collectives. That is, that certain relationships become visible only in the presence of narratives which incorporate factors which *cannot* be reduced to the intentions and beliefs of individual humans. The reason, which will be discussed in greater depth below, is that humans are unique in their ability to generate *intersubjective* mental states. The central claim of this dissertation is that the

intersubjective inferences upon which human collective loyalties are founded, are facilitated by external signs in the form of public messages which are powerful precisely because they constitute relations of *joint* awareness which cannot be reduced to the subjective mental states of individual humans. Just as certain properties, such as the balance of material power between states, cannot be reduced to the properties of individual units because they are necessarily properties of pairs or groups of units (states), so too the capability of intersubjective inference cannot be reduced to the capabilities of individual units because it is a capability which can only be held by pairs or groups of units (humans).

This is not to say that, at the end of the day, it is not some individual human brain which acts to raise the finger which creates the sign which creates the state of intersubjectivity between the members of a group, or that chemical events in the brains of each of those individuals are not responsible for the emergence of feelings of loyalty and cohesion. Just as the claim of the evolutionary biologist is not that there are no physical laws which underlie genetic interactions at the atomic level, but rather that epistemological advantages can be gained through the incorporation of higher-level concepts which despite their irreducibility to sub-atomic interactions nevertheless offer access to modes of understanding certain empirical patterns which would otherwise have remained inscrutable.

The goal of this dissertation is to provide a logically coherent and empirically grounded account of the relationship(s) between collective communication, collective loyalties, and collective violence. In contrast to the methodological individualism which has often (even if only implicitly) characterized these otherwise diverse fields of study, the alternative proposed here argues that a productive synthesis can be

achieved through the adoption of what I label a “structural” approach to the study of human communication and conflict. In doing so, I draw on a long tradition of structuralism in the social sciences that ranges from international relations (Waltz 1979), to comparative politics (Goodwin 2001), and sociology (Wickham-Crowley 1997).

As in other fields, Waltzian structuralism was rooted in the profound insight that scientific leverage over the difficult problems of human agency could be gained by abstracting away from the details of unit-level decision-making procedures, to focus instead on the structural arrangement of the units and the corresponding opportunities and constraints on action generated by such structural arrangements. However, in contrast to Waltz and many of his disciples who argued that the only valid form of structural theory was one which treated states as the relevant units of analysis and treated the international system as the relevant level of analysis, I argue that the principles of structuralism are valid at any level of aggregation, and that the question of which scale of reductionism to prioritize is one to be answered on the basis of productivity, not ideology.

As we will see in the following chapters, in the study of mass communication this call for a “structural” approach amounts to a claim that we should prioritize a style of causal narrative which abstracts away from the details of the contents of mass media messages, to focus instead on how the structural arrangement of the units (message senders and message receivers) creates systematic constraints on the generation of intersubjective mental states, which in turn generate constraints on the mobilization of collective loyalties and collective violence. That argument will be made in its full form in Chapter 2. In the remainder of this initial chapter, I

present a decidedly non-structural narrative of the role played by the mass media in the disintegration of the Federal Republic of Yugoslavia in the final decade of the twentieth century, followed by an analysis of the difficulties raised by such an account and the insights that might be gained from an expanded focus to communicative structure. The hope is that through the presentation of these competing narratives I can begin to reveal the 'wetness' of current approaches to the study of mass communication and collective violence before turning to a more complete articulation of my proposed alternative.

## ***1.2 Media Narratives and the Disintegration of Yugoslavia***

On April 24, 1987 Slobodan Milosevic traveled to Kosovo as the recently named head of the Serbian Communist Party in Yugoslavia, apparently for the express purpose of enflaming Serbian nationalist sentiments. Before a cheering crowd he pumped his fist and gave an impassioned battle cry to the Serbian nationalists:

"This is your land. These are your houses. Your meadows and gardens. Your memories. You shouldn't abandon your land just because it's difficult to live, because you are pressured by injustice and degradation. It was never part of the Serbian and Montenegrin character to give up in the face of obstacles, to demobilize when it's time to fight... You should stay here for the sake of your ancestors and descendants" (Silber and Little 1997, 38).

In this moment, the ethnic lines of 'Serbian character' were drawn and solidified with a discourse of ancient territorial ownership. The speech was carefully choreographed and planned to appear spontaneous (Silber and Little 1997, 39). It was then rebroadcast over and over again on statewide television, with the images skillfully manipulated to give the impression of a united 'Serbian' people who had

risen up impulsively and unanimously to spur on Milosevic's nationalist exhortations. Belgrade TV showed local Albanian police officers clubbing the Serbian crowd, conveniently omitting images of the nationalists stoning the police, all while repeatedly lionizing Milosevic's most memorable line: "From now on, no one has the right to beat you."

This pattern was repeated throughout 1988 as Milosevic toured the country holding "Meetings of Truth" (Silber and Little 1997, 58, 63). The meetings were massive rallies in which people were treated to repetitious barrages of nationalist propaganda. As with the Kosovo speech, they were carefully choreographed to give the impression that a wave of 'Serbian' unity was crashing through the country. People were bussed in from surrounding areas, state employees were forced to leave work to attend, and then the resulting crowds – paired with a virulent rhetoric of ethnic separatism – were broadcast nationwide through television and newspapers.

After the enormous success of the Kosovo campaign, the Serbian leadership realized that they could use the exact same principles to demonize other targets and mobilize the population in the directions that they deemed desirable.

"The Kosovo campaign ... of mass manipulation ... created a media model which was extended to embrace other targets of the Serbian leadership. It was a model which identified and stigmatized a national enemy, homogenized Serbs against this threat, and called for resistance" (Thompson 1994, 56).

In 1989 and 1990, the Serbian propaganda machine switched to targeting the Croats. Media images repeatedly stressed genocidal tendencies of the Croats, combined with graphic images from the ustaše concentration camps of World War II (Gagnon 1994/95, n. 58). According to the Serbian nationalist version of history, ustaše Croats aligned with the Nazi party had slaughtered thousands of Serbs in the 1940s, and they were now planning a repeat performance.

A particularly telling example of this rhetorical shift is provided by Verdery's account of the symbolic frames deployed by the media during the late 1980s while describing the unearthing of mass graves from World War II massacres:

"Initially the arguments aimed to rewrite the history of relations between the political categories "fascists" and "communists," both of whom had existed all over Yugoslavia's territory. These political terms gradually gave way, however, to the more territorially based ethnic terms—"Serb," "Croat," "Slovene," and "Muslim" ... All sides strove to transfigure anonymous skeletons into their own martyrs. Those skeletons then served in the historical revisionism by which new nationalist histories emerged for newly emerging states" (Verdery 1999, 101, 112).

The symbolic frames deployed within these news stories were neither accidental nor naïve. The battle was fundamentally symbolic. The fight was over the "categories" (or, equivalently, "dimensions") through which national politics would be imagined and contested.

As the Croatian leadership began to talk more openly about autonomy for the republic, a media campaign launched by the SDS (the Serbian nationalist party in Croatia) focused on the revival of *šahovnica* symbolism in Croatia. The checkerboard shield pattern, which had been used during Croatia's independence movement in the 1940s, was present during Tudjman's 1990 inauguration and was added to the uniforms of the Croatian police. In an ingenious symbolic manipulation, the SDS – guided by Belgrade – equated the symbol with World War II atrocities (which had now been conveniently redefined as 'ethnic' conflicts) and cited its reemergence as evidence of a coming wave of Croatian fascism and genocidal ambitions (Silber and Little 1997, 98).

When the first small-scale skirmishes occurred between Croatian police forces and the Krajina Serbs in the spring of 1991, Belgrade media accused Croatia of launching a "genocidal attack" on the Serbs. They went on to claim that this attack

was repulsed by a spontaneous uprising of the Serbian people (Silber and Little 1997, 102-103). In reality, the Krajina renegades had been covertly armed through the Belgrade regime. The attacks were purposely provoked by Serb militants seeking to draw Croatia into bloody guerilla war. Publicly however, the attacks were portrayed as "ethnic conflicts" resulting from centuries of "ancient hatreds" (Gagnon 1994/95, 156). When Croatia moved against the rebels militarily, the Serbian government claimed that Croatia was not just attacking individuals, it was attacking "the entire Serb nation" (Silber and Little 1997, 143). On September 30, the day of the Krajina Serb declaration autonomy from Croatia, the *Politika* newspaper (under the guidance of Belgrade) reported that "scenes from fifty years ago were repeated, when Croatian ustaše attacked the Serb people." The following day the headlines read: "The whole Serb people is attacked," and "1941 started with the same methods." Other papers were filled with rhetoric of "genocide" and "terror." One of the headlines from *Politika ekspres* read: "Protecting Serbs from vampirical ustaše" (Thompson 1994, 72-73). As the conflict escalated, repeated references were made to attacks on the "whole Serbian people" (Thompson 1994, 76). The symbolic frame of a unified Serbian ethnicity became the central organizing feature of the media coverage. Within this frame, an attack on a ragtag bunch of rebels in Croatia became the equivalent of an attack on "all of us."

On May 30, 1990 nationalist leader Franjo Tudjman was inaugurated as President of Croatia. After rapidly consolidating his control of Croatia's mass media, he proceeded to immediately launch a wildly xenophobic campaign of nationalist propaganda (Denitch 1996, 107). In Croatia, as in Serbia, the mass media were utilized to explicitly deploy and reify the symbolic frame of 'ethnicity' as the sole

relevant dimension of political and social life. Or, as Tomislav Marcinko, editor-in-chief of news programs at HRT put it, "At HTV we frankly supported the defense of Croat ethnic and historical space" (quoted in Thompson 1994, 156). That was putting it somewhat mildly. In 1991, explicit presidential directives were issued instructing the media to frame the conflict in categorically ethnic terms. Opposition forces were to be referred to only as "Serb terrorists," the Yugoslav army could be called nothing except the "Serbo-Communist occupation army," and casualty figures were to be accompanied at all time with the phrase "fell for Croatia's freedom" (Thompson 1994, 161; Woodward 1995, 231). Journalists who failed to utilize the proper 'ethnic' terminology were sacked for being "Yugoslav-oriented" (Thompson 1994, 158).

In addition, the style of the television broadcasts portrayed the conflict in broadly generalized terms that served to implicate the entire nation. The "images were very intense, emotive and generalized, depicting destruction, corpses, suffering, resistance, courage and so forth in an allegorical manner, often devoid of references to locate the story in a specific place" (Thompson 1994, 163). It was not a specific person who was killed or a specific location that was bombed, it was the whole 'Croatian people' who were under attack, and the whole 'Croatian people' who would have to rise up in defense. For instance, when Croatian demonstrators took to the streets of Zadar in May of 1991, the media covering the story collaborated to describe the scene as one in which thousands of Croats had arisen collectively to defend the city as a unified whole (Thompson 1994, 180). In reality, the event was relatively small and easily controlled. Both the number of demonstrators and their supposed unity had been hugely exaggerated. A "nationalist fantasy of spontaneous,

collective will" (Thompson 1994, 181) was deployed to serve the interests of the elites who governed the symbolic frames utilized in Croatia's media discourse.

The result of such manipulations was that the rhetoric of Croatian media coverage mirrored Serbian coverage to an astonishing degree. Croatian media strove to demonize the Serbian "enemy within" (Silber and Little 1997, 142). Serbian forces were relentlessly portrayed as expansionist, aggressive, and genocidal (Thompson 1994, 166). The accusations and denouncements were all largely the same; the names and places were simply reversed. The mass media in both territories thus worked to define 'ethnicity' as the only symbolic dimension that could be relevant to political struggles within Yugoslavia. In doing so, they fanned the flames of ethnic division and animosity to such a degree that violent fragmentation was all but inevitable.

### ***1.3 Mechanisms: Ancient Hatreds vs. Elite Manipulation***

The forgoing narrative will likely sound familiar to students of ethnic politics and civil conflict, as qualitative accounts of collective violence in a wide variety of contexts ranging from Yugoslavia (Gagnon 1994/95; Thompson 1994), and Rwanda (Des Forges 1999; Metzl 1997), to India (Brass 1997), and Sri Lanka (Tambiah 1997), have found that discourses of ethnification fanned the flames of divisive nationalist sentiments that become the rallying cries for all variety of barbarous massacres and the bloody deaths of hundreds of thousands of civilians. It is on the basis of this content-based approach to the study of communication and conflict that these scholars and many others have concluded that the mass media constitute

causal forces that have been explicitly responsible for the outbreak of collective violence between symbolically constituted solidary groups. This is a strong empirical claim, which will be empirically challenged in the following chapters. For now, the immediate question raised by what I will label the “standard account” of the relationship between mass media and collective violence is this: through what mechanism do the mass media manage to have such effects?

Two major hypotheses have arisen out of this content-based approach to explain the remarkably powerful ability of the media to incite mass violence in the former Yugoslavia. The first, especially popular in journalistic accounts of such conflicts, is that the media were playing on “ancient hatreds” and “tribal animosities” that supposedly reemerged in a violent eruption, after having been forcefully suppressed by Tito in the previous decades. As Kaplan (1993) argues, the Balkans are inhabited by “ghosts” have thrown these groups into bloody feuds for thousands of years. Seen from this perspective, the mass media were powerful simply because they held a mirror up to Yugoslavian society and reflected back into that society in amplified form the divisions and enmities which it already held within itself. A formal analysis of the mass media’s tendency to serve this ‘reflective’ role vis-à-vis pre-existing social cleavages will be undertaken in Chapter 3, on the basis of agent-based computational simulations. For now, I note that while this is the story that has been most dominant in press accounts of the Balkan warfare, a close examination of the facts on the ground make it difficult to accept.

Throughout the 1980s and early 1990s, intermarriage rates were quite high in Yugoslavia. For instance, 29 percent of the Serbs living in Croatia before the outbreak of hostilities married Croat spouses (Gagnon 1994/95, n. 15). Moreover,

those rates were highest in the ethnically-mixed regions that experienced the worst violence (Gagnon 1994/95, 133-134). Sociological polling in 1990 showed a high degree of tolerance throughout Yugoslavia (Gagnon 1994/95, 134). Across the country, there were ethnically mixed neighborhoods and towns, strong family ties between republics, respect for the multiple identities of each citizen, and pride in the multinational character of the federation (Woodward 1995, 225). Yugoslavia's various nationalities even celebrated each other's religious holidays. This was hardly a country seething with the vitriol of ancient hatreds.

Such difficulties with the "ancient hatreds" account have led many theorists to instead attribute the violence to elite exhortations made powerful through strategic manipulation of the content permitted in mass media messages (e.g. Gagnon 1994/95). According to this theory, elite manipulation of nationalist sentiments was used to cement the power of political leaders who would otherwise have faced eminent collapse. "The challenge for elites is therefore to define the interest of the collective in a way that coincides with their own power interests" (Gagnon 1994/95, 135). Elites who found their power bases threatened by the downfall of communism responded by manipulating the mass media to whip the populace into a nationalist frenzy, thereby distracting the population from domestic problems by focusing their anger on an external enemy.

Unfortunately, most versions of this theory have lacked a coherent causal mechanism that could explain why people were willing to follow their leaders into this bloodbath simply on the basis of mass media messages (Fearon and Laitin 2000, 854). How was it that thousands of supposedly rational people were duped by such a blatantly obvious ploy? Recognizing this theoretical gap, Bates, de Figueiredo, and

Weingast (1998) stepped in to provide an answer. They argue that rational citizens would have been uncertain whether Milosevic's accusations of genocidal machinations by the Croats were accurate. However, such well-founded skepticism was insufficient to prevent the outbreak of violence because the costs of being wrong were so high. In their model, each citizen makes an individual assessment of the probability that the Croats are aggressive, and decides whether or not to fight by weighing that estimate against the costs of the potential outcomes. Hence, they argue "the influence of ideas does not depend on relative plausibility but rather on the balance between plausibility and the stakes, that is, between probabilities and payoffs" (Bates, de Figueiredo, and Weingast 1998, 630). They claim that when Croatia moved towards independence, that served to partially verify Milosevic's claims and led Serbs to increase their assessments of the probability that Croatia was aggressive, thereby making fighting the rational response (Bates, de Figueiredo, and Weingast 1998, 612, 630-631).

#### ***1.4 Symbolic Security Dilemmas***

This logic is similar in form to a problem that has long been known to theorists of international relations as the "security dilemma." The phrase refers to a strategic context in which two (or more) sides to a dispute are incapable of committing to mutually defensive actions because "many of the means by which a state tries to increase its security decrease the security of others" (Jervis 1978, 169). Originally formulated to describe conflictual relations between states, the concept has since been applied to various forms of ethnic and sub-national conflict

(Lake and Rothchild 1996; Posen 1993), where it is the inability to credibly judge the intentions of the other side which renders all armaments as potential tools of aggression and generates the potential for a deadly spiral of conflict even though neither side actually prefers conflict to peace. As Jervis (1978) and others have noted, the forces driving such dilemmas are fundamentally psychological. It is only after a particular boundary has been socially and politically defined as threatening that it becomes a symbolic cleavage along which individuals will sacrifice to fight for an abstract collective, and thus a line along which a security dilemma is experienced (Mercer 1995).

The presence of a security dilemma, in other words, is necessarily premised on the pre-existence of intersubjectively constituted loyalties, which collectively divide groups of individuals into opposing camps of trust and animosity. The central problem faced by the reliance on the logic of the security dilemma to explain patterns in the outbreak of collective violence is thus that it ignores the role played by symbolic politics. As Johnson argues, "although their models specify what it is rational for individual players to do once the political world is constituted symbolically in ethnic terms ... they tell us nothing about how the world comes to be constituted in the those terms in the first place" (2002, 240). In other words, the model assumes a world in which the categories of "Serb" and "Croat" are politically salient, a world that does not exist naturally of its own accord, but has to be constructed. Ignatieff (1993, 42) notes that while 'symbolic' in their construction, such categories have very real and immediate effects: "Once the Yugoslav communist state began to split into its constituent national particles the key question soon became: will the local Croat policeman protect me if I am a Serb?"

Nevertheless, such categories are not objective facts that simply exist on the face of things. "Most of the so-called Muslims, Serbs, and Croats of Yugoslavia have little to distinguish themselves from each other" (Hardin 1995, 7). They are all south Slavs and they all speak the same language (with regional dialect differences that are smaller than those that separate British from American English). The three groups have different religious faiths, but when violence erupted Yugoslavs were amongst the least religious people in the world (Hardin 1995, 158). Their religions were not considered politically relevant. In cities throughout Yugoslavia, most 'Muslims' are "secular and culturally indistinguishable from their Serbian and Croatian neighbors" (Denitch 1996, 184).

Moreover, even in terms of subjective identification, the citizens of Yugoslavia seemed to be becoming more unified, not less, very shortly before the conflict erupted. The short time span between 1971 and 1981 witnessed a 4½-fold increase in the number of individuals who declared Yugoslav identity on the national census rather than declaring a specific national identity, despite the fact the question was phrased to discourage such an answer (Burg and Berbaum 1989, 535). Such sentiments were especially strong in Yugoslavia's youth. In a 1982 survey, 51% of Yugoslav youth answered that they "felt themselves" to be "just Yugoslav," rather than identifying with a specific ethnic nationality (Burg and Berbaum 1989, 540). The survey results were so strong that as late as 1989, a mere two years before the conflict began, Burg and Berbaum could conclude that "all other things being equal, the declaration of Yugoslav identity is likely to become more widespread, and the level of support for the multinational community is likely to increase" (1989, 549). This is congruent with Woodward's assessment that before the conflict, "the primary

social divisions and inequalities in Yugoslav society were not defined by ethnicity but by job status and growing unemployment. In terms of how people saw themselves, ethnicity was less important than either occupation and the social status it conveyed or place of residence" (1995, 44).

The central question therefore becomes: how did ethnic categories such as "Serb" and "Croat" come to be the dominant categories through which sociopolitical loyalties were collectively constructed and mobilized? That is, how does a particular dimension become the central boundary along which a security dilemma is imagined? The logic of the security dilemma assumes the relevance of such categories at the outset, and is therefore incapable of explaining how those collective loyalties came to be constituted in the first place. I argue that the solution to this conundrum is a structural approach which allows for a synthesis of the insights from the literatures on mass communication, collective violence, and group loyalty.

The central argument of this dissertation is that the communicative processes upon which the formation of collective identities and loyalties are based are structurally constrained in systematic ways. More specifically, it claims that public communicative structures, those which transmit synchronized messages and thus generate joint awareness of those messages amongst a collective audience, are central to the development of national, sub-national, and transnational symbolic allegiances because they create communities of shared experience and thereby generate symbolic touchstones which allow individuals to feel connected to a seemingly unified moral community. I argue that this form of collective awareness, which arises in the presence of public communicative structures, leads people to form affective associations between their concept of "self" and their concept of "we."

That is, they come to view themselves as a specific instance of a broader abstract category, the boundaries of which are defined by the boundaries of the collective audience. It is because those boundaries only exist as social facts to the extent that they are collectively recognized, that they can only be constructed on the basis of communications which are “public” (that is, communications that are characterized by synchronized transmission and joint awareness of reception). What we observe as collective loyalties are really the willingness of individuals to sacrifice on the basis of their membership in such publicly constructed moral communities.

### ***1.5 An Alternative Account of Yugoslavia’s Disintegration***

This argument indicates that in analyzing the relationship between mass communication and collective violence in Yugoslavia, we should place less emphasis on the content of specific mass media messages and greater emphasis on the structural constraints which underlie aggregate patterns of message transmission and reception. In other words, an understanding of the structural vulnerabilities to loyalty fragmentation which underlie the emergence of inter-group security dilemmas requires an understanding of the topology of shared experiences upon which such symbolic loyalties are based. The call for a structural approach to the study of mass communication is thus a call for a particular style of causal narrative which highlights several elements that are frequently overlooked when analysis is focused exclusively on mass media content. The theoretical justification for this claim is presented in its full form in Chapter 2. Here, I attempt to first ground the reader’s intuitions through an alternative account of the role played by the mass media in the disintegration of

Yugoslavia, which in contrast to the content-based approach presented above, points to a variety of empirical regularities that would otherwise have remained obscure in the absence of a structural perspective.

### **1.5.1 The Monopolization of Media Structures**

First, there can be little doubt that the profound structural changes which shook the media landscape in Yugoslavia began with the centralization, monopolization, and coercive control of the media resources in each of the three emerging states of Serbia, Croatia, and Bosnia. It is certainly not a coincidence that the emergence of large-scale civil conflict in Yugoslavia coincided with the rise to power of Slobodan Milosevic in Serbia and Franco Tujman in Croatia. The magnitude of the transformation that they enacted should be understood against the backdrop of a mass media structure which, in 1989, was more diverse and unrestricted than in any other Communist state (Thompson 1994, 5). At that time, Yugoslavia was home to 9 television stations, 202 radio stations, 27 daily newspapers, 17 major news magazines, and hundreds of local papers (Thompson 1994, 5). Divergent viewpoints were relatively abundant, and re-broadcast arrangements gave almost all viewers throughout the country access to the same array of TV programs (Thompson 1994, 17).

After Milosevic became the leader of the Serbian Communist Party in 1986, he began a series of strategic purges designed to consolidate his power. Reformists who sought to negotiate in Kosovo were accused of being "soft" on Albanians (Gagnon 1994/95, 148). Anyone who criticized the chauvinistic tenor of Serb

nationalism was labeled a "traitor" to the people. Formerly independent news organizations that dared to voice dissatisfaction with the regime found themselves with new leadership and new guidelines. Editors in the major news agencies were systematically replaced with officials loyal to Milosevic. By September of 1987, Milosevic had managed to consolidate his ideological control over the communicative structure of the Serbian Communist Party (Gagnon 1994/95, 148).

After the collapse of Communism in 1989 and Milosevic's subsequent rise to the presidency of Serbia, the consolidation and control of the state's mass media was further intensified (Denitch 1996, 62). Any and all dissenting views were silenced. Journalists who failed to tow the regime's line faced intimidation, economic sanctions, and dismissal (Thompson 1994, 52). By 1990, Milosevic's control of the Serbian airwaves was nearly absolute (Woodward 1995, 230), allowing him to use the mass media as "his personal propaganda machine" (Silber and Little 1997, 120).

In 1989, when Serbia rescinded the autonomy of Kosovo and Vojvodina, and replaced the leadership in Montenegro, the local TV stations of each region were brought under Belgrade's direct control. The TV stations of all three regions became nothing more than mouthpieces for Milosevic (Thompson 1994, 21). Most importantly though, Milosevic seized monopolistic control over Radio-Televizija Srbije (RTS), the sole mass media source capable of statewide broadcasting. RTS, by far the most important news medium in country, could reach 96 percent of Serbia in addition to large parts of Croatia and Bosnia (Thompson 1994, 84). In Serbia, the average audience for the RTS evening news in October 1991 was 3 million people, over 60 percent of the population over the age of ten (Thompson 1994, 84-85). For most of the people living in Serbia, this was their sole source of media exposure.

The only private alternative, NTV Studio B, could not transmit beyond Belgrade and could therefore reach only about a quarter of Serbia's population (Woodward 1995, 232; Thompson 1994, 85).

The dynamics of media coercion and monopolization were remarkably similar in Croatia, just delayed by a matter of months. Prior to Tudjman's election as president of Croatia, expressions of nationalist sentiment in Croatia were extremely muted. "The vast Serb processions and mass rallies, teeming with Serbian imagery and symbolism of domination, were often to be seen, but, as late as 1990, the Croatian counterpart was cowed and furtive" (Silber and Little 1997, 83). Up until 1990, regional mass media were abundant in Croatia, and the high professional standards of many of the news outlets ensured that diverse viewpoints could be expressed and disseminated (Thompson 1994, 132).

However, only two months after Tudjman's HDZ party came to power in the 1990 elections, parliament passed the "Radio-Television Act" which gave the state vastly expanded powers to exert control over media resources (Thompson 1994, 149). Tudjman and the HDZ then proceeded to establish rigid control over the republic's television, radio, and newspaper outlets (Denitch 1996, 107). Through a variety of methods, all dissenting views were purged from media broadcasts. Media personnel in charge of the major television and radio stations were replaced with HDZ loyalists. Some publicly owned media companies were transferred to state ownership, while others were purchased by HDZ officials. Licenses for new privately owned electronic media were withheld, and pre-existing private media companies were jammed if they broadcast viewpoints that ran counter to the interests of the regime. In addition, dissenting journalists who were outside direct government

control were attacked, slandered, fired, and physically intimidated (Thompson 1994, 132-133). The end result was nearly absolute hierarchical control of the entire republic's mass media resources, all under the monopolistic dominance of Tudjman. Much as in Serbia, the most forceful aspect of the campaign was Tudjman's manipulation of Croatia's only statewide broadcast agency, Hrvatska Radio-Televizija (HRT). As one Croatian dissident explained, it would be difficult to overestimate the power of this medium:

"In Croatia, which is terribly impoverished, there exists only one truly functioning means of information: HRT. ... [N]ewspapers have too small circulations to be able to influence Croatian public opinion. HRT presents and explains political life and its atmosphere. Everyone watches it, and many people are convinced that they need watch nothing else" (quoted in Thompson 1994, 152).

In contrast to the Serbian and Croatian elections which had produced unified nationalist leaderships, in Bosnia the mixed outcome of the 1990 elections created a tripartite division of power, with each of the three nationalist parties (Serbian (SDS), Croatian (HDZ), and Muslim (SPA)) sharing power in the legislature and presidency (Woodward 1995, 230). Nevertheless, after its rise to power in 1990, the government was still largely successful in exerting control over the republic's mass media. A state owned company, OKO, monopolized the supply of newsprint and repeatedly used this leverage to prevent the printing of magazines and newspapers that published articles that were critical of the government or ran counter to its interests (Thompson 1994, 214-215). Journalists who expressed views opposed the government were subject to harassment, intimidation, and removal (Thompson 1994, 215-216). In addition, in 1992 the collective presidency took formal of Radio-Televizija Bosne i Hercegovine (RTVBH), the republic's only statewide broadcasting agency (Thompson 1994, 214, 234).

## 1.5.2 The Segregation of Public Arenas

The structural approach endorsed here certainly does not deny the obvious importance of this coercive monopolization of control over the most powerful mass media resources in each of republics of Serbia, Croatia, and Bosnia. However, whereas the content-based narrative presented above focused on how these institutions were used to coerce journalists into using particular terminologies, frames, and images, a structural perspective reveals that these mechanisms of control were used to produce even more profound shifts in the topology of collective experiences available to Serbian, Croatian, and Bosnian audiences. It is important to remember that as an individual experience, the state-controlled broadcasts were not treated as particularly accurate or credible by those receiving them. Extensive anecdotal evidence indicates that most people in Yugoslavia initially reacted to the elite exhortations with extreme skepticism (Bates, de Figueiredo, and Weingast 1998, 611). Moreover, a survey conducted in July of 1993 found that only 8.4 per cent of viewers felt that RTS kept them “well” informed, as opposed to 43.5 percent who said that it kept them “badly” informed (Thompson 1994, 77, 108). As will be discussed more fully in Chapter 4, there is also extensive experimental evidence which indicates that even in the absence of such credibility concerns, shifts in mass media message content would have been incapable of generating the kinds of deep attitudinal changes envisioned by content-based analyses that blame the outbreak of violence on the ideational influence of media messages.

More importantly than controlling message content, each republic’s media monopoly was used to generate wholly segregated spheres of publicly shared experiences. This represented a shift not just in content, but in the lines along which

collective audiences could be constituted and the topology of shared experiences upon which collective loyalties could be based. In the fall of 1991, telephone communications between Croatia and Serbia were deliberately severed, and in Bosnia telephone line sabotage was used to disconnect neighborhoods targeted on the basis of ethnicity (Denitch 1996, 180; Woodward 1995, 236). Until the late 1980s, re-broadcast arrangements between the republics gave almost all viewers throughout the country access to the same array of TV programs (Thompson 1994, 17). However, from 1990 to 1991 the existing pan-Yugoslav media organizations – including Tanjug, the sole national news agency – were all systematically undermined by the three republican leaderships. As Thompson argues, encompassing zones of collectively shared mass media exposure were “shattered by force, before the territorial space was shattered by much greater force, in order to create exclusive national zones” (Thompson 1994, 263).

A particularly telling example of this dynamic is provided by the experience of the short-lived pan-Yugoslav television network named Yutel. Originally created in 1989 by Federal Prime Minister Ante Markovic, Yutel was intended to strengthen the unity of the Yugoslavian nation-state by providing a common set of shared media experiences, and thus a common set of shared symbolic touchstones, to the residents of all of Yugoslavia’s constituent republics (Thompson 1994, 41). From its initial broadcasts in October of 1990 the station faced extreme difficulties: a severe lack of financial resources, a need to rely on army surplus equipment, a limitation to broadcasting after the hours of midnight, and an eventual refusal from Belgrade to grant the network a broadcast license, all placed the organization on extremely shaky institutional footing from the outset (Thompson 1994, 38-43). Labeled as

treasonous by the republican regimes – after only four months on the air – for attempting to represent a viewpoint which might reveal the underlying similarities of ‘Yugoslav’ perspectives, the station was forced in late 1991 to relocate to Sarajevo after Serbian nationalist insurgents destroyed Yutel’s Belgrade office (Woodward 1995, 230). At that point, they could only reach around a quarter of Yugoslavia’s population (Thompson 1994, 41). Striving to challenge the nationalists’ vision of deep and primordial ethnic divisions, on July 28, 1991 the network organized the “Yutel for Peace” rally in Sarajevo, mobilizing 70,000 people to take to the streets for the largest such rally in the country’s history (Thompson 1994, 47).

In the face of such cross-ethnic mobilizational potential, “the barrage against Yutel was often fiercer than against the television centers of the war enemies” (Milošević 1997, 116). A transmitter planned for installation on Mount Avala near Belgrade was seized in late 1991 by the Serbian government (Milošević 1997, 115). After moving to Sarajevo, the station faced relentless shelling throughout the spring of 1992, until its transmitter was finally destroyed by Serbian insurgents and Yutel was forced to suspend operations on May 11, 1992 (Thompson 1994, 48).

Additional evidence that those in power were well aware of the critical importance of shaping public communicative structures can be found in the pattern of attacks that characterized the Serbian military campaign against Bosnia. From the very beginning of the conflict, media outlets broadcasting to multiethnic collective audiences and advocating Bosnian unity were deliberately targeted by Serbian mortars and bombs (Woodward 1995, 235-236). However, even before the military campaign had begun, a media war had already commenced. On August 1, 1991 the SDS (the Serbian nationalist party) seized the TVDH transmitter on Mount

Kozara, which covered north-central and north-western Bosnia, and redirected it to receive Serbian television. On October 28, 1991 the transmitter at Pljesevica, which covered north-western Bosnia, was also seized and redirected to Serbian television. By March of 1992, the SDS had also seized and redirected transmitters in Doboj and Majeвица, in addition to destroying the transmitter in Trovhr. Thus, before the war had even begun, nearly half of Bosnia's territory had been blanketed by the Serbian television signal (Thompson 1994, 207-208, 250-251).

For the most part, these transmitters re-broadcast the programming from TV Belgrade. As one journalist explained, Belgrade was quite aware of its new communicative reach: "Serbian TV during that period [the winter of 1991 -1992] was geared for the Serbs in Bosnia, not for Serbia" (Thompson 1994, 250). Hence, as a result of the initial seizure at Kozara,

"For more than six months before the Serb attack began in March 1992, the Serbs of northern Bosnia were saturated with propaganda about the Bosnian government (and the Serbian version of the war in Croatia) which the government was impotent to challenge" (Thompson 1994, 209).

It was during this same time period that the propaganda machine headed by Milosevic began adding demonizations of the Bosnian Muslims to its array of jingoistic rhetoric. All the same techniques that had been mobilized against the Croats were now also deployed against the Muslims. Reporters for Belgrade TV claimed that "Muslim forces want to destroy everything Serbian." News stories made repeated reference to the "terror" and "fanatical hatred" that were at the root of Muslim political ambitions. They also claimed that Muslims were threatening the Bosnian Serbs with "physical and spiritual genocide" (Thompson 1994, 102). At the same time, Serb forces in Bosnia were often referred to as "unarmed defenders of centuries-old hearths" (Thompson 1994, 103).

Note that the specific terms and images used in Serbian mass media broadcasts were observed by the quoted journalist to have changed in response to changes in the composition of the audience which the broadcasts were imagined to reach. In other words, communicative structure sometimes appears to drive communicative content, rendering content essentially epiphenomenal. However, if one had instead followed the lead of the "standard account" and focused only on the changing rhetoric and images while ignoring the underlying shifts in structure, one could easily have drawn a spurious causal inference linking media content to collective violence, when in fact the content was only following along behind.

The key point to understand is that in undermining Tanjug, Yutel, and every other organization capable of engaging in pan-Yugoslav broadcasting, nationalist insurgents were not attempting to prevent the dissemination of particular messages, but rather were attempting to prevent the constitution of particular kinds of groups. The battle being fought was not simply over the content of mass media messages, but over the boundaries of the public communicative structures which would constitute Serbian, Croatian, and Bosnian collective experiences and collective loyalties. To the resident of Belgrade who in 1989 could imagine that the images on his television screen were being symbolically interpreted and jointly experienced simultaneously by the residents of Zagreb and Sarajevo, the world of 1992 must have felt very different. It was not particularly different in a *subjective* sense. The flickering box said that the "fanatical Muslims" were now the genocidaires of the Serbian nation rather than the "ustaše Croats," but he attached little credibility to such blatantly exaggerated rhetoric and so his beliefs, attitudes, and values – his subjective mental states – were fundamentally unchanged.

Rather, the world must have felt very different in an *intersubjective* sense. Forces beyond his control had constrained the set of individuals with whom he could engage in what I call *intersubjective inference*, which is the ability of two or more people to jointly recognize themselves as members of the same abstract collective. Because our Belgrade resident's only public experiences were now shared almost exclusively with other Serbs, his intersubjective access to the experiences of his fellow citizens was similarly constrained, and the only category of "we" to which he had ready access was necessarily circumscribed by the ethnic bounds of Milosevic's strategically constructed mass audience. It was thus only on the basis of his membership in the structurally-induced (induced, that is, by the communicative structure of public experiences) symbolic category of "Serbian" that he could now imagine the collective sacrifices for group loyalty that are the building blocks of every security dilemma.

In other words, by bombing, seizing, and redirecting television transmitters in northern Bosnia, the insurgents were changing the set of individuals who could effectively imagine themselves as loyal members of the broader Serbian nation. We should therefore not be surprised that while there were high concentrations of ethnic Serbs in several parts of Bosnia, the initial Serbian insurrections were launched from the very area that had experienced a change in the structure of communication six months earlier, when the Kozara transmitter was redirected. We should also not be surprised that within Serbia, the strongest support for Milosevic's expansionist vision of "Greater Serbia" came from central and southern Serbia, precisely the region of the country which could not receive privately-owned radio and television stations such as Studio B and Radio B92 (Thompson 1994, 62).

We have thus worked our way around to what may be the most controversial empirical generalization to emerge from this structural approach to the study of mass communication and collective violence. In stark contrast to the conclusions generally drawn from content-based analyses, when viewed from a structural perspective the mass media do not function to *divide* group loyalties, but rather serve as powerful mechanisms for the *unification* of group loyalties. The conceptual difficulty with this point arises from the tendency to conflate different levels of aggregation when examining patterns of cohesion and fragmentation. According to the structural account presented here, 'Serbian' broadcasts facilitated the formation of 'Serbian' group loyalties amongst those exposed to the broadcasts because they knew that it was other members of the 'Serbian' collective audience who were joining them in the experience. However, from the perspective of the Federal Republic of Yugoslavia, this Serbian national unity represents sub-national divisiveness. In a similar manner, the unified symbolic loyalties of modern nation-states represent a fragmentation of symbolic loyalties when viewed from a global perspective. The choice of levels is arbitrary, but the structural mechanism remains the same regardless. It is precisely for this reason that pan-Yugoslav public communicative structures, such as the Yutel network, had to be bombed out of existence by insurgent Serbian nationalists. It was not simply because Yutel might have sent out to the citizenry a piece of information which was inconvenient for the Serbian nationalist agenda. The problem was not only the messages themselves. The problem, at least from the perspective of the Serbian insurgent, was also that Yutel represented a means by which a large-scale collective audience might be

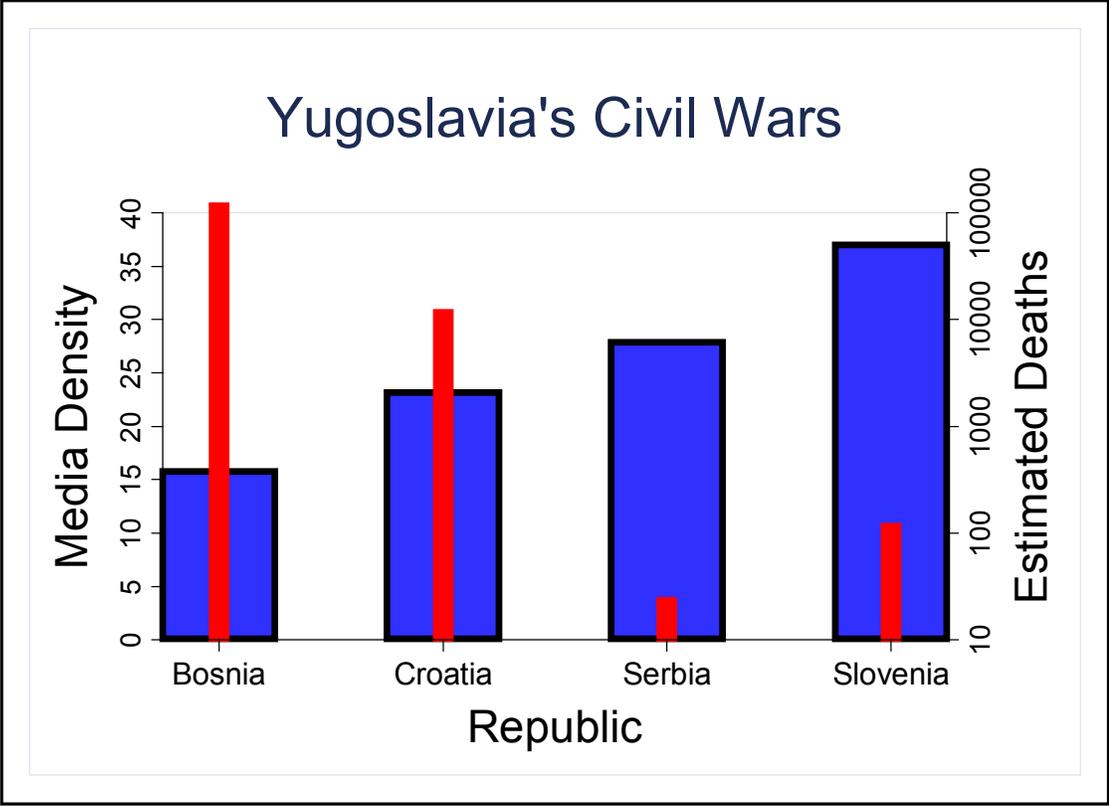
constituted along non-ethnic lines. It represented, in other words, a platform upon which alternative group loyalties could be collectively imagined.

### **1.5.3 Media Density and the Vulnerability to Fragmentation**

As will be explained more fully in the following chapter, this dissertation takes the position that different populations possess differing degrees of vulnerability to the fragmentation of sociopolitical loyalties, and that these differences in levels of cohesion are driven in large part by differences in the public communicative structures present amongst the members of a given population. It also takes the position that collective violence is driven in large part by the security dilemmas that arise in strategic contexts characterized by divided group loyalties and that groups that possess strong public communicative structures will therefore experience lower levels of internal violence. In subjecting this proposition to empirical scrutiny, one of the key concepts that arises repeatedly in subsequent chapters is the *density* of a public communicative structure, which simply refers to the proportion of a given population which are capable of receiving its broadcasts. For instance, the density of the broadcast network in Serbia is equal to the proportion of residents who have access to radio or television receivers. This is a convenient measure for the strength of public communicative structures, such as mass media, since according to the structural account proposed here it is precisely because mass media messages are known to be experienced simultaneously by thousands or millions of others that such experiences can become a basis for intersubjective inferences and collective loyalties.

Moreover, because media density can be measured on a sub-national basis in Yugoslavia, it can be used to make cross-sectional comparisons between the Yugoslavian republics, to examine how media strength in the various republics was related to the emergence of divided loyalties and collective violence. If the structural account is correct, then republics with higher levels of media density should have lower vulnerability to loyalty fragmentation and thus lower levels of violence. Interestingly, the content-based account of the relationship between mass communication and collective violence makes exactly the opposite prediction, as having more people reachable by hateful sectarian mass media messages should heighten their effectiveness and generate higher levels of violence.

Which prediction is correct? Figure 1 presents the data in graphical form. The blue bars measure media density (per 100 people) in each of the Yugoslav republics that was party to the civil war(s) fought between 1991 and 1995. The red bars represent estimated deaths for the same period in each republic on the right axis (which is log-transformed to ease presentation). The relationship between the two variables could not be clearer. The two republics with the highest levels of media density – Serbia and Slovenia – are also the two republics that experienced by far the lowest levels of internal violence during the conflict. In contrast, highest levels of internal violence amongst any of the republics was experienced in Bosnia, the republic which also has the lowest level of media density. This finding represents a serious anomaly for the content-based approach to the study of mass communication, but makes perfect sense if the structural account of loyalty fragmentation is correct.



Note: For extensive notes on data and sources, see Chapter 5.

**Figure 1: Media Density vs. Severity of Violence**

Of course, there are many alternative explanations for this simple bivariate relationship, including a wide variety of independent variables which are absent from the analysis but which may be correlated with both media density and the emergence of collective violence. Moreover, the single case of Yugoslavia is hardly a sufficient evidentiary basis upon which to make a convincing claim that mass media density structurally facilitates unified national loyalties and resistance to sub-national fragmentation and civil conflict. That empirical case will be made on the basis of extensive cross-national data concerning both micro-level outcomes in Chapter 4 and macro-level outcomes in Chapter 5.

The purpose of this introduction was not to prove the veracity of the structural account that has been sketched here, but rather to reveal the blind spots generated by the standard account and highlight the fact that *media* analysis need not be equated with *content* analysis. In the following chapter, I seek to generalize the principles underlying this structural approach to the study of mass communication and collective violence and demonstrate that the regularities described here are not specific to Yugoslavia, or to conflicts which revolve around the constitution of ethnic identities. They are, rather, regularities which inhere in all forms of large-scale collective violence because they are generated by the intersubjective nature of group loyalties and the intersubjective nature of the security dilemmas that such loyalties spawn.

## Chapter 2. A Theory of Communicative Structuralism

### 2.1 Introduction

The argument made in this chapter, while extended in a wide variety of directions, revolves foundationally around a single claim: *that human groups are constituted via communicative structures and that much variation in the form and behavior of human groups can therefore be explained by variation in the communicative structures through which they are constructed and maintained.* Unpacking this claim, the task to which the rest of this chapter is devoted, will require an examination of the factors that underlie group mobilization and solidarity. It will also require an examination of the cognitive underpinnings of human communication, the role played by variation in levels of intersubjective awareness, and the nature of the structural forms which delimit the bounds on the set of communicative possibilities. In other words, it will require a *structural* theory of communication that will allow us to judge the effects of communication through an analysis of variation in the structures through which it occurs.

All theories rely upon modes of categorization. That is, they highlight certain dimensions of difference while obscuring others, and in so doing push us to see the world as being naturally divided along certain lines rather than others. Such moves, while necessary and frequently productive, also run the risk of generating obstacles to progress if the divisions constructed come to be reified rather than consciously deployed. Indeed, part of the difficulty in developing a productive conceptualization of communication lies in the fact that it straddles divides that have been disciplinarily

naturalized in the study of international relations and more broadly in the social sciences – divides between ‘materialism’ and ‘idealism’, between ‘causal’ and ‘constitutive’, between ‘individual rationality’ and ‘collective consciousness’, etc. – and which have thereby become hindrances rather than tools. Lying at the intersection of these conceptual boxes, the study of communication finds itself forced to the margins of the discipline by an apparent lack of space at the center. The claim that the study of communication should figure more prominently in the discipline is thus simultaneously a claim that these particular divisions have outlived their usefulness. If no space currently exists, then space must be cleared.

All theories also rely upon modes of narrativization. That is, they construct metaphors which highlight certain paths of precedence and antecedence, while directing our attention to certain characters and objects as central rather than peripheral. Theories are stories, and this theory is no different. This is a story about networks. But it is also a story about the insufficiency of the network metaphor and our need to transcend it. This is a story about power. But it is also a story about the blind spots created by a narrowly materialist conception of power. This is a story about individuals. But it is also a story about the constitution of intersubjective spaces that are not reducible to individual subjective states. Most importantly, this is a story about communication and the structures that simultaneously allow for and constrain the pursuit of symbolic politics, by influencing the topology of shared experiences.

The idea that symbolic politics, that is the politics of identity-based cleavages, might be structurally constrained in systematic ways has been obscured by the continuing legacy of Social Identity Theory in a wide variety of social sciences,

including psychology, sociology, and political science (Tajfel and Turner 1979; Tajfel and Turner 1986).<sup>1</sup> While Tajfel and Turner's original laboratory results simply indicated that the act of group categorization was sufficient to generate behavioral patterns of in-group favoritism and out-group bias, the results have since been treated as evidence of an innate human propensity towards antagonistic fragmentation (Horowitz 1985, 144-147). As a result, it has come to be a widely held belief amongst social scientists that our human faculties, our fundamental identificatory mechanisms, lead us naturally and inevitably to divide into exclusionary and hostile camps.<sup>2</sup> In contrast, the claim made here and defended empirically throughout this dissertation will be that such fragmentation is frequently an artifact of certain communicative effects, and can therefore be explained, at least in large part, through variation in the communicative structures through which such effects are produced.

*Structure*, as the term is used here, simply refers to a system of constraints (and opportunities) that delimits bounds on some set of agentic possibilities and/or influences the relative desirability of options within that bounded set. Structures, in other words, are those variables which mediate the relationship between agency and outcomes. We can define a *communicative structure* as a system of interlocking constraints on (and opportunities for) either the transmission or reception of messages amongst some set of agents. Such constraints can be the result of wide variety of forces, including those arising from material factors (e.g. a soundproof wall

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<sup>1</sup> See Chapter 4 for a more extensive discussion of this literature.

<sup>2</sup> For a critique of this tendency to over-predict intergroup conflict from a game theoretic perspective, see Fearon and Laitin (1996). For a more philosophical critique, see Abizadeh (2005).

standing between two individuals), cognitive factors (e.g. the inability of a Hindi-speaking individual to receive messages written in Urdu), or institutional factors (e.g. a prohibition on transboundary television broadcasts that transgress territorial state borders). More generally, different classes of communicative structures can be broadly characterized by different patterns of linkages that constrain the paths along which messages can travel. We can refer to such a pattern as a *network structure*. However, as we will see later, network structure alone will frequently be an insufficient means by which to characterize a given communicative structure. This is because different classes of communicative structures are also characterized by different *communicative mechanisms*, which constrain the relationship(s) between messages transmitted along a particular linkage and between messages transmitted along parallel linkages, in ways that can vary even when network structure is held constant.

Differences in communicative mechanisms are especially important to an analysis of group mobilization and solidarity because they allow us to differentiate *private* communicative structures from *public* communicative structures. Private communicative structures are those in which messages are transmitted directly between pairs of individuals, and are usually constituted by relatively clustered and parochial patterns of face-to-face contacts referred to as *social networks*. In contrast, public communicative structures are those in which messages are transmitted simultaneously to a larger group of individuals, and are usually constituted by some broadcast medium that allows for one-to-many transmission and reception. As I will show below, this structural distinction parallels a division between two forms of communicative effects: those that operate at the *subjective*

level and those that operate at the *intersubjective* level. Subjective communicative effects are those that influence the attitudes, values, and beliefs that people possess as individuals, whereas intersubjective communicative effects are those that influence a group's awareness of itself as a cohesive collective. It is at the intersection of these two dimensions, the subjective and the intersubjective, that group solidarity is formed, and it is thus via these two communicative paths, the private and the public, that the structural effects of communication on group mobilization and maintenance can be observed.

As opposed to discursive or interpretative analyses which focus on the details of message construction, the central claim of *communicative structuralism* is that the structure through which a message travels is as important, if not more so, than the contents of the message itself. This is both because communicative structures have effects which are independent of the messages themselves, and because communicative structures influence the generation of messages and thus frequently render their contents epiphenomenal. Thus, by examining the structural properties of human communication, it becomes possible to more productively analyze its causal effects.

## ***2.2 Private Social Networks and the Micro-Genesis of Culture***

The first category of communicative effects to be examined here are subjective effects, the causal pathways through which human communication influences the adoption of attitudes, values, and beliefs. It is a quintessentially *social* form of influence, which occurs through linkages provided by social networks

of family, friends, and acquaintances. The inherent diversity of individual subjective states, the profusion of positions and perspectives that exist on an infinite array of issues, means that when one individual communicates with another they are both inevitably exposed to the possibility of attitudinal change along any number of dimensions. The discovery of a disagreement between the two communicators is itself a piece of information that may prompt revision, in addition to whatever other information is revealed in the conversation. Of course, the opportunities for such interactions are not distributed randomly amongst the members of a population. Extensive evidence from a wide variety of settings indicates that human social relationships are formed according to regular and systematic patterns (Scott 2000). This makes it possible to speak of characteristics of network structures that specify the relative probability of the existence of different types of ties.

A network structure is simply a fixed set of ties (frequently referred to as 'edges') which define the connections between a fixed set of agents (frequently referred to as 'nodes'). A network structure can be represented as a graph diagram, with dots representing the nodes of a network and lines between dots representing those edges which are present. More formally we can represent a network structure  $\mathbf{S} = (S_{ij})$  linking  $n$  agents as an  $n \times n$  matrix where  $S_{ij}$  represents the relation directed from actor  $i$  to actor  $j$  ( $i, j = 1, \dots, n$ ). Implicit in most definitions of social networks is the assumption that the network is *symmetrical* ( $S_{ij} = S_{ji}$  for all  $i, j$ ) and the assumption that the network is *dichotomous* ( $S_{ij} \in \{0,1\}$  for all  $i, j$ ). With these assumptions in hand, we can define agent  $i$ 's *neighborhood* as the set of agents to which agent  $i$  is connected ( $S_{ij} = 1$ ). If ties were equally likely to occur

between all pairs of agents, we would have what is known as a *random* network, in which  $\Pr(S_{ij} = 1) = p$  for all  $i, j$ . In this case,  $p$  would represent the only structural parameter needed to describe the pattern of ties existing between a given set of agents.<sup>3</sup>

Of course, real social networks are only partially random. While a fair degree of stochastic variation is inherent in the formation of social ties, there also tends to be a great degree of regularity, which can be judged on the basis of deviations from randomness. The most frequently observed principle upon which such regularities are based is *homophily*, the tendency of individuals to associate with those who they view as similar to themselves. The tendency towards homophily has been measured and found to be significant in a wide variety of settings and across a broad spectrum of dimensions, including age, race, ethnicity, religion, gender, economic class, and social status (McPherson, Smith-Lovin, and Cook 2001). As a result, in our day-to-day lives, the vast majority of our conversations occur with people who are relatively similar to ourselves along one or more dimensions of social differentiation. In addition, there is a strong tendency for tie formation to be governed by the principle of *transitivity*: a friend of a friend is far more likely to also be a friend than would be the case if ties were formed in a completely random fashion (Gould 1995, 205; Watts and Strogatz 1998). This combination of tendencies towards both homophily and transitivity produces social environments that are highly homogeneous in regard to a wide variety of social and demographic characteristics, and highly parochial in regard

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<sup>3</sup> See Wasserman and Faust (1994) for a more complete discussion of the wide variety of structural parameters that can be used to describe patterns in social network data.

to the probability of contact with outsiders. Moreover, because it is through these pathways that opportunities for shifts in subjective mental states – that is, attitudes, values, and beliefs – arise, it is reasonable to expect that those opinions will come to be clustered in ways that correspond to the structural configuration of social networks.

It is on the basis of this insight that Latané and his colleagues have developed a modeling framework referred to as Dynamic Social Impact Theory (DSIT) (Latané 1996). Combining evidence from computer simulations and laboratory experiments, the DSIT framework purports to demonstrate that the generation of “culture” at the micro-level can be explained through an analysis of the spatial clustering of social contacts and the resulting spatial clustering of attitudes, values, and beliefs.<sup>4</sup> While social ties can cluster along any number of dimensions, a strong tendency towards spatial clustering has characterized human interactions throughout history. Consequently, we tend to have more dense interactions with those who are near us than those who are farther away, and thus the probability and strength of social influence tends to be spatially structured.

As Latané (1996) notes, the distribution of subjective mental states amongst individuals is generally characterized by several widely observed regularities. First, they tend to be clustered: the attitudes, values, and beliefs of neighbors are more similar on average than those of non-neighbors. Second, they tend to be correlated: attitudes, values, and beliefs concerning seemingly unrelated issues come to be

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<sup>4</sup> See Harton and Bourgeois (2004), Latané and Bourgeois (1996), and Latané and Liu (1996). It is important to note that this conceptualization of culture is restricted to subjective mental states, a restriction which will be challenged in subsequent sections of this chapter.

associated with each other both on a local level and in the society as a whole. Finally, while minority positions are under constant pressure from more widely held views, they tend to demonstrate a propensity towards continuing diversity rather than convergence to a global consensus. Using computer simulations based on a square lattice neighborhood structure, Latané and Nowak (1997) demonstrate that the emergence of these regularities can be generated under a wide variety of simulated contexts as long as two simple conditions hold: that the strength of social influence declines in proportion to physical distance, and that attitudinal changes are non-linear in response to social influence pressures. With widespread historical and contemporary evidence for the first condition, and robust experimental evidence for the second condition,<sup>5</sup> Latané (1996) concludes that the dynamic, recursive impacts of numerous everyday interactions provide a robust and coherent account of the micro-genesis of human culture (see also McIntyre et al. 2004).

The computer simulations presented in Chapter 3 expand these results to demonstrate that the square lattice structure used by Latané and Nowak to specify the relationship between social connections and geographic space, generates the observed regularities because it combines the structural principles of homophily and transitivity into a single dimension represented as physical distance. By allowing for a wider variety of network structures, I demonstrate first, that the structural principles of homophily and transitivity have both separate and joint effects on the

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<sup>5</sup> Latané and Nowak (1994) show experimentally that the non-linearity of attitudinal change is especially apparent for attitudes characterized by high involvement or importance. This is also consistent with so-called "connectionist" models of human cognition, in which attitudes become more difficult to change as they become more closely associated with a larger number of additional mental constructs (Rumelhart et al. 1986).

process of social influence; and second, that the specific patterns of attitudinal clustering and correlation that arise are due to the specific dimensions along with homophily is pursued. In other words, what matters is not the particular square lattice structure used by Latané and Nowak, but rather the more general structural parameters which govern the distribution of communicative connections. If the formation and dissolution of connections is governed, at least in part, by the principle of spatial homophily, then spatial clustering and correlation of subjective mental states is likely to result. On other hand, if connections are governed by the principle of ethnic homophily, then ethnic clustering and correlation of subjective mental states should be the expected result.

Moreover, there is no reason to suspect that such dimensions of homophily are mutually exclusive. Varying strengths of such tendencies along different dimensions could thus provide a relatively parsimonious model of the dynamic process by which the multitude of possible subjective mental states comes to be condensed along particular lines into observed categories of people. The basic framework of the "social network" model of communication has also provided space for the pursuit of complementary research programs, including analysis of the message characteristics that facilitate reproduction and transmission,<sup>6</sup> additional structural factors which influence the formation and dissolution of social linkages,<sup>7</sup> and the ways in which communicative experiences influence cognitive associative

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<sup>6</sup> For instance, Kashima (2000) and Lyons and Kashima (2001) have found that people are more likely to remember and re-transmit aspects of a narrative which are congruent with group stereotypes.

<sup>7</sup> See Latané and Liu (1996) for a discussion of "social distance" as an alternative to physical distance as a metric of the cost of forming a social tie.

patterns.<sup>8</sup> The social network paradigm, which predates by many years the particular specification given by Latané and his colleagues,<sup>9</sup> has thus provided an immensely productive framework for the analysis of a wide variety of subjective communicative effects, while at the same time providing a formal language with which to describe the structural constraints which channel such effects.

However, while the social network paradigm has produced insights in a wide variety of research programs, I will argue that it fails to capture some vitally important aspects of communicative interactions. This is not to claim that the social network paradigm is wrong, but rather that it is incomplete. As with all paradigms, it represents a series of interlocking, mutually reinforcing claims which highlight certain elements of the situation while obscuring others. The assumptions upon which the paradigm is based seem relatively uncontroversial at first glance, but two of them in particular are deserving of closer scrutiny. The first is the assumption that human communication is concerned solely with the transmission of information, and the second is the assumption that communicative effects are restricted to impacting the content of subjective mental states. Together, these assumptions construct an image of communication in which isolated packets of data, discrete informational quanta, travel out of one human head and into another. Whether transmitted via vibrations in the air, marks on a page, or electronic impulses, the only difficulty for the agents involved lies in selecting a mapping function which allows the vibrations, marks, or impulses to be translated into the 'correct' subjective mental

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<sup>8</sup> Chiu, Krauss, and Lau (1998).

<sup>9</sup> For instance, Granovetter (1973) and Gould (1991).

representations. Communication thus transmits information much like a virus, which leaps from node to node according to the available pattern of transmission vectors. And when those packets of information exercise influence upon a human mind which has received them, that influence takes the form of a pressure on the subjective beliefs of that individual. Whether concerning subjective beliefs about the material state of the world or subjective beliefs about normative values, that pressure is imagined to build through repeated exposures until the belief is tipped over into a new state.

From this perspective, the impact of a communicative act is necessarily a function of the credibility of the information contained therein, that is, the likelihood that the message is "true." Communication is hence a series of *persuasive acts*, some more effective and some less, which occurs as a series of informational transactions between atomized individuals.<sup>10</sup> We could thus refer to this as the "hydraulic" theory of communicative effects, in which informational flows, produced via communicative acts, create pressures on subjective beliefs, which shift at such time as those pressures grow sufficiently strong. When viewed in this light, the "structures" through which communicative acts are channeled and constrained are fully and sufficiently described by a "network" which characterizes the pathways through which messages are allowed to travel from individual to individual. The problem with this perspective, and the computational simulations that arise from it, is that while purportedly modeling a process of dynamic "social" influence, the

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<sup>10</sup> For a more thorough review of the psychological literature underpinning this view of communication, see Chapter 4.

agents are fundamentally atomized. The “social” component of such simulations is really just a collection of discrete dyadic interactions, a serialized chain of message production and reproduction.

In reality, however, humans do not simply bump into each other as individuals. They imagine themselves and others as members of more or less cohesive groups. This impetus to group formation appears to be one of the most fundamental characteristics of human nature, but it remains wholly absent from most models of social or political interaction. Moreover, these groups are not simply collections of correlated physical and subjective traits. A human group comes to exist *as a group by virtue of its awareness of itself as a group*, but we have very little in the way of theories that might explain variation in this condition. As I argue below, this form of awareness can only emerge in the presence of specific forms of communicative structures, namely public communicative structures, which while partially composed of the network structures that are so central to the hydraulic theory of subjective communicative effects, are not reducible to those network structures. We must, in other words, come to understand the communicative basis for group mobilization and solidarity as an *intersubjective* accomplishment rather than simply a collection of individuated subjective mental states.

### ***2.3 Communication and Intersubjectivity***

To make sense of this claim, that the communicative effects through which groups are constituted should be conceptualized as intersubjective effects, requires that we first clear some ground on a landscape that has been strewn with concepts

that might otherwise hinder our progress. The notion of intersubjectivity, that which is 'beyond subjectivity,' has been approached from a variety of social science perspectives, but most begin with some principle by which the subjective mental states of different individuals could be said to "interlock" with each other (Wendt 1999, 160). That is, they begin with a notion of intersubjective beliefs as being composed, somehow, of subjective beliefs. Two of these perspectives deserve sustained attention because of their prominence in the field. The first, rooted in the game theoretic conception of "common knowledge," relates subjective beliefs to intersubjective beliefs through the principle of *recursion*, depicting an infinite layering of beliefs about beliefs about beliefs. The second, rooted in the constructivist conception of "collective knowledge," relates subjective beliefs to intersubjective beliefs through the principle of *supervenience*, depicting a merging of diverse beliefs into a unified whole. I will address each perspective in turn.

### **2.3.1 Intersubjectivity as Common Knowledge**

The concept of common knowledge emerges from the game theoretic focus on deductively rational agents in situations of strategic interdependence. For deductively rational agents to reason about each other's likely responses, it is necessary for certain aspects of the situation – such as the payoff structure, the order of the moves, etc. – to be jointly known by all the players. Moreover, it will be insufficient for those facts be "mutual knowledge," that is, held to be true by each of the players individually. If two players both know the payoffs that result from a particular sequence of moves, but player 1 does not know that player 2 knows, then

player 1 cannot use her own knowledge of the payoffs to predict the likely responses of player 2, and thus cannot deductively calculate her best response. Similarly, if player 1 knows that player 2 knows the relevant payoff, but does not know that player 2 knows she knows, then she still cannot deduce a best response. In fact if any link in the infinite chain of “I know that you know that I know ...” is missing, the entire structure unravels. For knowledge of the game to be useful to deductively rational agents, that knowledge must be not just mutual knowledge, but *common knowledge*, meaning that the entire infinite recursive chain of beliefs about beliefs about beliefs must be present.<sup>11</sup> Osborne and Rubinstein (1994, 73) define this concept more formally as follows:

“Let  $K_1$  and  $K_2$  be the knowledge functions of individuals 1 and 2 for the set  $\Omega$  of states. An event  $E \subseteq \Omega$  is *common knowledge* between 1 and 2 in the state  $\omega \in \Omega$  if  $\omega$  is a member of every set in the infinite sequence  $K_1(E), K_2(E), K_1(K_2(E)), K_2(K_1(E)), \dots$ ”

This definition could easily be expanded to an  $N$ -player context in which  $K_n$ ,  $n \in \{1, \dots, N\}$  defined the knowledge functions of each of player. The key point is that the informational requirements for reciprocal deduction in situations characterized by strategic interdependence are quite stark.<sup>12</sup>

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<sup>11</sup> While Schelling (1960) argued that some sort of coordinated expectations were necessary to explain strategic interactions, those expectations were first described as an infinite hierarchy of beliefs about beliefs about beliefs by Lewis (1969). Schiffer (1972) and Aumann (1976) then each generated their own formalizations of the condition.

<sup>12</sup> Several attempts have been made to relax the strictness of the common knowledge assumption. Rubinstein (1989) examines a situation in which the infinite hierarchy is truncated to a finite level. Monderer and Samet (1989) instead relax the certainty with which the knowledge must be held, arguing that agents might form probabilistic beliefs about a fact at higher levels of the hierarchy even if true common knowledge is not available. But regardless of the specific conceptualization, the general finding is that “almost common knowledge” is insufficient to generate the deductive results upon which the game theoretic edifice depends.

There are, however, some fundamental problems with using this mode of formalization to describe actual human decision making. It is difficult to imagine that humans ever manage to achieve anywhere close to the full recursive belief structure necessary to engage in the reciprocal deduction imagined by game theory. Finite agents cannot formulate infinite mental states.<sup>13</sup> Moreover, even if pairs of humans could, through some undiscovered magic, manage to recognize the presence of the full infinite recursive belief structure, it is even more difficult to imagine that they could do so in the context of large groups. Doing so would require that *everyone* in the group know with certainty that everyone else, in every possible combinatorial set, know the relevant set of facts. In other words, rather than a single infinite hierarchy of subjective beliefs, for a group of size  $n \geq 3$  it would

require  $\sum_{k=2}^{n-1} \frac{n!}{k!(n-k)!}$  infinite hierarchies. An assumption which seemed dubious in

the context of paired interactions thus comes to seem downright impossible when applied to large groups.

Consider this from the perspective of a one-shot coordination game: that is, a game in which two players each receive positive payoffs  $x_1$  and  $x_2$  respectively if they manage to simultaneously choose the same move  $m$  from some set of moves  $\mathbf{M}$ , and 0 otherwise. In a standard game theoretic setup, the common knowledge constituted by the game structure consists of the set of moves and the payoffs that

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<sup>13</sup> This difficulty has been recognized at least since Lewis (1969). In an attempt to circumvent the issue, Chwe (1998) argues that people might use some sort of situational heuristic to determine when common knowledge is present even if they cannot actually deduce the full infinite hierarchy, but this simply begs

result from each strategy pair. How, given this information, are deductive agents supposed to solve this problem? Because they cannot communicate with each other before choosing their moves, they can do no better than randomizing uniformly over the set of possible moves. Hence, if there are  $p$  possible moves in  $\mathbf{M}$ , and thus  $p^2$  strategy pairs of which  $p$  represent successful coordination equilibria, then two perfectly deductively rational agents should manage to coordinate successfully with a probability equal to  $\frac{1}{p}$ .

In fact, however, behavioral economists have known for years that people in laboratory settings manage to coordinate successfully at far greater rates than would be predicted by game theoretic deductive logic. For instance, while there are at least a hundred different moves available in the one-shot version of the 'divide-the-dollar' game, almost all players manage to coordinate on a 50-50 split.<sup>14</sup> The great mystery then, lies not in coordination failure, but in the overwhelming human tendency towards coordination success. To solve this apparent difficulty, many game theorists have latched onto Schelling's (1960) notion of "focal points." A focal point is a strategic equilibrium that both players recognize as so obviously unique that they can choose it as a rallying point without explicitly consulting each other. This, however, raises the question of how such obviousness comes to be constituted in the first place. One might suppose that people engaged in such interactions simply choose the option which seems most obvious to them as individuals and

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the question: how do they develop such heuristics without first having a conceptual awareness of the infinite condition in the first place?

manage to coordinate simply because they independently generated identical judgements about the which move was most obvious. Mehta, Starmer, and Sugden (1994) call this "primary salience," but in a series of experiments in which they measure the level of primary salience for a variety of moves, they find that players manage to solve coordination games at a greater rate than would be possible if they were choosing moves only on the basis of primary salience. They take this to be evidence that players must be coordinating on the basis of "secondary salience," that is, their opinions about which option will have primary salience for the other player. However, (Bardsley et al. 2006) find that in many situations players are significantly more successful at coordinating their choices than they are at guessing which options will have primary salience for other players. It turns out that humans are actually relatively poor performers when it comes to guessing the explicit contents of other human minds.

Furthermore, for the obviousness that characterizes focal points to influence the choices of deductively rational agents in a game theoretic framework, that obviousness would itself have to be common knowledge amongst all the players. This means that rather than avoiding the difficulties inherent in the concept of common knowledge, the focal point account simply reproduces those difficulties. We thus find ourselves at a loss to explain the psychological mechanisms by which focal points might be constituted. We are supposed to infer their existence from the presence of higher-than-expected rates of coordination, but we cannot explain how

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<sup>14</sup> This was originally shown in informal experiments Schelling (1960) conducted with his students, but the results have since been replicated in a wide variety of contexts.

they emerge, or the conditions for their efficacy. And even if we could explain their emergence, its not clear how exactly we could characterize their content. It is simply not plausible to suppose that people carry around in their heads explicit solutions to all of the coordination problems that they might encounter.<sup>15</sup> Focal points, while serving as a sometimes helpful metaphor, thus turn out to be an insufficient model of the means through which actual human agents solve their coordination problems.

### **2.3.2 Intersubjectivity as Collective Knowledge**

The other prominent perspective on the nature of intersubjectivity receives articulation from the constructivist school, with longstanding roots in sociology and critical theory. With so many problems apparent in the notion of deductive agents, these scholars have chosen instead to focus on those “cultural” elements that purportedly exist independent of human agency. Different terms are used in different fields: sociologists tend to build on Durkheim’s (1898/1953) notion of “collective representation” as knowledge structures held by the group in the aggregate, whereas many critical theorists refer back to Foucault’s (1979; 1980)

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<sup>15</sup> Two interesting solutions to the problem of content have been proposed. Bacharach and Bernasconi (1997) argue that rather than each specific option being characterized as more or less focal, people instead utilize “frames” to rank various dimensions of difference/similitude according to varying degrees of relevance and then differentiate specific options on the basis of those dimensions that have been deemed most relevant (see also Bacharach and Stahl 2000). Richards (2001) makes an interesting attempt to abstract away from focal points to an account based on “shared mental models,” in which players do not have to agree about which specific move is most obvious, but instead just have to agree about the relations of similarity between moves (see also Denzau and North 1994). However, with each of these solutions the fundamental problem still remains: if the “frames” or “mental models” that people carry around in their heads are not nearly universally identical, and there is little reason to believe they would be, then their ability to coordinate remains a mystery.

conception of “discourse” as an entity which *constitutes* human individuals rather than simply arising from them. While there are important differences between these perspectives,<sup>16</sup> the key point for the present discussion is that they share an ontological logic which characterizes that which is ‘beyond subjectivity’ as little more than an expanded, all-encompassing subjectivity. In so doing, they *entify* intersubjectivity and then frequently *anthropomorphize* it. In other words, intersubjectivity comes to be imagined as a separate entity that floats above human interactions and exercises influences that are independent of those interactions, an entity which itself comes to resemble a human form by virtue of being endowed with knowledge, beliefs, values, and memories.<sup>17</sup>

It is difficult to imagine how a coherent program of empirical investigation could be grounded in such conceptual framework.<sup>18</sup> Let me run the risk of stating the obvious: groups cannot have beliefs, knowledge, or intentions. Those are subjective mental states that require the presence of a mind, and a group *as* group has no mind because it has no brain. Methodological individualists thus rightly criticize constructivist accounts of intersubjectivity for constructing an image of group consciousness that is at loggerheads with the seemingly obvious physical facts of human existence (Little 1991).

Recognizing the difficulties inherent in views which divorce culture from micro-level mental states, Wendt argues that Durkheimian and Foucauldian views of

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<sup>16</sup> See (Wendt 1999, 161-164) for an interesting discussion.

<sup>17</sup> See, for instance, Gilbert (1987) who argues that we can speak of group ‘beliefs’ that need not be held by any of the individual members of the group.

<sup>18</sup> And indeed, many who espouse such views deny the very possibility of empirical investigation into these matters.

intersubjectivity *reify*<sup>19</sup> culture, and thus render impossible any attempt to explain its production (1999, 162-164). Wendt claims that we should instead utilize the concept of “collective knowledge” to represent the fact that macro-level intersubjective states, while not *reducible* to individual subjective states, nevertheless *supervene* on those states. As he explains:

“The concept of supervenience ... describes a non-causal, non-reductive relationship of ontological dependency of one class of facts on another ... [O]ne class of facts (macro) is said to ‘supervene’ on another class of facts (micro) when sameness with respect to micro-states entails sameness with respect to macro-states” (1999, 156).

Hence, collective knowledge is said to be dependent on individual subjective beliefs, but not necessarily reducible to those beliefs. This means that while collective knowledge at the macro-level cannot shift without some corresponding shift in micro-level individual beliefs, we could nevertheless observe changes in particular individual beliefs without observing a change in the corresponding macro-level state of collective knowledge.

This insight, that intersubjective states are characterized by “multiple realizability” (Wendt 1999, 156) is important. However, the concept of supervenience can only take us so far in understanding its implications. Two problems in particular deserve noting. First, the characterization of the macro-state as “collective knowledge,” while avoiding the reification of intersubjectivity, still demands that intersubjectivity be imagined as consisting simply of knowledge, beliefs, and values – that is, subjective mental states – which are held by groups

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<sup>19</sup> That is, they characterize as natural and inevitable that which is actually produced and maintained through human agency.

rather than by individuals. Intersubjectivity is thus, according to Wendt's account, nothing more than *subjectivity writ large*. But because groups *as groups* have neither brains nor minds, it is not clear how they could have subjective mental states. Second, the concept of supervenience on its own is little more than a conceptual placeholder, an empty generic container awaiting explanatory content. Simply asserting that macro-states supervene on micro-states does not tell us *how* exactly any of those states come to be constituted.

On the one hand, then, we have a conceptualization which characterizes intersubjectivity as common knowledge, as a product of the *recursion* of subjective mental states. And on the other hand, we have a conceptualization which characterizes intersubjectivity as collective knowledge, as a product of *supervenience* upon subjective mental states. We are thus left with two impossibilities: first, the impossibility of finite agents conceiving of infinite states, and second, the impossibility of the existence of groups which have knowledge and memory without having minds or brains. The fundamental problem lies in trying to characterize intersubjectivity as some form of subjective mental state, by using the language of "intersubjective beliefs." In the next section, I will argue that we should reframe our focus away from intersubjective *beliefs*, and towards intersubjective *capabilities*, but this will require that we first develop a conceptual component which both of these perspectives lack: an intersubjective theory of communication that allows us to describe the structural conditions upon which intersubjective states depend and through which they vary.

### **2.3.3 Communication as Intersubjective Accomplishment**

The human condition is tragic: born with a desire to know the world and to know ourselves, our peculiar brand of subjectivity is characterized by a combination of diversity and opacity. Our experiential reality is filtered, distorted, and biased before it ever reaches higher levels of conscious awareness, leaving us with only an inevitably partial and fragmentary knowledge of the world around us. But compared to our knowledge of the subjective conditions in the minds of other people, our knowledge of the world before us seems downright clear-sighted. We experience human interactions on a daily basis, the behavioral results of which force us to infer the presence of a vast multitude of attitudes, values, and beliefs, but we can directly perceive none of them. If our vision of the world is blurred, our vision of each other is virtually nonexistent, dark to the point of outright opacity in the face of overwhelming perspectival diversity.

The great mystery, then, of human interactions is not that we find them so difficult, but that in so many contexts we find them effortless. The subjective gulfs are wide, but we cross them again and again without even being aware of having done so. One striking example of this ability is the unexpectedly high success rate observed in the coordination game experiments described above. Even in the absence of explicit communication, players consistently manage to jointly coordinate their expectations. While focal points and the corresponding assumptions concerning common knowledge and deductive rationality turned out to be a poor method of explaining this regularity, the regularity persists nonetheless. And moreover, the regularity clearly points to an ability on the part of human subjects to engage in some form of joint alignment of perspectives that would be impossible for agents

who possessed only the skills of deductive rationality. What, then, can we infer about the cognitive processes that underlie this ability? First, because the ability persists in the absence of direct contact between the players, it must be tacit, understood implicitly by the participants rather than constructed explicitly through their interactions. Second, since it is implausible to suppose that people carry around in their heads specific solutions to each of the wide variety of coordination problems they might face, the ability must be based on more broadly applicable symbolic principles of categorization that allow for generalization across varying contexts. In other words, the participants in such an interaction must engage not only in a coherent categorization of the choice space, they must engage in a *jointly tacit categorization* of the choice space.

The linguistic philosopher Ragnar Rommetveit calls this a “contract of categorization” and argues that such intersubjective engagement forms the basis for all human communication (1974, 28). There is, in fact, a great deal of similarity between the cognitive operations required to tacitly coordinate the selection of moves in a coordination game and those required to tacitly coordinate the selection of interpretative frameworks from which to judge the meaning of an utterance.<sup>20</sup> To see how this works, let us return to the most basic of communicative interactions, those which occur between two individuals in face-to-face dialogue. Suppose that while driving through the country, John looks over to Jane and says, “Did you see that rabbit?” How is this utterance to be understood? Jane must first engage in a categorization of potentially visible objects to differentiate those objects which fit

into the category of 'rabbit' and those that do not. But the 'that' in the utterance indicates a greater degree of specificity: it is not just any rabbit, but 'that' rabbit that is the object of the question. If there is only one rabbit sitting in a nearby field then judging the nature of the reference may be relatively unproblematic. It would be similarly unproblematic if there were a multitude of brown rabbits in the field with a single albino rabbit sitting in their midst. However, in this case the meaning of the statement would be quite different than in the first instance, and that difference would be in no way reducible to the utterance itself, but could instead only be attributed to the *intersubjective context* in which the utterance was made. Regardless, seeing no furry long-eared mammals in the nearby field, Jane replies, "No," and then as she turns her head from side window and sees a shiny neon green Volkswagen pulling away down the road exclaims, "Oh, *that* rabbit!"

Several lessons can be derived from this example. First, even in such a simple interaction, the possibilities for errors of categorization are literally infinite. There is no end to the dimensions along which difference and similarity can be judged. Second, we are frequently (perhaps always) incapable of fully adopting the perspective of another person, even when no effort is made to hide that perspective. Given the perspectival diversity which characterizes the human condition, the success of a communicative interaction cannot depend on one person's ability to literally see what another sees, but rather must depend on their ability to *jointly* adopt a decentered perspective which may bear only a slight resemblance to their

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<sup>20</sup> For an interesting discussion of this analogy, see Sally (2002).

individually constituted subjective visions. Communication is thus properly conceived not as an individual act, but as an *intersubjective accomplishment*.

As Rommetveit argues, jointly understood meanings can only be constructed “to the extent that the participants in the act of communication are capable of decentered shifts of perspectives, and as a result of temporary convergence with respect to categorization of multifaceted objects, events and states of affairs” (1974, 52). This decentration of perspective bears some similarity to George Hebert Mead’s (1934) notion of “the generalized Other.” For Mead, it was only from such a generalized perspective that human agents could seek to make judgements about social roles and expectations. However, the examples above indicate that no such universal perspective is available in the abstract, it can only be constructed in the context of specific others in specific situations. Moreover, it is not just an attunement to the other that generates the intersubjective context necessary for the construction of coordinated meanings, but rather an “attunement to the attunement of the other” (Rommetveit 1992, 23). It is necessarily a joint movement to a point of projection that is external to both of the participants.

The constitution of intersubjectivity thus results not from a summation of perspectives, and not from an infinitely iterated recursion of perspectives, but from a movement of *abstraction*. Finding ourselves without access to those unique subjective elements of the other’s perspective which render it cognitively idiosyncratic, that immense web of differentially valenced associations which constitutes an individual’s subjectivity, we have no ability to simply add those features to our own cognitive map and thereby form a unified whole. Rather, the only cognitively viable option is the transcendence of our parochial selves, the

stripping away of that which is specific to a particular perspective until the resulting lines reach a point of intersection. This transcendence thus represents not an intersubjective *belief*, but rather a capability to engage in what we might label *intersubjective inference*. Impossible to achieve in its fullest form, intersubjectivity is always only partially constituted. It is a capability which is not simply present or absent, but rather exists along a continuum representing the relative ease with which intersubjective inference can be pursued.

Intersubjective inference is also a capability which, because it represents a joint movement towards an external abstraction, can only be held by groups of two or more. We are thus now in a position to give content to Wendt's invocation of the principle of supervenience. Intersubjective inference is a capability that while dependent on individual subjective states, cannot be reduced to those individual subjective states, precisely because intersubjective inference can only be pursued jointly. It is on the basis of such jointly cognized movements that all human communication occurs. We are thus now also in a position to revise our characterization of the communicative interactions that form the foundation for the theories and simulations gathered under the umbrella of the "social network paradigm" in Section 2.2. Every dyadic link in the network of social interactions described by such models requires a dyadically constituted pursuit and achievement of intersubjective inference. In other words, every communicative link previously characterized as simply a vector for the virus-like transmission of information, is itself an intersubjective accomplishment on local scale.

This, then, leads finally to a revision of the definition of "communicative structure" presented in the introduction. A communicative structure is not simply a

system of constraints on the movement of messages (although it is this as well). A communicative structure is a system of constraints on the production of intersubjectivity, that is, on the achievement of the capability to engage in intersubjective inference. Communicative structures *constitute* groups as sets of individuals amongst whom this capability obtains. Again, this is not to claim that communication does not transmit information. Rather, it is to claim that this is only one of its effects.

### **2.3.4 The Obelisk and the Crowd**

To better understand the structural nature of these effects, let us construct a vision of an idealized group setting. Imagine a vast crowd seated in a circular amphitheater, all facing inwards towards the center. And imagine further that at the center of the stadium's circle stands not a human speaker, but a mute tower, an immense obelisk towering above the gathered observers, simultaneously in view of them all. The overall outline of the obelisk is quite regular in its shape, with four equally sized faces forming a square at the base and tapering to a point at the shaft's peak. Nevertheless, its surface is so multifaceted and multitextured that the precise image facing each member of the assembled crowd is different. As the location from which their perspectives are generated varies, so too does their experience of the object, even as the objective identity of the observed object remains constant. This experiential variance becomes more severe as the perspectives become more opposed. It reaches its maximum for any two individuals sitting at exactly opposite points of the circle, whose visions of the obelisk are

entirely distinct and non-overlapping, and it reaches its minimum for any two individuals seated directly next to each other, whose visions of the obelisk overlap almost completely. None of them, however, can ever hope to 'adopt the perspective of the other,' to inhabit the full richness of another's experiential reality. They cannot see what others see. They are each aware of this inability, while simultaneously being jointly aware that in an important sense they are all nevertheless viewing the *same* object. They experience the obelisk as shared, but not in a form that is not in any way reducible to their individual subjective mental states.

This then is the perfect analogy for the human condition. Faced with a world that is known to be constant and shared, we nevertheless face an immense diversity and opacity of perspectives, a condition of deep pluralism as regards our subjective mental states. Even in the face of this seemingly overwhelming diversity and opacity, though, there is something unavoidably unifying about the structural arrangement of the obelisk and the crowd. It is no coincidence that viewed from afar, this structural arrangement would be indistinguishable from a posture of communal worship. The crowd in such a stadium finds itself drawn, as an organic whole, to an imagined point of joint convergence and experiences the abstract sharedness of the group's perspective. As Hannah Arendt explains:

"the reality of the public realm relies on the simultaneous presence of innumerable perspectives and aspects in which the common world presents itself and for which no common measurement or denominator can every be devised. ... This is the meaning of public life ... the reality rising out of the sum total of aspects presented by one object to a multitude of spectators. Only where things can be seen by many in a variety of aspects without changing their identity, so that those who are gathered around them know that they see sameness in utter diversity, can worldly reality truly and reliably appear" (Arendt 1958, 57).

However, for all the reasons discussed in the previous section, this movement towards 'the sum total of aspects,' cannot be one of addition but must instead be one of abstraction. Although the members of the crowd lack access to the experiential perspectives of each other, and thus lack the ability to simply combine those perspectives into a unified whole, they nonetheless possess the ability to imaginatively project their perspectives to an external point of intersection. Their individual perspectives intersect at a point centered above their heads, above the stadium, and above the monument. Abstracted away from the parochial details of their individual subjectivities, away from the multifaceted and multitextured richness of the monument's three-dimensional form, the object seen from on high is simply a two-dimensional square, an awareness of which is available to all. What they share then is not the object itself, but a symbol, a dimensional reduction of their experienced reality.

It is this capability to engage in a joint movement of abstraction which lies at the root of intersubjective inference. It is a capability which is necessarily partial, because it is interpretive, and the basis upon which to construct such interpretations is always incomplete. It is based on what may seem a peculiar aspect of our cognitive apparatuses: that the immense diversities of our individual experiences become more readily shareable as they are rendered more abstract. This is the magic of communication: it is the process by which our experiences are reduced to a symbolic form which renders them suitable for transmission and reception. The obelisk-as-object transmits a common message to all receivers in the form of its objective status as a unified entity, but the receivers of this message experience it differently, a divergence of experience as great as the diversity of perspectives from

which the object is viewed. But even as the obelisk-as-object is necessarily experienced separately, the obelisk-as-symbol can be experienced jointly precisely because its abstract form, stripped bare of its subjectively idiosyncratic trappings, is available to all.

It is thus the joint arrangement of the obelisk and the crowd which constitutes, intersubjectively, a communicative structure. The structure induces a shared perspective through its communicative effects, but those effects are impossible to describe in terms which reduce communication to the mere transmission of information. Indeed, part of the importance of the example lies in the fact that these effects seem to occur in the absence of many of the factors that are usually assumed to form the foundation for human communication. The obelisk has no intentions, no interests, no persuasive abilities, no credibility, and no reputation for truthfulness. It has effects only by virtue of the communicative structure which it and the crowd jointly constitute. It is this structural arrangement, and the joint perspectival abstraction it makes possible, not any particular act on the part of an individual, which creates the necessary conditions for the pursuit of intersubjective inference.

## ***2.4 Public Communication and the Macro-Genesis of Culture***

Seen from the perspective of group-level communicative effects, it no longer seems possible to characterize communicative structures solely in terms of informational network structures. Communicative structure is no more reducible to network structure than intersubjectivity is reducible to subjectivity. An exclusive

focus on “private communication,” the dialogical mode of communication that occurs between two individuals, while apparently a reduction of communication to its most basic foundations, in fact serves to obscure the full extent of the intersubjective effects of communication in its broader forms. This dyadic, informational view of communicative structures renders nearly impossible any attempt to conceptualize their constitutive effects at the level of broader groups. This is the task to which we now turn.

### **2.4.1 Public Communicative Structures**

One of the central arguments of *communicative structuralism* is that a particular form of communicative structure is necessary for the constitution of intersubjectivity on a group scale, rather than just between two individuals. We can label this class of structures *public communicative structures*. They are differentiated from private communicative structures, not by the pattern of linkages, but by the relationships between linkages. While network structures are generally sufficient for the purpose of describing the vectors along which informational flows can travel from one point to another and thereby influence subjective mental states, a broader array of structural elements will be needed to characterize the communicative constraints on the production of intersubjectivity. These elements, which we can array under the general heading of *communicative mechanisms*,

constrain the patterns of transmission and reception between parallel linkages,<sup>21</sup> in ways that can vary even when network structure is held constant.

*A public communicative structure* is one characterized by communicative mechanisms which produce the following constraints between a given set of parallel communicative linkages:

**1. Synchronized transmission:** This condition requires *that message transmission occur identically towards all recipients*. When linkages are constituted by a private communicative mechanism, such as verbal utterances, then what is said to one recipient might bear no resemblance to what is said to another recipient. On the other hand, if the relevant linkages are constituted by a public communicative mechanism, such as the printing and delivery of a newspaper, then what is said to one recipient is necessarily what is said to all of them, because the relationship between linkages thusly constituted requires that messages sent along them be identical. It is through this condition that message transmission comes to be generalized as transmission to a collective audience.

**2. Joint awareness of reception:** This condition requires *that message reception occur in a form that allows recipients to know that they are not alone in their reception of the message*. Obtained in idealized form by a circular array of viewers who can each see each other attending to a visual

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<sup>21</sup> By "parallel" linkages, I simply mean those which originate from a common source.

message, this condition can also be achieved by a loud yell which is known to travel to all corners of a room, a television broadcast that is known to be widely viewed, or a religious text which is known to have been widely read. It is the condition through which the subjective experience of message reception is expanded into an intersubjective experience.

From the informational perspective of private communication, each of the numerous public communicative structures encountered in human societies – religious congregations, street rallies, television broadcasts, etc. – is nothing more than an additional set of linkages layered atop the social network, just another vector through which information can be transmitted, virus-like, between individuals. However, when present together, these constraints constitute a different kind of communicative structure: one which creates the conditions for the public constitution of intersubjectivity, and hence the pursuit of intersubjective inference at the level of a group rather than simply between pairs of individuals. Public communicative structures make it possible for a group to gain an awareness of itself as a cohesive collective, because they represent arenas of shared expression in which it becomes possible to construct communities of symbolically shared experience. That is, they constitute groups *as groups*, by “offering the audience an image of itself ... as a knowable community” (Morley 1995, 66).<sup>22</sup> Constrained by the principles of synchronized transmission and joint awareness of reception, the medium forces both

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<sup>22</sup> Chayko refers to this as a “community of the mind” (2002, 60-63). Many have argued for the nationally unifying effects of mass media, including Deutsch (1953), Gellner (1983), Anderson (1991), Schlesinger (1991), Calhoun (1991), and Servaes (1997). On this point, see also Meyrowitz (1985, 1997).

a generalization of message production and a generalization of message reception. It is thus through public communicative structures that the capability to engage in intersubjective inference is constituted amongst the members of a group, and thus through such structures that a group can become aware of itself *as* a group.

Moreover, by recognizing the structural basis upon which the ability to engage in intersubjective inference is founded, it becomes possible to investigate the effects of variation in the capability to engage in intersubjective inference through an analysis of variation in the structures through which such capabilities are constituted. Public communicative structures vary along such a wide variety of dimensions that it would be impossible to catalogue them all here. Instead, we will focus on those dimensions which most directly affect the bounds along which groups are constituted, that is, those structural dimensions which constrain the composition of the community of receivers. The most basic such dimension is the *magnitude* of a public communicative structure, which refers to the absolute size of the community within its reach. For instance, the magnitude of the public communicative structure constituted by a priest's sermon would be equal to the number of parishioners in attendance, whereas the magnitude of the public communicative structure constituted by *The New York Times* would be equal to its total global circulation. Often though, we will instead be interested in the relative *density* of a public communicative structure, which refers to the proportion of a given population that has the capability to receive its messages. This structural dimension can only be measured relative to the size of some exogenously given population. For instance, the national density of the public communicative structure constituted by CNN in the United States would be equal to the proportion of residents with cable television

subscriptions and a comprehension of spoken English. Communicative structuralism takes as one of its foundational hypotheses that those public communicative structures with relatively higher densities amongst a given population will exercise greater intersubjective effects than those with relatively lower densities, because the former allow for the construction of more robustly unified audiences than the latter.

The final dimension to be considered is the relative *bias* of a public communicative structure, which refers to the correlation between a particular individual trait and the probability of message reception. This is not the more common conception of "bias," which treats it as a property of messages which deviate in systematic ways from the truth, but rather a structural characteristic concerning the means through which messages are disseminated. This structural dimension can only be measured relative to the distribution of some individual-level trait or set of traits in the population. For instance, if there were a positive correlation between the individual-level trait of being Muslim and the probability of being in the set of individuals who receive messages from a particular public communicative structure, then that structure would be considered "Muslim-biased" and the degree of structural bias would be proportional to the strength of the correlation. There are an endless array of dimensions along which such structural bias could evidence itself – linguistic, religious, ethnic, etc. – each representing another more or less porous intersubjective cleavage. The relevant dimensions may be constituted by physical forces (such as a rural absence of electricity with which to power a radio), subjective forces (such as an inability to read written statements), or institutional forces (such as a legal prohibition on transnational broadcasts). It is important to recognize that these are not simply structural barriers to the

transmission of information, but structural barriers which circumscribe the bounds of intersubjective communities. In other words, they circumscribe bounds on the set of individuals who, by virtue of their inclusion into a given public communicative structure, have a relatively greater ability to engage in intersubjective inference. In an important sense, then, communicative boundaries *are* group boundaries.

### **2.4.2 The Speaker and the Audience**

Seen from a another perspective, what different public communicative structures do is construct different kinds of *audiences* by creating different patterns of intersubjective inclusion and exclusion. Consider the position of a speaker at the center of a public communicative structure. To be effective in constructing her message, a message which will be transmitted identically and jointly to all recipients included in the structure's reach, she must carefully consider the composition of the audience constituted by the structure. All messages, all spoken and written expressions, take the form of a series of comparisons and contrasts along some subset of the infinite array of dimensions of difference and similitude that can be symbolically evoked.<sup>23</sup> Perhaps not coincidentally, so too are our most basic cognitive structures composed in large part, if not entirely, of positively or negatively valenced connection strengths between neural units forming a complex web of symbolic associations.<sup>24</sup> On an individual level, then, a message can be said to

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<sup>23</sup> See Saussure (1959) for an extended discussion of how meaning functions as a system of contrasts.

<sup>24</sup> Increasingly prominent in the field of psychology, the "connectionist" school is promoting the conclusion that all cognitive functions must be explicable from within such a framework, because the physical

*resonate* to the extent that its pattern of contrasts, its proposed system of categorization, is congruent with the corresponding pattern in a particular mind. And moreover, we can reasonably assume that the degree to which a message impacts the values, attitudes, or beliefs of an individual will be a positive function of the message's resonance with particular aspects of that individual's mental schemas.<sup>25</sup>

The speaker at the center of a public communicative structure will thus have to carefully consider which symbolic contrasts and associations are most likely to resonate with her audience.<sup>26</sup> Moreover, any audience of substantial size will necessarily be characterized by some degree of diversity in the subjective mental states which form the basis for such resonance. As we saw in Section 2.2, the parochial and clustered nature of the social networks which channel the subjective effects of informational flows, tends to generate a consolidated diversity of correlated attitudes, values, and beliefs. When combined with the constraints of a public communicative structure – synchronized transmission and joint awareness of reception – this diversity forces the speaker to face a trade-off between two broad categories of communicative strategies: *broadcasting* and *narrowcasting*.

Broadcasting refers to the attempt to construct messages which will have the broadest possible resonance, constrained in principle only by the magnitude of the

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substrate of our minds is nothing more than a complex web of neurons connected to each other with stronger or weaker bonds. With more research, this mechanism may eventually provide a micro-foundation for the process by which newly encountered information produces changes in subjective mental states. See Rumelhart et al. (1986), Lavine and Latané (1996), Read and Miller (1998), and Read and Urada (2003).

<sup>25</sup> A wealth of psychological evidence exists for the proposition that individuals respond more positively and openly to messages which are congruent with pre-existing schemas (see Fischer et al. 2005).

<sup>26</sup> The experiments of Fussell and Krauss (1989; 1992) and Krauss, Fussell, and Chen (1995) demonstrate that these kinds of calculations are systematically and successfully pursued by actual speakers. See (Chiu, Krauss, and Lau 1998) for a review.

public communicative structure through which the messages are disseminated. However, as the potential audience provided by given public communicative structure becomes more diverse, the messages of a speaker pursuing a broadcasting strategy must become more abstract, falling back upon those dimensions of difference and similarity that are most widely recognized and appreciated. Narrowcasting refers to the attempt to construct messages which will have strong resonance with only a subset of the potential audience provided by a given public communicative structure. Rather than seeking the most common of denominators, such a communicative strategy seeks instead to target a particular combination of cognitive associations which is present in the minds of a parochially clustered social constituency. If we assume that public communicators wish, above all, to mobilize the strongest possible base of support for themselves through the generation of positively valenced cognitive associations in their listeners, then they face a complex dilemma. On the one hand, messages tailored to more narrow constituencies can combine a larger number of symbolic dimensions and thus will resonate more strongly. On the other hand, messages tailored to broader constituencies, while producing positive associations in the minds of a larger number of listeners, will resonate more weakly, and thus open the speaker to the threat of 'flanking' by alternative communicators who adopt more narrow communicative strategies. The simulations presented in Chapter 3 demonstrate that when faced with such a competitive communicative environment, the messages of public communicators

competing for resonance come, in many ways, to reflect the pre-existing dispositions of the audience.<sup>27</sup>

Seen from this perspective, we might make the mistake of concluding that the messages deployed through public communicative structures are little more than a mirror held up to the social landscape, simply reflecting back those dimensions of subjective cognitive categorization which happen to be appreciated and recognized by sufficiently large sets of individuals. However, when viewed from the perspective of intersubjective inference, we can see that publicly disseminated messages do not simply reflect systems of categorization, but also *induce* systems of categorization. Rommetveit refers to this as the “proleptic” effect of communication, by which a speaker tacitly induces the listener to adopt those symbolic premises which are necessary for a message to be rendered coherent and meaningful (1974, 87-88). While Rommetveit restricts his discussion of proleptic effects to those communicative interactions which occur between a pair of individuals, such effects are also critical to an understanding of public communication.

The constraints which constitute public communicative structures – synchronized transmission and joint awareness of reception – induce not only a generalization of message transmission on the part of a speaker, but also a generalization of message reception on the part of the audience. A publicly constituted audience is not merely an atomized collection of individuals (although it is this *too*). While each member of the audience has her own subjective experience

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<sup>27</sup> This general pattern is also consistent with game theoretic models of competitive mass media markets. See Mullainathan and Shleifer (2005), Gentzkow and Shapiro (2006).

of the message, knowing themselves to have been addressed as a collectivity induces a proleptic search on their part for a system of categorization which is available to all those being addressed, and which would therefore allow them to *jointly* comprehend the message. Just as the obelisk can only be jointly understood in symbolic form, so too with all publicly disseminated messages. The effect of a publicly disseminated message is thus not only a function of its reception by the subjective 'I', but also a function of its reception by the intersubjective 'we.' And the bounds of this 'we' are *structurally* constituted. That is, they are determined by the nature of the public communicative structure through which the 'we' gains an awareness of itself. It would therefore be incorrect to characterize public communications as a mere reflection of pre-existing subjective mental states. A strategic communicator deploys messages which not only reflect the individual dispositions of the audience's members, but which also *construct* the audience as a particular kind of cohesive collective. The speaker and the audience thus necessarily find themselves in a relationship of *mutual constitution*.

### **2.4.3 Subjectivity, Intersubjectivity, and the Constitution of Groups**

The most obvious elements of our lived experiences of "cultural" difference tend to revolve around differences in subjective mental states – the attitudes, values, and beliefs which, when divergent, make difficult the negotiation of our day-to-day activities. This has led many to characterize the nature of group divisions as being driven primarily by differences in subjective beliefs. However, while such differences are quite real, they do not fully describe the nature of the divisions that

separate us. The reality of the experience of cultural dislocation is far more profound than a simple unfamiliarity with certain idiosyncratic beliefs. As Wittgenstein says,

“We learn this when we come into a strange country with entirely strange traditions; and, what is more, even given a mastery of the country’s language. We do not *understand* the people. (And not because of not knowing what they are saying to themselves.) We cannot find our feet with them” (2001[1953], 190).

Note that it is not only the internal obscurity of the human mind which creates this difficulty. *We* cannot find our feet with *them*. The barriers are not only subjective, but also intersubjective.<sup>28</sup> Human groups are not simply collections of individuals who happen to have a particular combination of correlated traits and dispositions. They are sets of individuals who imagine themselves as members of the group, who jointly recognize each other as members of the group, and who jointly experience attachments of loyalty and solidarity to the group. “Culture,” properly understood, is thus neither an entity which floats above our heads, nor an entity which resides in our heads. It is not an *entity* at all. It is a jointly constituted *capability*: the capability to engage in intersubjective inference. Whereas the attitudes, values, and beliefs held by individuals can be characterized as subjective mental states, the jointness of the abstract imagination which constitutes the group *as* group is quintessentially intersubjective.

A coherent account of the conditions necessary for the construction and maintenance of group solidarity thus requires an accurate understanding of both subjective and intersubjective communicative effects. It will, in other words, require

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<sup>28</sup> This reflects the longstanding anthropological realization that culture cannot be reduced to events that go on ‘inside the head’ of individual agents, but rather is constituted in public (Geertz 1973). On this

that we bring together our discussions of private communicative structures and public communicative structures to describe how the two interact. As we saw in Section 2.2, private communicative structures are responsible for channeling flows of information through dyadically constituted networks of social linkages. Due to the homophilic and transitive topology of these ties, the subjective mental states that form from human interactions tend to be arrayed in socially (and spatially) clustered patterns, creating arbitrary correlations between one's geographic location, one's physical traits, and one's attitudes, values, and beliefs. And as we saw in Section 2.4, public communicative structures are responsible for the construction of the capability to engage in intersubjective inference, that is, the capability to engage in joint symbolic categorization which abstracts away from perspectival idiosyncrasies. Human groups are constituted at the intersection of these two dimensions: both by their subjective traits and by their ability to engage to engage in intersubjective inference. The correlated individual-level mental states produced by private communicative structures thus constitute the subjective substrate upon which public communications are projected. Private communicative structures create numerous latent constituencies awaiting the awakening of public consciousness, subjectivity awaiting intersubjectivity, but it is only through public communicative structures that this awakening can reach fruition, in the form of a group's awareness of itself as a cohesive collective.

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point, see also Taylor (1971, 60). For an interesting discussion of the normative implications of this view, see Johnson (2000).

## **2.5 Communication, Conflict, and Political Stability**

Although many of the relationships described above are constitutive in nature, this should not prevent us from analyzing their *effects* from within a causal framework.<sup>29</sup> The recognition that these constitutive relationships are structurally produced and constrained, allows us to analyze variation in their effects through an examination of variation in the structures through which they are constructed. There are, in other words, structurally-induced regularities to the constitution of intersubjectivity that we can submit to empirical scrutiny.

At the most basic level, different public communicative structures make possible the construction of intersubjectivity on different scales, and along different bounds. That is, they produce relatively greater or lesser abilities to engage in intersubjective inference amongst particular sets of individuals. In principle, there is no minimum nor maximum to the scale upon which the capability to engage in intersubjective inference can be publicly constituted. At the smallest scale, it can be instantly constituted amongst those within the reach of a particular human voice. With nothing more than verbal utterances, intersubjectivity can be constituted amongst three conspirators huddled in a corner, amongst ten villagers gathered around a fire, amongst a hundred parishioners listening to a sermon, or amongst a thousand soldiers arrayed before their general. However, the constitution of intersubjectivity on scales that transcend the natural reach of human vocalization

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<sup>29</sup> This claim stands in contradiction to most constructivist accounts which assert that "causal" and "constitutive" are two diametrically opposed logics for the analysis of social and political phenomena. For an extended discussion of the distinction, see Wendt (1999). For a persuasive critique of the philosophical basis for the distinction, see Kurki (2006).

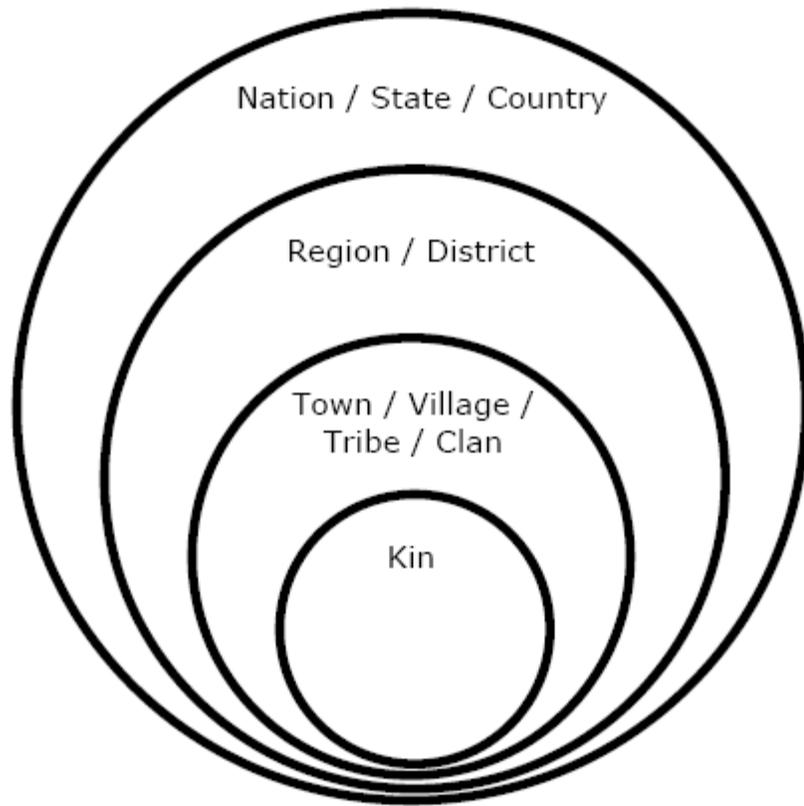
requires some medium of mass communication. Historically, such public media have taken a wide variety of forms, ranging from the acoustic amplification of ancient Rome's coliseum, to the proclamations of medieval courts issued via handwritten scrolls, and to the modern technologies of the printing press, the cinema, and the transmission of electromagnetic signals. All communicative structures are intersubjective, they just vary in the scope and strength of the intersubjective communities they constitute.

The historical and contemporary importance of such communicative structures lies in their ability to facilitate not just the transmission of information, but the construction of *group loyalty*. Loyalty to a group, as opposed to a particular individual, is a strange phenomenon because there is no real entity to which the loyalty can be anchored. When loyalty is affixed to a group, it can only be a symbolic construction because the group itself is nothing more than a shared abstraction. Public communicative structures thus induce group loyalty by providing a means for the construction of shared symbolic abstractions to which feelings of loyalty can be attached.<sup>30</sup> In fact, it is through such structures that all variety of forms of popular mobilization are pursued.

The development of the technological means to construct and mobilize intersubjective communities on broader scales has therefore also served to produce increasingly broad arenas within which the competition for solidarity and loyalty can be pursued. Such competition is especially intense in democracies which provide

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<sup>30</sup> As Gould argues, "When someone responds positively to an appeal for to solidarity, then, he or she has acknowledged membership in the group whose boundaries are defined by the terms of the appeal" (1995, 14).



**Figure 2: Nested Levels of Loyalty Aggregation**

direct institutional rewards to those who can most effectively deploy mobilizational appeals, but it also occurs in more authoritarian settings where some minimum level of group loyalty must be maintained amongst a sufficiently large coalition of supporters to prevent the overthrow of the regime. Regardless of regime, there are always interests to be served by group mobilization along particular lines rather than others and on certain scales rather than others (see Figure 2), and thus always a variety of voices competing intensely to be heard. Price has referred to this competitive structure as a “market for loyalties,” (1995; 2002) but the market metaphor is not quite correct. There are indeed regularities to the pursuit of group constitution, but they are not the regularities of symmetrical exchange. They are, rather, the regularities induced by the intersubjective structure of public communication.

### **2.5.1 Communicative Power and Structural Strength**

How then are we to understand the immense variation in the levels of success achieved by competitors for group loyalty? What, in other words, accounts for variation in *communicative power*? The framework of communicative structuralism leads us to look towards the structural features of the public media through which mobilizational appeals are disseminated. By doing so, we can see that communicative power is itself a structural phenomenon. It does not inhere in an individual, it cannot be held or possessed, but instead is the necessary consequence of an individual’s position in a broader communicative structure. Moreover, public

communicative structures can be seen to vary along a number of dimensions which jointly determine a structure's *strength*.

As we saw above, the pursuit of greater and greater degrees of message resonance by communicative competitors would, if unconstrained by additional structural factors, create an unavoidable incentive towards narrowcasting strategies which target relatively homogenous social clusters. Group loyalty would then be constituted on ever smaller scales, creating nearly infinite fragmentation. Luckily though, there are additional structural factors which complicate matters somewhat. The first of these are institutional incentives which reward the mobilization of larger and more diverse constituencies rather than more narrow constituencies.<sup>31</sup> However, such incentives only create the demand for broader strategies, not the opportunity.<sup>32</sup> Opportunity, in this sense, is constituted by the relative strength of different public communicative structures at various levels of aggregation. The greater the strength of a public communicative structure at a given level of aggregation (for instance, at the national level), relative to the strength of the public communicative structures at lower levels of aggregation (for instance, at the village level), the greater the relative opportunity for the mobilization of constituencies at the higher level.

What, then, determines the strength of a public communicative structure? Answering this question requires that we first redress an error of omission. Up to this point, we have characterized public communicative structures as a category of

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<sup>31</sup> Horowitz's (1985) advocacy of cross-ethnic electoral incentives is one such institutional device. In contrast, first-past-the-post electoral systems create message-broadening incentives only to the point of obtaining a plurality in a particular district.

communicative structures which satisfy certain conditions – namely, synchronized transmission and joint awareness of reception. This characterization, while making it easier to discuss the unique consequences of this set of structural constraints, has also served to obscure the full range of structural possibilities. Communicative structures are never simply “public” or “private”, but rather exist along a continuum of greater or lesser public-ness. The factors which increase the strength of a public communicative structure are thus, above all, those conditions which render a communicative structure *more* public.

This means, first, that such structures will be stronger to the extent that they produce a greater synchronization of message transmission. Whispered verbal utterances, for instance, almost certainly transmit varying messages to different recipients, whereas hand-copied scrolls are likely to be similar and electromagnetic broadcasts are necessarily identical. A corollary to this claim is that structures which allow messages to be synchronized with greater frequency will have greater strength than those which transmit with lesser frequency. All else being equal, we would thus expect daily newspapers to represent stronger communicative structures than weekly newspapers. Communicative structures are also more public, and hence stronger, to the extent that they allow for a greater degree of joint awareness of reception.<sup>33</sup> A corollary to this claim is that structures which create a greater degree of simultaneity in message reception across recipients will have greater strength

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<sup>32</sup> For a discussion of “motivation” versus “opportunity” in nationalist mobilization, see Snyder (2001, 37).

<sup>33</sup> Indirect experimental evidence is provided for this claim by Chaudhuri, Schotter, and Sopher (2001), who find that coordination game success rates increase when instructions are read aloud publicly rather than distributed separately in writing, even though both conditions should, from a game-theoretic perspective, have rendered the information “common knowledge.”

than those which allow for more temporal separation. We should therefore expect great differences between the intersubjective community constituted by those who have at some time read the bible, and the intersubjective community constituted by those who have gathered together to hear a reading from the bible, the latter representing a far *stronger* communicative structure than the former even if the former has a greater *magnitude*.

Finally, public communicative structures will be stronger to the extent that they have greater density. As mentioned briefly in Section 2.4, density refers to the proportion of a given population which is within the reach of a public communicative structure. This is a structural dimension which can only be judged relative to the bounds of some exogenously given population or sub-population. The density of the communicative structure constituted by a newspaper in its city of origin, for instance, may be far higher than its density in the country as a whole. Holding public-ness constant – that is, holding constant the degree of synchronized transmission and joint awareness of reception – the intersubjective effects of public communication will be greatest at that level of aggregation for which the communicative structure has the highest density, because it is at that level that the most robustly unified audiences can be constructed. The most powerful opportunities for popular mobilization are thus made available by those public communicative structures which have the highest *relative* density, because it is under the aegis of such structures that intersubjective inference is rendered most facile. Communicative power is therefore nothing more than the structurally-induced ability to be heard widely, densely, and publicly.

## 2.5.2 Intersubjective Inference and Collective Violence

Seen from this perspective, collective violence is the result of conflict between opposing mobilizational structures, i.e. public communicative structures.

Antagonistic fragmentation, then, rather than being a natural condition emerging from individual cognitive psychology, is in fact a structurally induced outcome. It occurs primarily, not within the bounds of public communicative structures, but along the relative intersubjective gaps constituted between them. Because it is under the aegis of public communicative structures that intersubjective inference is rendered relatively more facile, it is also between those communities constituted by public communicative structures that intersubjective inference is rendered relatively more difficult. Whether constituted at the level of tribes, villages, or nations, public communicative structures thus circumscribe communities capable of engaging in mutually meaningful symbolic action.<sup>34</sup> In the absence of such a capability, the only available alternative is objectification, rendering outsiders “merely as objects of this interpretation, but not beyond it, as addressees of possible acts emanating from the outcome of the interpretative procedure and not as subjects of anticipated reactions to those acts” (Schuetz 1944, 503). This is a gap constituted not by differences in subjective beliefs, but by discontinuities in the distribution of intersubjective capabilities. There is a kind of sociopolitical fragility created by such gaps which, in the context of the modern state system, frequently takes the form of a disjuncture between the communicative bounds of intersubjective communities and the

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<sup>34</sup> As Weeden argues, “People form a semiotic community to the extent that they recognize the same set of contrasts and therefore are able to engage in mutually comprehensible symbolic action” (2002, 722).

territorial bounds of a state. Sociopolitical fragmentation, the division of loyalties into competing camps of mutual antagonism and objectification, can then be seen as the result of an insufficient density of public communicative structures on the scale of the state, relative to their density at lower levels.

Violence is itself a form of communication. Indeed, it is the most basic of all forms of communication because it is the most interpretively clear and intersubjectively shallow. By this I mean that the purposeful production of pain, even in the absence of any shared symbolic framework, can only be jointly interpreted in one way: as the action of an *enemy*. Paradoxically, while the subjective experience of pain is nearly impossible to communicate,<sup>35</sup> as *intersubjective* experience pain may be the closest thing we have to a human universal. We hear belligerents of all stripes saying: "Violence is the only thing these people understand." What they really mean is that violence is the only message that can be reliably communicated. Collective violence is pursued by publicly but separately constituted groups who, lacking symbolic intersubjective access to each other, have no choice but to make claims on alternative grounds. Collective violence is thus a form of action which arises not from strength, but from *communicative weakness*.

## **2.6 Moving Forward**

Given the breadth of the conceptual framework outlined here, it would be impossible to directly test each and every of the observable implications which could

be derived from the theory. Instead, the strategy pursued in the remaining chapters will be to select more narrow areas of inquiry for deeper investigation and analysis. The strategy will also be to triangulate through the use of a wide variety of methodological frameworks: approaches both qualitative and quantitative, and both formal and empirical. In each of these three chapters, I revisit the theory of communicative structuralism in order to more thoroughly review specific concepts and literatures that could only be briefly referenced above. Moreover, in an attempt to satisfy the Lakatosian dictum that progressive research programs must be capable of continually 'explaining-more-with-less' (King, Keohane, and Verba 1994; de Marchi 2005), I use the remaining chapters to derive and test a wide variety of observable implications, at both the micro-level and the macro-level, to demonstrate that outcomes in a broad array of domains are explicable from within this single explanatory framework. To test these implications, I collected data on the structural properties of the most prominent public communicative structures in the contemporary state system – those constituted by the mass media networks of newspapers, radios, and televisions – in 177 countries for the period 1945 – 1999. Regardless of the level of analysis, the central finding is that mass media structures are fundamentally involved in generating the conditions for the formation of collective audiences (that is, audiences which are composed of members who are jointly aware of themselves as a collective) and that such collective audiences, when constituted on a national scale by dense public communicative structures (i.e. mass media), make individuals more inclined to feel affective attachments to their country,

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<sup>35</sup> See (Arendt 1958, 50-51) for a discussion of this point.

and reduce the propensity to sociopolitical fragmentation thereby lessening the risk of large-scale civil conflict.

In Chapter 3, I utilize computational simulations to demonstrate that the central causal mechanisms underlying the claims made in this dissertation are subject to rigorous formalization in the form of an agent-based model of communicative competition. The model demonstrates that pressures upon the competing communicative strategies of broadcasting and narrowcasting change in predictable ways with shifts in communicative structure, which in turn produces differing degrees of sociopolitical cohesion and fractionalization. In addition to demonstrating that the causal logic of the theory is internally coherent, replicable, and formalizable, I argue that the simulations serve as virtual laboratories, not for the *testing* of hypotheses, but rather for the *generation* of hypotheses.

In Chapter 4, the observable implications of the theory are tested at the micro-level, using cross-national survey data on media exposure, media confidence, and state allegiance from over 30,000 respondents in 38 countries. The analysis demonstrates that even when controlling for a wide variety of confounding factors, exposure to the mass media and confidence in the mass media both produce higher levels of willingness to engage in armed conflict for one's country. Moreover, in the first model of its kind, I demonstrate that these individual-level mass media effects are a function not only of individual characteristics, but also a function of the communicative context in which they are operating, becoming more powerful in precisely those countries which have more densely constituted public communicative structures at the national level. This provides micro-level evidence that people, at least implicitly, respond to mass media messages on the basis of the *collective*

audiences and *intersubjective* perspectives that are constituted by public communicative structures.

In Chapter 5, I expand the analysis to the macro-level to demonstrate that the hypothesized relationships between communicative structure and collective loyalties hold not just on the basis of the sparse, formal logic of Chapter 3, and not just on the basis of the self-reported judgements of Chapter 4, but also on the basis of real-world behavioral regularities in the life-or-death contexts of large-scale civil conflicts. Using the newly compiled data on mass media structures referenced above, I show that as the density (i.e. per capita reception capability) of national mass media structures increases, the probability of civil war onset decreases dramatically. Through a combination of standard regression analysis, non-parametric tests of predictive accuracy, Bayesian model averaging, and structural equation modeling, I demonstrate that this effect is one of the most robust empirical relationships yet to be discovered in the study of large-scale domestic violence.

## Chapter 3. Mass Communication and Mass Mobilization: An Agent-Based Model of Sociopolitical Fragmentation

### 3.1 Introduction

Students of civil conflict have long recognized the important role played by the fragmentation of group loyalties in the emergence of civil conflict (Wood 2003, 132, 135; Ellis 1995). Loyalties are the symbolic bonds of attachment which provide the psychological foundation for the construction of group boundaries and the maintenance of group cohesion. Qualitative accounts of civil conflict are rife with descriptions of what we might term the *localization of attachments*, whether through the bonds of family, class, clan, tribe, neighborhood, village, or ethnicity (Kalyvas 2003; Lacquer 1998). Indeed, both popular fragmentation and elite fragmentation have long been recognized as key to the emergence of domestic warfare (Tilly 1993; Skocpol 1979; Lachman 1997). Moreover, scholars are increasingly coming to the realization that the cleavages upon which such fragmentation is based are not necessarily pre-existing (at least in a political sense), but rather frequently emerge endogenously as products of the conflictual environment in which they are lodged (Kalyvas 2006). We are thus in need of a modeling framework which would allow us to estimate the proclivity towards such fragmentation *ex ante*; that is, a model which could specify the conditions under which sociopolitical loyalties were more likely to cohere or more likely to divide into segregated camps of mutual antagonism.

In the previous chapter, I argued that the theoretical framework of *communicative structuralism* provides a productive path forward in this pursuit. The

framework is based on three central claims. First, that collective identities and collective loyalties are primarily the product of communicative processes. Second, that communicative processes are subject to structural constraints on both message transmission and message reception. And third, that if we wish to understand the causal processes which underlie the emergence of collective fragmentation in the face of competing mobilizational appeals, we should therefore focus not simply on the content of particular messages, but on the structures through which such messages are disseminated. As opposed to discursive or interpretative analyses which focus on the details of message construction, the central claim of communicative structuralism is that the structure through which a message travels is at least as important as the contents of the message itself. This is both because communicative structures have effects which are independent of the messages themselves, and because communicative structures influence the generation of messages and thus frequently render their contents epiphenomenal. Thus, by examining the structural properties of human communication, it becomes possible to more productively analyze its causal effects.

In this chapter, I develop an agent-based model (ABM) of sociopolitical mobilization in which communicative competition is subject to the constraints of different communicative structures. In so doing, I seek to demonstrate that the concepts and mechanisms underlying the framework of communicative structuralism can be subjected to rigorous formalization. I also seek to demonstrate that ABMs represent a modeling framework sufficiently flexible to allow for the derivation of novel empirically testable hypotheses. By modeling a pool of competing heterogeneous agents who are bound by the constraints of public communication,

the model shows that the dimensionality of the political arena is an emergent property of communicative structure. That is, different communicative structures produce different patterns of political dimensionality.

The remainder of this paper proceeds as follows: In Section 3.2, I describe some of the benefits and potential drawbacks of agent-based models, and suggest some ways to improve our ability to ground ABMs empirically. In Section 3.3, I outline the components of my model of the relationship between communicative structure and the emergence of identity-based fragmentation. In Section 3.4, I report results from simulated runs of the model. The results demonstrate that as the density of public communicative structures (e.g. mass media) increases, the tendency towards sociopolitical fragmentation, as captured by a variety of simulated measures, decreases substantially. Finally, I conclude by discussing potential paths forward for future research.

### ***3.2 Agent-Based Models***

Agent-based models use computer simulations to define a set of agents, behavioral rules for each agent, and a relational topology upon which they can interact. The flexibility of the programming languages used to build agent-based models allows the researcher to concretely specify nearly any combination of agent attributes, decision procedures, and interactive relationships. At the same time, the basic structure of such models is not fundamentally different from that of other formal (i.e. decision theoretic or game theoretic) models (see Epstein 2005). In the abstract, a computer program is nothing but a series of if/then statements, a formal

logic which proceeds deterministically through a combination of declarative statements and conditional statements and arrives eventually at some form of output. However, unlike with game theoretic models there is usually no attempt made to 'solve' the model by discovering deductively stable Nash equilibria. Rather, the model is analyzed inductively, by 'running' it and observing patterns in its stochastic behavior. Agent-based computational models are so called because individual agents (frequently represented as 'objects' in an object-oriented programming language) and their interactive decisions form the foundation of the models' dynamics. Moreover, the ease of associating variables with each agent/object means that not only can each agent have different characteristics and different beliefs, but those characteristics and beliefs can be allowed to change endogenously in response to interactions with other agents.

While early agent-based models were usually based on very simplistic agents and interactions,<sup>1</sup> models based on increasingly complex agents and interaction rules have more recently been used to study a wide variety of complex social and political behaviors, including patterns of armed conflict. Cederman (1994; 1997) presents a model in which conflict between nation-states proceeds on the basis of calculations of relative military power across particular borders. The nations grow and contract through conquest and defeat and thereby generate the borders between themselves endogenously. Lustick (2000; 2002; 2004) developed a model in which agents with complex, multidimensional identities mutually influence each others' choices to

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<sup>1</sup> For instance, Epstein and Axtel's (1996) SugarScape model centered around agents who simply walked around a two-dimensional landscape, picking up and consuming resources they found.

prioritize different dimensions of their identities. Even though the agents are highly heterogeneous, relatively stable 'emergent' patterns of identification form which persist over time. Attempts have also been to construct agent-based models of opinion dynamics (Mckeown and Sheehy 2006), ethnic mobilization (Srblijinovic, Penzar, Rodik, and Kardov 2003), state policing (Epstein, Steinbruner, and Parker 2001), religious movements (Upal 2005), and peacekeeping operations (Wheeler 2005).

Unfortunately, while these models have frequently provided illuminating insights and convenient heuristics, they have all too often fallen victim to the same difficulty that ensnared their game theoretic cousins: a lack of testable empirical implications (de Marchi 2005). Indeed, such models have frequently been constructed in ways that make empirical verification and falsification downright impossible. First, many models have dozens upon dozens of parameters which drive the behavior of the model but which have no empirical referents upon which their values could be based.<sup>2</sup> Second, the output of the models frequently bears no resemblance to any real world events that could be treated as dependent variables.<sup>3</sup> The models are thus reduced to little more than 'just so' stories which reflect our discipline's stylized facts back to itself. As a result, agent-based modeling has been relegated to the margins of the political science discipline by practitioners who

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<sup>2</sup> See for instance, arguments about the desirability of asynchronous versus synchronous updating (Lawson and Park 2000) or Moore neighborhoods versus von Neumann neighborhoods (Flache and Hegselmann 2001).

<sup>3</sup> For instance, see the wide variety of convergence concepts in the opinion dynamics literature (e.g. Mckeown and Sheehy 2006).

demand that they be given some criteria by which such models could be subjected to empirical scrutiny.

While ABMs have been used for a variety of purposes, from virtual thought experiments to the reconstruction of the causal logic underlying specific historic events, I argue that they can also be productively deployed as tools for the generation of testable empirical implications. The point is thus not just to make our models of agents or their interactions more complex, but to build models in ways that allow them to be subjected to empirical verification and falsification. This means, first and foremost, building models in which both the parameters and the outputs have empirical referents so that patterns found between parameters and outputs in the model can be compared to analogous patterns in the real world. In principle, ABMs could engage in varying levels of validation. At one end of the spectrum would be models that bear some conformity with previously known 'stylized facts' and at the other end of the spectrum would be models that generate an ability to produce novel predictions on previously unrealized data.

de Marchi (2005) argues that empirical validation of computational models has been hindered by what he calls 'the curse of dimensionality.' On the one hand, the flexibility of agent-based models allows us to specify varieties of agents, beliefs, and behaviors that would be difficult to capture in a game-theoretic framework. However, this same flexibility allows us to produce models which include enormous numbers of ungrounded parameters and can therefore produce almost *any* set of predictions (see Windrum et al. 2007). As many have noted before, a model that explains everything explains nothing. If our ABMs are allowed to be arbitrarily complicated they can achieve arbitrarily high levels of fit to empirical data. While the

implication of de Marchi's perspective is that we should seek to limit the overall number of parameters in our models, it is important to note that not all parameters are created equal. Instead, we should consider three different categories of parameters:

1. **Grounded parameters** are model parameters that are seeded with specific values derived from real world data. Because they are fixed by known quantities, they raise none of the concerns of the curse of dimensionality. By definition they are non-arbitrary.
2. **Empirical parameters** are model parameters that can be measured and tested, at least in principle. While they may not be 'fixed' in the sense of grounded parameters because the necessary data is not yet available, they can nevertheless be related to real world events and can therefore be used in the formulation of hypotheses that could be tested in the future.
3. **Free parameters** are model parameters that cannot be measured or tested, even in principle. These are parameters which hold meaning only in the sparse formal logic of a particular computer program.

In formulating an ABM, we should be careful to thoroughly list and categorize the parameters upon which the model is based. Large numbers of 'free' parameters are liable to generate the 'curse of dimensionality' that de Marchi points to. In contrast,

the inclusion of 'grounded' and 'empirical' parameters only heightens our ability to engage in empirical validation of the model.

The goal of the model presented here is certainly not to provide a complete rendition of the myriad array of processes that underlie the emergence of civil conflict. Rather, the goal is to isolate and simplify one of those processes (loyalty fragmentation) in order to highlight its relationship to a variable (communicative structure) that has been largely overlooked by scholars of civil conflict. This model has been constructed with the express purpose of producing observable and testable predictions for the relationships between communicative structure and sociopolitical fragmentation.

### ***3.3 Simulating Loyalty Fragmentation***

The model of communicative structure presented here has three main components: a set of *agents*, with multi-dimensional sociopolitical identities, a *social network*, which defines the pattern of ties between agents, and a *mass media* mechanism, which defines broader constraints on the agents' ability to engage in public communication. The model's dynamics are driven by competition amongst the agents to mobilize followers by sending successful public messages under the constraints of the communicative structure in which they find themselves.

Each agent is endowed with an  $n$ -dimensional array of traits which defines both its social identity<sup>4</sup> and the kinds of public messages to which it responds positively. The content of these traits is left purposely abstract. They could represent racial or ethnic markers, geographic location, class characteristics, or any other factors which are thought to influence the formation of social ties or the evaluation of public messages. I divide these traits into two categories: arbitrarily labeled *attitudes* and *convictions*. The only difference between these categories is that attitudes are represented on a continuous scale from 0 to 1, whereas convictions are represented dichotomously as either 0 or 1.<sup>5</sup> The agents in the model are endowed with four identity dimensions: two attitude dimensions (A1 and A2) and two conviction dimensions (C1 and C2).<sup>6</sup> Values for each agent on each attitude dimension are drawn from a uniform distribution with a mean of 0.5. Values for each agent on each conviction dimension are drawn from a Bernoulli distribution with a mean of 0.5. Some proportion  $r$  of the agents are also randomly endowed with the quality of being *mass media receivers*. As will be explained more fully below, agents who are media receivers have access to the full range of available public messages, whereas those without the media reception capability are limited to

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<sup>4</sup>  $n$  is currently a 'free' parameter, but one could imagine converting it into an 'empirical' parameter with the addition of sufficiently detailed demographic data.

<sup>5</sup> Latane and Nowak (1997) demonstrate using ABM simulations on a lattice topology that the clustering produced by social influence processes differs depending on whether relevant traits are represented as continuous or categorical. This distinction may also matter for political processes, as Latane and Nowak (1994) show experimentally that highly involved values (e.g. high salience political values) are those which tend to be cognitively treated as all-or-nothing. See also Baldassarri (2007) and Lavine et al. (2000).

<sup>6</sup> I selected four dimensions, two each of attitudes and convictions, so that I could run experiments varying the properties of a single dimension (e.g. A1), while holding the properties of its counterpart dimension (e.g. A2) constant. As will become clear in the results below, this 2 x 2 setup allows for the creation of controlled virtual experiments that vary the weights attached to particular dimensions.

those messages which originate in their local neighborhood. In the virtual experiments reported bellowed,  $r$  is varied between 0 and 1.

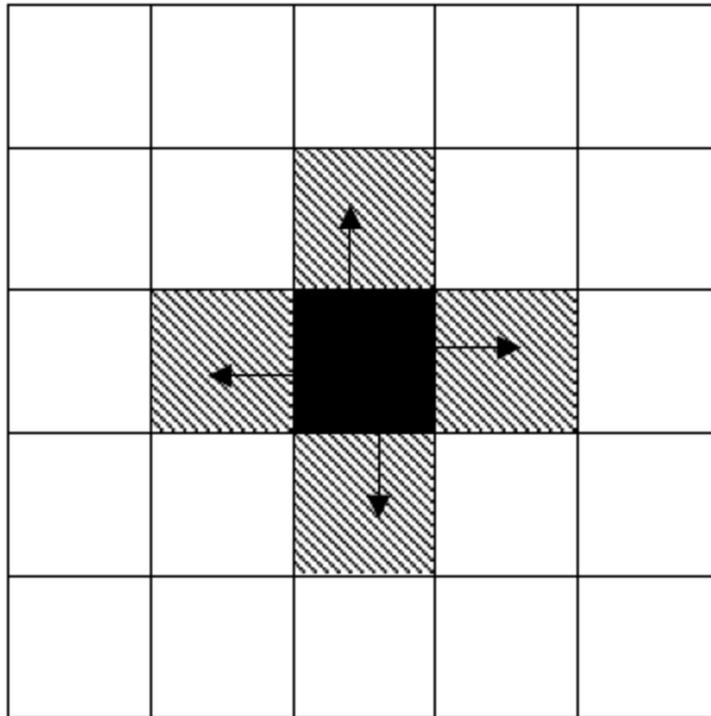
In the absence of mass media, public message transmission is constrained by the structure of *the social network*. A social network structure is simply a fixed set of ties (i.e. 'edges') which define the connections between a fixed set of agents (i.e. 'nodes'). More formally, let  $\mathbf{S} = (S_{ij})$  be a  $k \times k$  matrix where  $S_{ij}$  represents the relation directed from actor  $i$  to actor  $j$  ( $i, j = 1, \dots, k$ ).<sup>7</sup> The social network structure defined here will be both symmetrical ( $S_{ij} = S_{ji}$  for all  $i, j$ ) and dichotomous ( $S_{ij} \in \{0,1\}$  for all  $i, j$ ). We can define agent  $i$ 's neighborhood as the set of agents to which agent  $i$  is connected ( $S_{ij} = 1$ ). A wide variety of methods exist for defining the layout of agent neighborhoods, or equivalently, the structure of ties connecting agents. The most common choice made in agent-based models is to place the agents on a square grid (i.e. 'lattice'), such that each agent's neighborhood is defined by the four or eight agents with which it shares a boundary (see Figure 3). Another common choice is to define neighborhoods on the basis of a random network, in which  $\Pr(S_{ij} = 1) = p$  for all  $i, j$ . In other words, ties are modeled as occurring with fixed probability between all pairs of agents.

However, while both of these setups are computationally convenient, they fail to capture much of what is known about real world social networks. Actual social networks are highly clustered, meaning that a friend of a friend is also likely to be a

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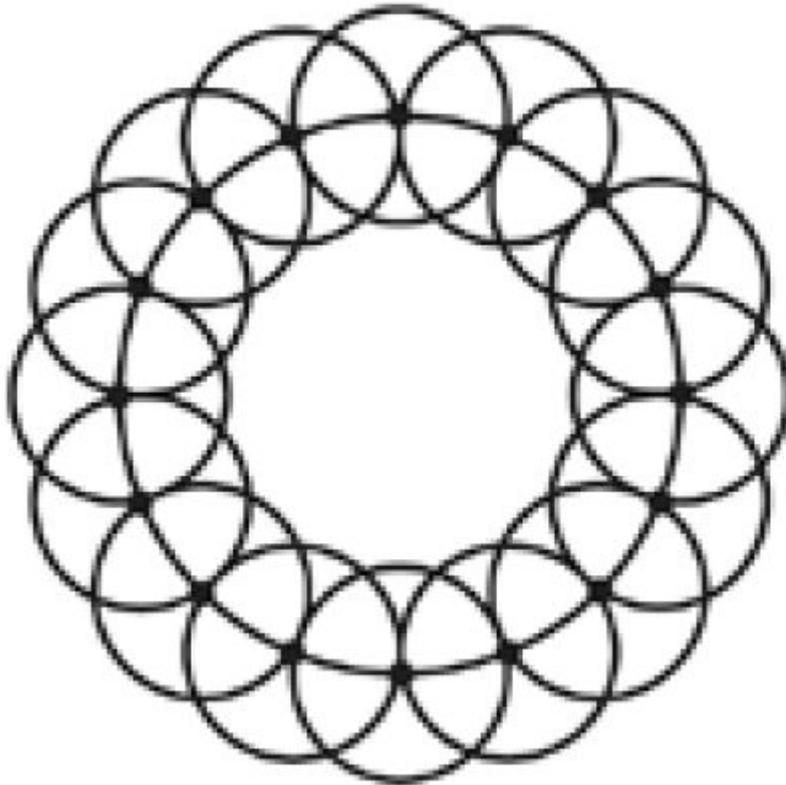
<sup>7</sup> For all model variations examined here,  $k = 100$ .

### Lattice Topology



**Figure 3: Lattice Topology**

**Circular Network**



**Figure 4: Circular Network**

friend, but they also exhibit low average path lengths, meaning that no two agents are very distant from each other. This pattern arises because most agents have locally bounded acquaintance networks, while a small number of agents have long-distance ties which transcend the general pattern of local clustering. Watts and Strogatz (1998) have developed a simple algorithm for generating so-called “small world” networks which captures both of these characteristics and thus allows for a more accurate rendition of the kinds of connections that are formed by normal people. The algorithm begins with a highly clustered circular network, which is basically a lattice with no endpoints (see Figure 4). It then cycles through each tie, and with probability  $p$  ‘rewires’ the tie to a node chosen uniformly at random from the entire set of nodes.

While a small world network is an improvement over a simple lattice framework, it still fails to capture all of the relevant elements of social structure. While a fair degree of stochastic variation is inherent in the formation of social ties, there also tends to be a great degree of regularity, which can be judged on the basis of deviations from randomness. The most frequently observed principle upon which such regularities are based is *homophily*, the tendency of individuals to associate with those who they view as similar to themselves. The tendency towards homophily has been measured and found to be significant in a wide variety of settings and across a broad spectrum of dimensions, including age, race, ethnicity, religion, gender, economic class, and social status (McPherson, Smith-Lovin, and Cook 2001). In addition, there is a strong tendency for tie formation to be governed by the principle of transitivity: a friend of a friend is far more likely to also be a friend than would be the case if ties were formed in a completely random fashion (Gould 1995,

205; Watts and Storgatz 1998). This combination of tendencies towards both homophily and transitivity produces social environments that are highly homogeneous in regard to a wide variety of social and demographic characteristics, and highly parochial in regard to the probability of contact with outsiders.

We therefore seem to be in need of a more generalized algorithm to generate social network structures that more accurately reflect our knowledge of real world social ties. Here, I propose a framework in which tie probabilities are in part a function of social identity traits and in part a function of pre-existing ties. These factors are converted into tie probabilities through a logistic link function of the form:

$$\Pr(S_{ij} = 1) = \frac{1}{1 + e^{-X_{ij}\beta}} \quad (1)$$

where  $X_{ij}$  is a vector of factors which influence the probability of a tie between  $i$  and  $j$ , and  $\beta$  is a vector of parameter weights which determines the relative importance of each of the factors in  $X_{ij}$ . For the model presented here, the first  $n$  elements of  $X_{ij}$  will be defined by similarity scores on each of the  $n$  social identity dimensions.

For dimension  $d$ , the similarity score between agents  $i$  and  $j$  is defined as the absolute value of the difference between  $i$ 's position on dimension  $d$  and  $j$ 's position on dimension  $d$ :

$$sim_{ij}^d = |d_i - d_j| \quad (2)$$

Because we wish to generate networks which reflect the tendencies towards clustering observed in real world social networks,  $X_{ij}$  also includes a transitivity variable, which is equal to the number of nodes  $h$  to which  $i$  and  $j$  are already tied:

$$trans_{ij} = \sum_h s_{ih} s_{jh} \quad (3)$$

As with the Barabási-Albert (1999) network generation algorithm, the algorithm used here begins with a set of  $m_0$  fully-connected nodes and then grows the social network by successively adding nodes  $i$  which each form  $m$  new symmetric ties to a subset of the nodes which are already connected, where  $m < m_0$ .<sup>8</sup> But whereas the Barabási-Albert algorithm forms ties with probabilities proportional to the degree of the target node  $j$  (i.e. its number of existing edges), the algorithm used here forms ties with probabilities given by (1). Given this framework, it becomes possible to represent almost any social network structure as the outcome of a network formation process which is biased by the elements of  $X_{ij}$  towards some ties and away from others. By manipulating the  $\beta$  weights, one can generate a wide variety of network structures. The relatively simple instantiation of  $X_{ij}$  described above is sufficient to allow us to capture the tendencies towards homophily and clustering and thereby produce networks which replicate many aspects of 'small worlds' (see Table 1) while also being broadly similar to those observed in actual

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<sup>8</sup> Because  $m$  is a 'free' parameter, all model variants were run under the conditions of  $m = 2$  and  $m = 4$ , which correspond to the average densities of the two most commonly used structures for lattice networks – *Von Neuman* neighborhoods and *Moore* neighborhoods. This was done to insure that the results were not sensitive to this arbitrary parameter.

**Table 1: Network Statistics**

	Density	Cluster Coef.	Avg. Path Length
<b>Lattice</b>	0.0800	0.6429	6.7646
<b>Small World</b>			
p = 0.05	0.0800	0.4975	3.1371
p = 0.10	0.0800	0.3869	2.8201
p = 0.15	0.0800	0.2983	2.6730
p = 0.20	0.0800	0.2328	2.5870
p = 0.25	0.0800	0.1857	2.5379
<b>Homophylic</b>			
Attitude (A1)	0.0780	0.2181	2.5196
Conviction (C1)	0.0780	0.2217	2.6636

social settings (see Stocker, Green and Newth 2001).

The formulation above allows me to generate what I will call a *homophylic network*, where the dimensions of homophily are defined by the  $\beta$  weights attached to specific identity dimensions. For instance, to investigate the role played by homophily along an attitudinal dimension, I can set the  $\beta$  weight for dimension A1 to 5, while holding the other identity  $\beta$ s at 0. This would generate a network in which ties between agents with similar values on dimension A1 were proportionately more likely to occur. The resulting network, in other words, would be homophylic along dimension A1, with the strength of the homophily determined by the magnitude of the  $\beta$  weight. Similarly, the degree of clustering in the social network can be tuned by manipulating the  $\beta$  weight attached to the transitivity parameter given by equation (3). For the virtual experiments described below, the transitivity weight is held constant at 5, which when combined with a weight of 5 on any one of the social identity dimensions, was found to approximate the clustering coefficients and average path lengths of 'small world' networks (see Table 1). Because these values are arbitrary, in the current instantiation of the model, they must be considered 'free' parameters. However, the advantage of this approach is that it allows us to generate social network structures on the basis of parameters which in the future could be 'grounded' with structural weights from real world social networks. Snijders (1996; 2001; 2005) demonstrates that parameter weights of precisely this form can be extracted from longitudinal social network data using Markov-chain Monte Carlo simulations of network evolution.

Within the constraints generated by this social network and the constraints of mass media reception, agents are competing with each other to craft messages that will gain them as many followers as possible. Because the messages are subject to the constraints of public-ness described in Chapter 2, agents must choose a single message which will be visible simultaneously to all of their listeners. Each agent chooses some subset of the available  $n$  dimensions to include in her outgoing message. On each dimension included in a given message, the message consists of a point value between 0 and 1. The agents are free to craft whatever type of message they want, constrained only by the desires of their available audience and their inherent goal of maximizing their number of followers.

In the first time step of the simulation, every agent begins by sending their own personal identity values as their message. Over time, however, agents are given the opportunity to mutate their messages in an attempt to gain more followers. There are two simple forms of message mutation which are allowed: (1) a change in the subset of the  $n$  dimensions which is included in the message created by switching a single dimension from 'on' to 'off' or from 'off' to 'on', or (2) a change in the position taken on a single dimension drawn uniformly at random between the bounds of 0 and 1. Both kinds of mutations occur independently at each time step, for each agent, with probability given by the mutation rate  $c$ .<sup>9</sup> Any mutation that results in increased levels of success becomes that agent's new public message, otherwise the message remains unchanged.

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<sup>9</sup> For all results reported below,  $c$  is set at 0.5, meaning that all 4 combinations of yes/no on dimension change and yes/no on position change occur with equal probability. The mutation rate is currently a 'free' parameter that I have not been able to envision a way to empirically ground, but sensitivity tests indicate

Agents in the model receive a variety of public messages, either those messages sent from their local neighborhood if they are not media receivers, or the full set of messages sent from every agent if they are media receivers. Out of the set of messages that a given agent receives, she chooses one as her favorite and is then considered a 'follower' of the agent who sent that message. Agents evaluate messages according to a *resonance function*. This function has two components. First, an agent evaluates the content of the message. For each dimension  $d$  that is included in the message, agent  $i$  assess its congruence with  $i$ 's social identity values. This component incorporates elements of both spatial and directional logic. For each dimension  $d$  included in the message, the agent first decides whether the message is "on my side," which, without loss of generality, is determined by arbitrarily splitting  $d$  at its mid-point. If dimension  $d$  of the message is directionally congruent with dimension  $d$  of  $i$ 's identity, then a positive resonance value for that dimension is created that is equal to  $\max(\Delta) - \Delta$ , where  $\Delta$  is equal to the absolute value of the difference on dimension  $d$  between the message and  $i$ 's identity. If dimension  $d$  of the message is not directionally congruent with dimension  $d$  of  $i$ 's identity then a negative resonance value for that dimension is create that is equal to  $\Delta$ . Each dimension is assessed independently, and the values described above are then summed to create a *congruence score*.

I also assume that in evaluating a message, each agent considers the observed responses of other agents. They cannot know the minds or desires of all the other agents, but I assume that public message senders have means of credibly

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that this specific value is not critical to the results reported below.

revealing their current levels of support (whether through mass rallies, riots, polls, or electoral returns). The second component of the resonance function therefore judges the sender of the message by the number of followers  $f$  that the sender has already gained. I model this factor as a multiplicative interaction with the congruence score. That is, if you really hate a message but see that not many people are taking it seriously, your negative assessment is somewhat weaker than if you saw thousands rallying to the same appeal. Similarly, if you really like a message your estimate of its value will be increased by the observation that many others apparently agree with your assessment. The total resonance for  $i$  in evaluating a given message is thus given by

$$\text{resonance} = \text{congruence} * f \quad (4)$$

With these components in place, the model's dynamics are quite easy to describe. At each time step, the model cycles through each agent in random order and allows mutations in public messages to be tested and either adopted or discarded. The model then cycles through each of the agents again, allowing each to select from amongst the public messages they can receive, the message which generates the highest resonance value. If agent  $i$ 's favorite message emanates from agent  $j$ , then agent  $i$  is now considered a follower of agent  $j$ . This process then continues for every subsequent time step, with agents updating their messages to seek broader resonance and agents in turn shifting their allegiances as more personally favorable public options come into view.

Agents who have all chosen the same message/messenger to follow, can thus be considered a symbolically constituted group. This, in some sense, is the basis upon which all human groups are constituted. As an "imagined community" (Anderson 1991), human groups – whether tribes, nations, or political factions – are simply collections of individuals who have chosen to ally themselves with a common set of symbolic attachments. As Gould argues, "When someone responds positively to an appeal for solidarity, then, he or she has acknowledged membership in the group whose boundaries are defined by the terms of the appeal" (1995, 14). Of course, there are a nearly infinite array of crosscutting cleavages and coalitions that could be formed through different combinations of dimensions and positions, only some of which will ever come to be reflected in public discourse. In a certain sense then, this model seeks to be a description of the process by which such latent diversity is transformed into public dimensionality.

Competition on such complex terrain creates difficult problems for those who wish to compete in mobilizing the loyalties of their followers. This diversity forces the speaker to face a trade-off between two broad categories of communicative strategies: *broadcasting* and *narrowcasting*. Broadcasting refers to the attempt to construct messages which will have the broadest possible resonance, constrained in principle only by the reach of the public communicative structure through which the messages are disseminated. However, as the potential audience provided by given public communicative structure becomes more diverse, the messages of a speaker pursuing a broadcasting strategy must become more shallow, falling back upon only those few dimensions that are most widely recognized and appreciated. Narrowcasting refers to the attempt to construct messages which will have strong

resonance with only a small niche of the broader population. Rather than seeking the most common of denominators, such a communicative strategy seeks instead to target a particular parochially clustered social constituency by including positions on a large number of dimensions which may not be well received by portions of the broader population. Those competing to send effective public messages thus face a complex dilemma. On the one hand, messages tailored to more narrow constituencies can combine a larger number of symbolic dimensions and thus will resonate more strongly. On the other hand, messages tailored to broader constituencies, while producing positive associations in the minds of a larger number of listeners, will resonate more weakly, and thus open the speaker to the threat of 'flanking' by alternative communicators who adopt more narrow communicative strategies.

The primary point of the results presented below is that such competition does not occur on a level playing field, but rather one that is *structured* by the constraints of public communicative structures. In other words, it is communicative structures that allow us to predict communicative behaviors. The results demonstrate, first, that the *political* cleavages adopted by public communicators competing for resonance frequently come to reflect the *social* cleavages of the underlying population. However, they also demonstrate that this congruence between the social and the political is conditional on variations in public communicative structures produced by varying densities of mass media capabilities. In other words, the public dimensionality of the political arena is an emergent property of public communicative structures.

### 3.4 Results

As I argued above, models such as this are best used as virtual laboratories which use controlled variation in model parameters to generate empirically testable hypotheses. Here, I use this model to generate three general classes of results. First, I experimentally vary the social weights attached to specific identity dimensions to assess their impacts on the content of popular public messages. Second, I vary mass media density, given by  $r$ , to assess its impact on the incentives for broadcasting versus narrowcasting communicative strategies. Third, I vary mass media density to assess its impact on a population's overall proclivity towards sociopolitical fragmentation.

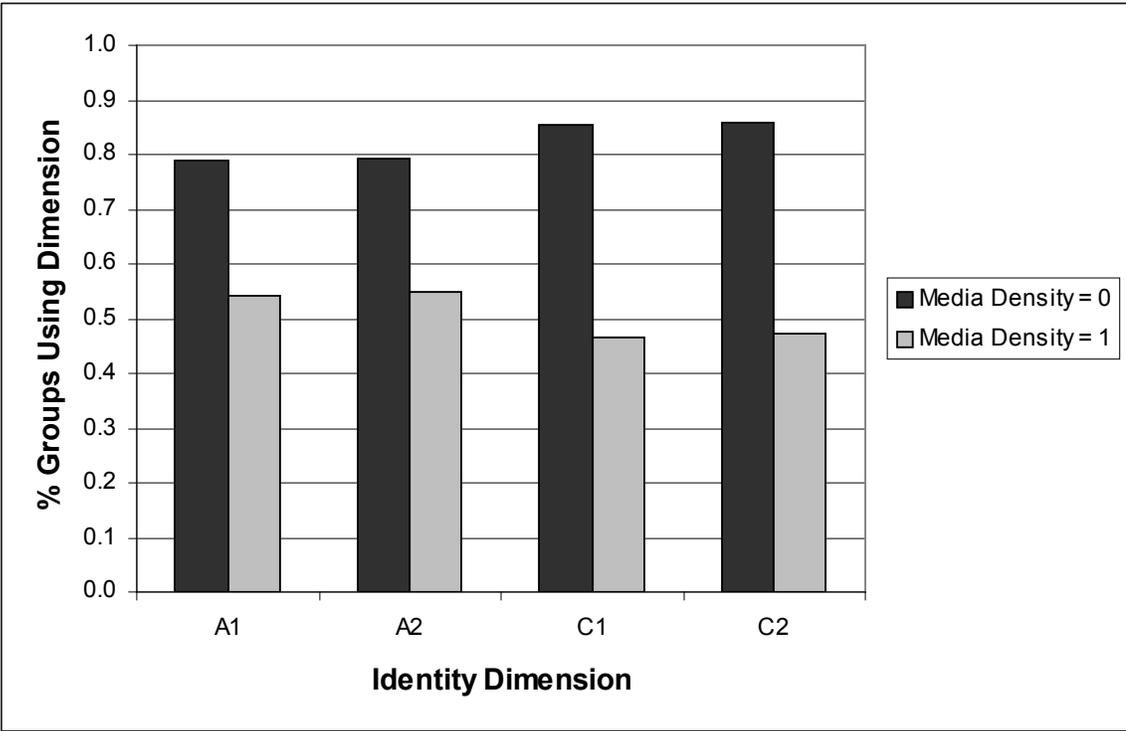
While different combinations of parameter values create systematically different patterns of public dimensionality, relatively stable patterns tend to emerge after 250-300 time steps in a single model run. For each simulation run, I therefore begin with 400 iterations to allow the model's dynamics to fully stabilize<sup>10</sup> and then construct the measures discussed below by averaging over an additional 100 time steps. The values I report below are the result of averaging over 100 simulation runs at each point in the parameter space. Note also that paired t-tests indicate that the differences in outcomes between the relevant points in the parameter space are all statistically significant at the  $p < 0.001$  level.

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<sup>10</sup> Note that this does not mean that messages and allegiance patterns have become frozen. It is in the nature of the model that there is always some alternative point in the  $n$ -dimensional space from which a currently constituted group can be challenged. Rather, this simply means that the aggregate measures of dimensionality and fractionalization discussed below have stabilized into narrow cyclical patterns.

The first set of virtual experiments varies the parameter weights attached to two (A1 and C1) of the four identity dimensions during the social network generation stage. The hypothesis is that as these weights change, the composition of neighborhoods will change, and thereby create different incentives for the inclusion or exclusion of particular dimensions in public discourse. First, as a baseline case, I generate the social network by assigning a value of 0 to each of the 4  $\beta$ s associated with the 4 identity dimensions. As shown in Figure 5, under these conditions, groups are on average equally likely to include A1 or A2 in their public messages, and equally likely to include C1 or C2. This is to be expected, because these parameter values render those dimension pairs formally equivalent. It is also interesting to note the conditioning effect of mass media density here. At low levels of media density groups have a general tendency to rally more around the all-or-nothing 'conviction' dimensions which tightly constrain their social neighborhoods, whereas at high levels of media density groups have a tendency to rally more around the 'attitude' dimensions that vary continuously.

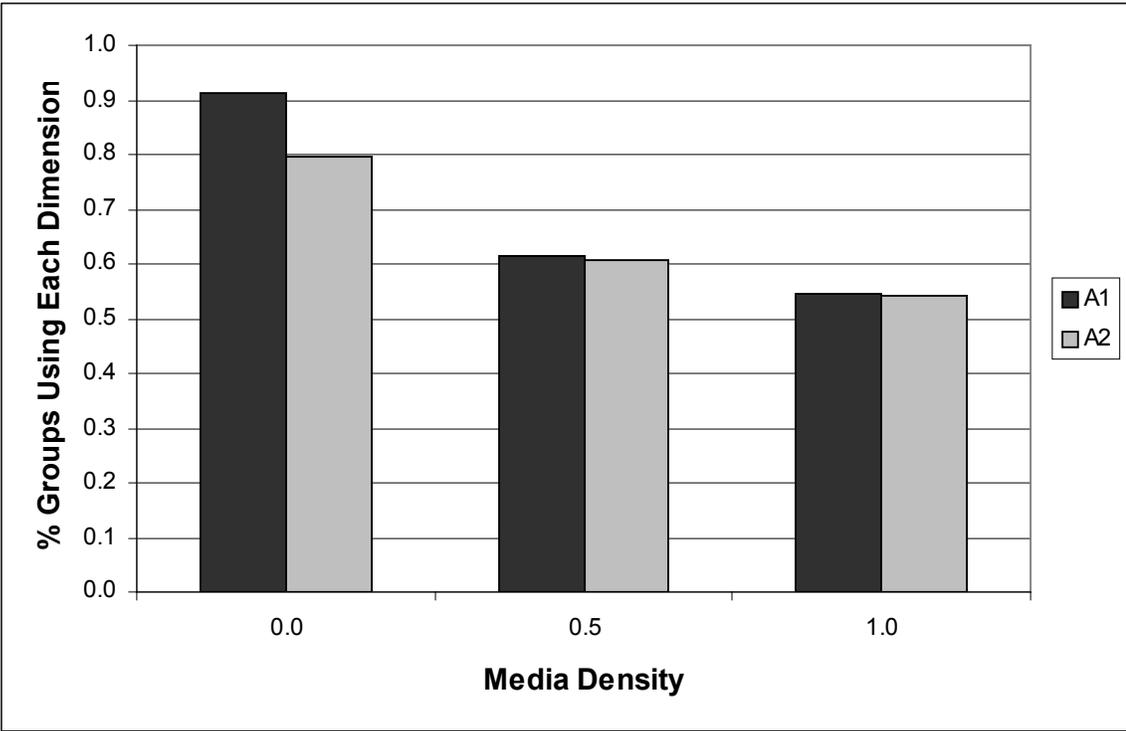
Next, I generate the social network by assigning a  $\beta$  value of 5 to the A1 identity dimension and 0 to all others. This generates a social network in which neighborhoods are proportionately more likely to be organized along the A1 dimension (that is, those with similar values on A1 are more likely to form ties, whereas they are indifferent to their similarities on the other three dimensions). By comparing the public usage of dimension A1 to the public usage of A2, we can thereby assess the influence of social structure on political structure. Because A1 and A2 are formally equivalent, any differences in behavior can only be attributed to the increased  $\beta$  value for A1. A2 thus essentially serves as an experimental control



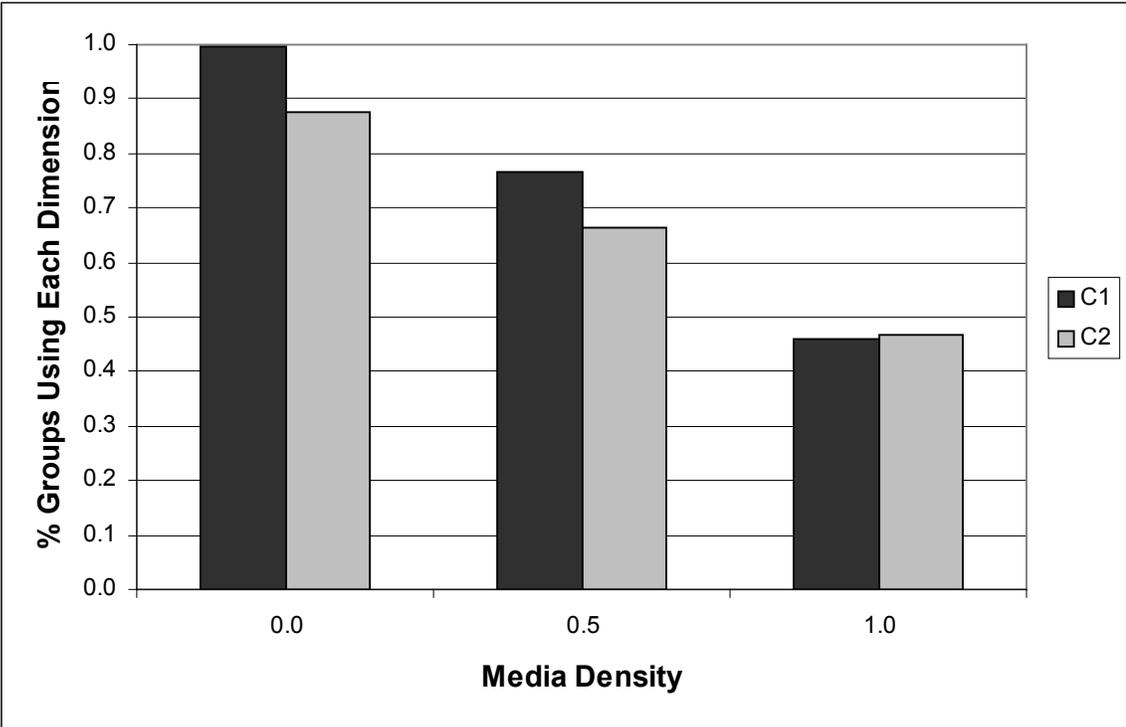
**Figure 5: ABM - Attitudes vs. Convictions**

for A1. As shown in Figure 6, the primary result of this manipulation is that dimension A1 comes to be used more often in successful public messages relative to dimension A2. Political salience, in other words, is in part a reflection of social salience. Note again though, that this result is conditioned by mass media density. As media density increases, the linkage between social salience and political salience weakens and eventually become nonexistent. By freeing agents from the parochially constituted audiences of their local neighborhoods, mass media thus make possible more flexible and far-reaching public strategies. A similar set of results obtains when the social network is constructed by assigning a  $\beta$  value of 5 to the C1 identity dimension and 0 to all others. Again groups become more inclined to rally publicly around the C1 dimension and again the effect is attenuated in the presence of high media density (see Figure 7).

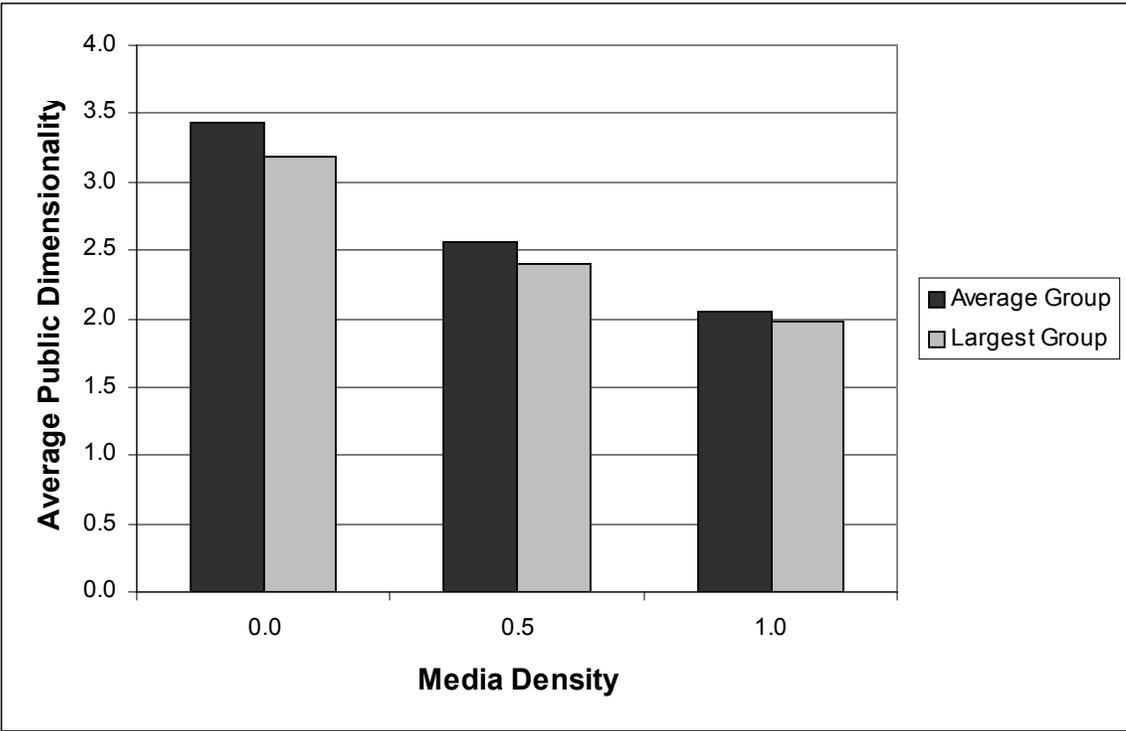
This argument is bolstered if we instead examine the total number of dimensions included in successful public messages. Recall the argument above that public communicators face a tradeoff between narrowcasting to niche communities versus broadcasting to wider coalitions. In the model, narrowcasting is represented by agents who chose to include a relatively large number of dimensions in their messages, whereas broadcasting is represented by agents who focus on a relatively small number of dimensions. Two useful measures of such tendencies are the average number of dimensions used by the largest group and the average number of dimensions used by the average group. As shown in Figures 8, both measures indicate that as media density increases we see substantial reductions in the dimensionality of public messages. As message senders gain access to broader and broader constituencies, their incentives shift away from narrowcasting strategies and



**Figure 6: ABM - A1 Homophylic Social Network**



**Figure 7: ABM - C1 Homophylic Social Network**



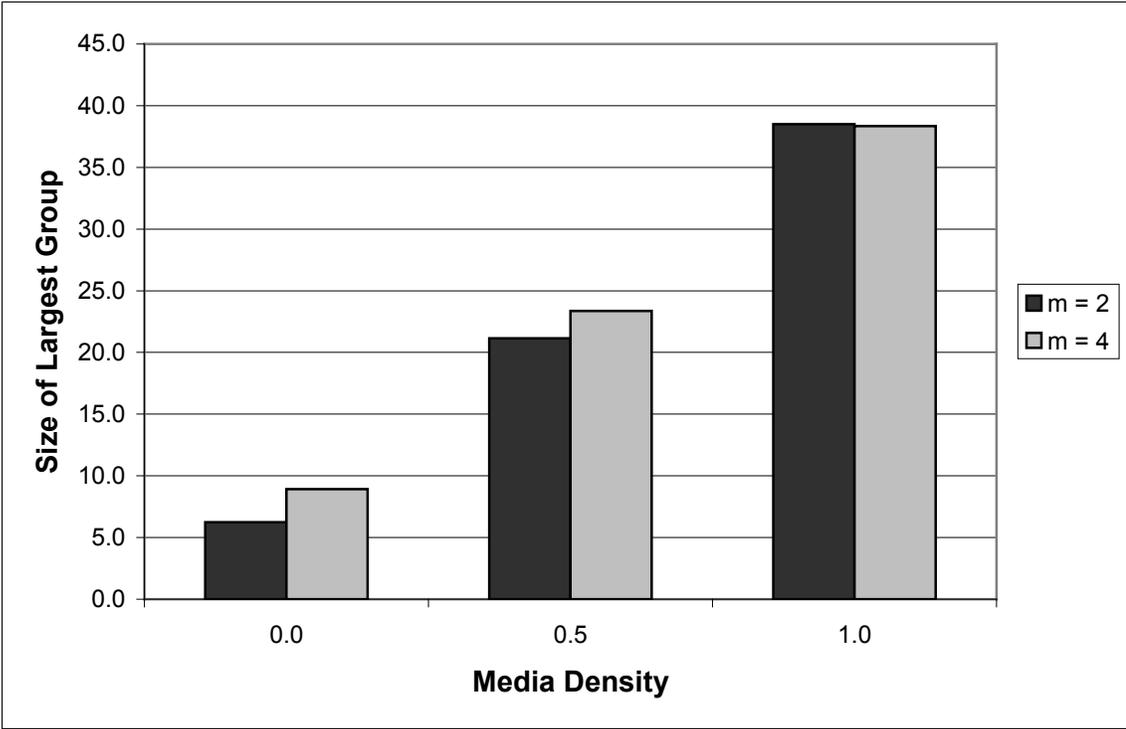
**Figure 8: ABM - Public Dimensionality**

towards broadcasting strategies, and groups come to be constituted along less divisive lines. Again, we see that the structural effects of dense mass media serve to break down the linkage between social divisions and public coalitions.

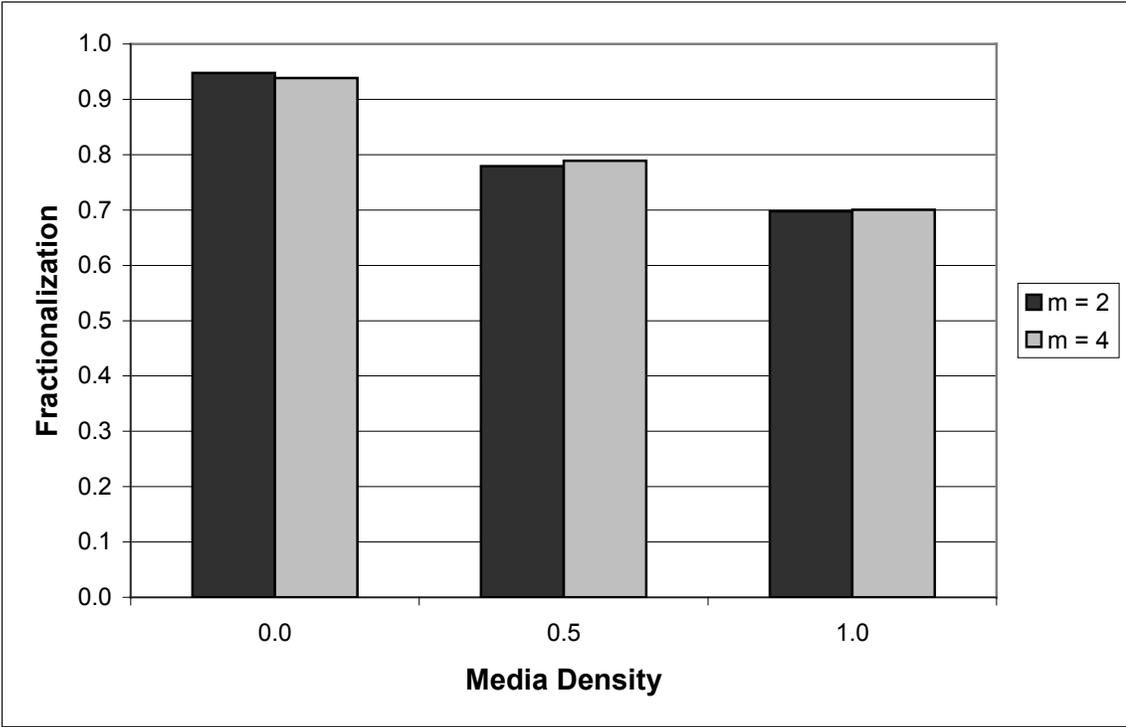
The final set of results concerns the aggregate population's proclivity to form dominant hegemonic coalitions versus its tendency to fragment into ever smaller factions. The easiest measure of this tendency is the average size of the largest group formed by a single message (see Figure 9). I also measure this tendency with a Herfindahl fractionalization index analogous to the standard ELF measure of ethnic diversity (see Figure 10). Both measures generate the same implication: as mass media density increases, a population's tendency towards fragmentation decreases and larger coalitions become more likely to form. Moreover, as shown in Figures 9 and 10, this effect occurs regardless of density of the social network (recall that the density of the social network is controlled through the parameter  $m$ ), although the effect is slightly more pronounced when social networks are more localized.

### ***3.5 Discussion***

Taken together, these results indicate that various aspects of communicative structure exercise profound influence over patterns of political dimensionality and the emergence of sociopolitical fragmentation. The model demonstrates, first and foremost, that students of communication in general, and mass media in particular, cannot afford to focus exclusively on message content while ignoring structural context. The opportunities and constraints produced by public communicative



**Figure 9: ABM - Size of Largest Group**



**Figure 10: ABM - Fractionalization**

structure constitute audiences along certain lines rather than others, and thus bias the political arena towards certain configurations and away from others. In fact, it is frequently communicative structure that drives communicative content. This is not to say that content is unimportant, but rather that an exclusive focus on content runs the danger of losing the forest for the trees.

Moreover, because the key parameters of the model are all measurable in real world contexts, this framework provides the opportunity to generate falsifiable predictions which could in turn generate further model enhancements. For instance, the model predicts that the structure of acquaintance networks (i.e. their dimensions of homophily) will influence the issue dimensions that politicians deploy in their public messages. It also predicts that this influence will be more pronounced in societies which lack dense mass media structures and therefore must focus their mobilization efforts on parochial localities. Additionally, the model predicts that populations – whether villages, regions, or nations – will be more vulnerable to sociopolitical fragmentation when they lack dense public communicative structures that transcend the homophily and clustering of their social relations. While testing these implications lies beyond the scope of this chapter, the ease of imagining such tests is an important benefit of modeling framework proposed here. Undoubtedly, the testing of such hypotheses will produce some anomalies which cannot be reproduced by the model in its present form, but it is only by producing models which are vulnerable to such falsification that we can hope to move forward in the study of civil conflict.

## **Chapter 4. Mass Media Structure and the Micro-Logic of National Attachments**

### ***4.1 Introduction***

In the preceding chapters, I have made the case that collective loyalties can be productively theorized, both qualitatively and formally, from the perspective of public communicative structures that generate shared – that is, *intersubjectively* shared – symbols upon which a willingness for group-level sacrifices can be anchored. In this chapter I present the first empirical tests of that proposition at the micro-level, using cross-national survey data on national loyalty combined with newly compiled cross-national data on the structural density of mass media broadcast networks. This work represents the first systematic attempt to estimate, both across individuals and across countries, those factors which induce higher levels of national loyalty. This is also the first study to examine the conditioning effects of national-level mass media structures on individual-level media effects. The results demonstrate that each individual's allegiance to their state is a function not only of their individual characteristics, but also a function of the communicative context in which they are operating.

In the following sections I review first the existing literature on mass media effects, and then the existing literature on the generation of group loyalties. Through this review, I argue that studies in both empirical domains have suffered from remarkably similar blind spots, treating their objects of analysis solely from the perspective of individuals and their subjective mental states, while obscuring the role

played by the collective constitution of intersubjectivity. I argue that the structural perspective outlined in Chapter 2 allows for a productive synthesis of theories of media effects and theories of group loyalties, and points to evidence for the intersubjective nature of individual interactions with the mass media, by demonstrating that important media effects are conditional on the broader structure of public communication in which they occur.

More specifically, on the basis of hierarchical linear models which allow me to directly test for cross-level interaction effects between individual-level variables and country-level variables, I confirm the following implications of the theory: (1) the greater an individual's *exposure* to the mass media or *confidence* in the mass media, the greater their likelihood of indicating allegiance to their national community, as measured by their willingness to fight for their country in the event of a war, and (2) the greater the density of the broadcast network in a particular country, the greater the magnitude of the individual-level effects of mass media exposure and confidence on national allegiance. In other words, while higher exposure to the mass media and higher confidence in the mass media are always associated with higher probabilities of nation-state allegiance (at the level of the individual), those effects become far more pronounced when an individual is operating in a country with a dense mass media network. These results thus represent individual-level evidence that a central predictive implication of the theory of communicative structuralism is correct: when individuals interact with the mass media, they do so on the basis of implicitly imagined collective audiences, perspectives imagined from the intersubjective viewpoint of "we" rather than the subjective viewpoint of "I." When more of their fellow citizens are involved in the experience, greater weight is attached to the

experience, and it thereby becomes a symbolic platform upon which more cohesive collective loyalties can be constructed.

#### ***4.2 Media Effects: Subjective Attitudes***

In the early days of research on the social and political effects of mass media, the prevailing consensus was that mass media generated profound impacts on the attitudes and beliefs of those who received its messages (Lippmann 1922). Arising from an era in which broadcast technologies were associated with the apparently overwhelming propagandistic successes of European fascist movements, the “direct effects” school portrayed readers, listeners, and viewers as passive recipients of the attitudes, beliefs, and ideologies expressed in mass media messages (Lasswell 1927; Doob 1935). Sometimes referred to as the “hypodermic model” of media effects because the message effects were characterized as passing directly into the minds of the plebian masses, the general causal mechanism has also found expression in critical theory conceptions of “cultural hegemony” (Gramsci 1971; Gitlin 1979; Hall 1982) which characterize the mass media as all-powerful purveyors of attitudes, values, and schemas that the masses are incapable of resisting. Such accounts are united in attributing to the mass media the ability to directly and fundamentally alter the subjective perceptions and beliefs of an entire citizenry.

It was against this backdrop that Lazarsfeld and his colleagues (Lazarsfeld et al. 1948) developed the “minimal effects” paradigm which dominated academic analyses of mass media effects for much of the ensuing decades. In contrast to the breathless confidence in the incontrovertible power of mass media technologies that had characterized previous analyses, Lazarsfeld and others argued that the ability of

mass media messages to influence the beliefs and values of individual recipients had been vastly overblown and that the evidence for such propositions ranged from anecdotal to non-existent. First and foremost, their argument challenged the supposed passivity of the audience in their reception of novel information. Experimental evidence, since confirmed in multiple settings, revealed that individuals are quite selective in their reception of information, tending to easily incorporate information which is congruent with pre-existing beliefs, but unconsciously rejecting information which conflicts with their entrenched schemas and values (Graber 1984; Zaller 1992; Severin and Tankard 1992; Rabin and Schrag 1999). As a result, even if mass media messages reflect a wide diversity of perspectives, they are likely to be received so selectively that they serve only to reinforce the pre-existing attitudes (Klapper 1960).

Second, their argument challenged the legitimacy and credibility which the mass media had been assumed to possess. According to the "two-step" model of communication flow (Katz and Lazarsfeld 1955), the power to influence one's fundamental values is ceded only to highly trusted friends and associates. In their model, elite members of particular communities serve as opinion leaders, receiving the values espoused in mass media messages and then re-transmitting them to average citizens who are relatively uninterested in large-scale ideological battles, but who are willing to follow the cues of their trusted community leaders. Seen from this perspective, the media messages themselves are relatively powerless to generate the changes in mass values and beliefs characterized as inevitable by the hypodermic model.

Subsequent research has greatly complicated these caricatures, finding more nuanced paths through which to navigate between the opposing conceptual poles of media-as-hegemonic-creator and media-as-impotent-vessel. In particular, the “uses-and-gratifications” approach to media effects (Rosengren 1974) has demanded that researchers pay greater attention to the contextual variables which generate heterogeneity amongst agents in how they relate to mass media experiences. People bring to various media their own predispositions, assumptions, and expectations. They experience media differently, in part because they attach differing degrees of confidence to the accuracy of the messages (Tsfati 2003), and in part because they come to the messages seeking to fulfill divergent needs. Blumer, Katz, and others (Katz, Blumer, and Gurevitch 1973-74; Katz, Blumer, and Gurevitch 1974; Rosengren 1974; Rubin 2002) have argued that the ‘uses and gratifications’ that individuals seek from the media range from simple escapism, to the cultivation of affective relationships with the characters and personalities that through daily contact come to simulate a certain kind of imagined social connection (Chayko 2002). When it comes to the standard analysis of political interactions, both domestic and international, the most relevant mode of media utilization has been what Blumer, Katz, and their colleagues would refer to as “surveillance,” by which they mean the attempt to keep track of events and information about the external world which would otherwise be unavailable to the audience.

Such surveillance activities are widely thought to lie at the root of effective democratic governance (Mutz and Martin 2001; Snyder 2000; Van Belle 1996). It is this mode of relating to the mass media, in which novel information leads first to persuasion of its veracity and then to changes in individual attitudes and/or

behaviors, that to date has most interested political scientists, because of its easy congruence with models of ideal democratic citizenries who generate accountability through a combination of informational monitoring and sanctioning made possible through mass media's wide reach. The basic outlines of the information-persuasion account of mass media effects were first systematized by Hovland and his colleagues (Hovland, Janis, and Kelley 1953; see also McGuire 1996). Since then, the psychological literature on media and persuasion has expanded greatly, particularly through the development of the Elaboration Likelihood Model (ELM) of persuasion, which differentiates between the "central" and "peripheral" and routes to persuasion (Petty and Cacioppo 1986). The former refers to the conscious cognitive activities through which opposing positions are weighed and eventually judged, whereas the latter refers to the implicit processes through which messages influence attitudes even in the absence of their conscious consideration. The general consensus emerging from this line of research has been that the central route to persuasion is responsible for much more substantial and long-lasting attitudinal shifts than the peripheral route (Petty, Priester, and Briñol 2002; Holbert and Stephenson 2003). Still, much experimental evidence continues to indicate that mass media messages are remarkably weak instruments through which to induce changes in individual values and attitudes (McGuire 1986; Schudson 1984). Moreover, as Mughan and Gunter note, a half-century of observational evidence from mass behavior under authoritarian regimes leaves us with strong reasons to doubt the hegemonic attitudinal impacts predicted by the persuasive model of media effects:

"The seemingly worldwide retreat of more authoritarian forms of government certainly suggests that state control and manipulation of the media have been notably unsuccessful in sustaining nondemocratic forms of government the world over. ... This implies that the regime's ability to translate its control of

the media into compliant and lasting mass-level attitudes and behavioral norms was by no means as great as initially estimated" (Mughan and Gunter 2000, 6).

Despite these grounds for empirical suspicion, this "*informational-individual*" model of mass media effects – in which messages are conceptualized as more-or-less persuasive carriers of information about the external world and their effects are conceptualized as more-or-less substantial changes in individual attitudes – has continued to dominate political, economic, and sociological models of mass media effects (see for instance, Coase 1974; Zaller 1992; Stromberg 2001; Djankov et al. 2003; Murphy and Shleifer 2004; Glaeser 2005; Mullainathan and Shleifer 2005; Gentzkow and Shapiro 2006). However, while this approach has clearly provided many positive advances in our understanding of a wide variety of social and political interactions, it has simultaneously obscured classes of media effects which are reducible neither to information nor to individuals.

### **4.3 Media Effects: Sociotropic Judgements**

While many of the approaches reviewed above are to be commended for recognizing the importance of context in analyzing mass media effects, the ego-centric biases of the psychological frameworks upon which they have been based have left them blind to the *collective* nature of the contexts that condition the impacts of mass media messages. For this reason, some media effects research has more recently moved toward a recognition of the social and collective aspects of

mass media experiences.<sup>1</sup> Evidence from a wide variety of studies indicates that communication serves, in general, as a tool used by participants to establish shared symbolic reference points that are premised on the intersubjective construction of implicit collective audiences. This is, in fact, the fundamental mechanism through which our “experience of reality and meaning is created and maintained” (Hardin and Higgins 1996).

The first set of evidence that individuals cognize communication through the implicit construction of collective audiences, comes from a series of experiments by Fussell and Krauss in which they demonstrate that when asked to produce an effective message, experimental subjects attempt to constrain their representations to that which is “mutually known” by the participants (Fussell and Krauss 1989; Fussell and Krauss 1991; Fussell and Kraus 1992; Krauss and Fussell 1991a; Krauss and Fussell 1991b; Krauss, Fussell, and Chen 1995). They show that “the process of determining what is mutually known is guided, in part, by communicators’ implicit theories about the social distribution of knowledge” (Krauss and Fussell 1991a, 190), which in turn is guided by “knowledge of the social categories to which those individuals can be assigned” (Krauss and Fussell 1991a, 174). Moreover, the evidence from these studies indicates that “people are remarkably accurate in making such estimations” (Lau, Chiu, and Lee 2001, 359; see also Lau, Chiu, and Hong 2001). In other words, the twin acts of message construction and message interpretation are necessarily pursued *jointly* by any set of communicators, and

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<sup>1</sup> This is, in fact, part of broader movement within the field of psychology towards a “sociocultural” approach to the mind. As Wertsch summarizes: “The basic tenet of a sociocultural approach to mind is that human mental functioning is inherently situated in social interactional, cultural, institutional, and

although we are generally unaware of it, our minds seem to process meanings by constantly constructing implicit images of the collective audiences which form the intersubjective backdrop upon which our communications are projected.

The second set of evidence that individuals cognize communication through the implicit construction of collective audiences, comes in the form of the well-known "Third-Person Effect" (TPE) in studies of mass media impacts. Originally formulated by Davison (1983), experiments in this now sizable literature demonstrate that individuals generally believe that when exposed to mass media messages, the messages will have their largest effects, not "on 'me' or 'you,' but on 'them' – the third persons" (Davison 1983, 3). That is, when asked to evaluate whether exposure to particular mass media messages will influence the attitudes, values, or beliefs of those exposed, respondents consistently indicate that they believe the messages will have substantial effects on others, but also indicate that they simultaneously believe the same messages will have no substantial effects on themselves (for comprehensive reviews, see Perloff 1999; Paul, Salwen, and Dupagne 2000). Moreover, further experiments indicate that people consider the likely social distribution of media exposure in making such third-person judgements (Lambe and McLeod 2005). This is strong evidence that people not only construct implicit images of collective audiences, but also cognitively model the behavior of those audiences separately from their own (McLeod, Detenber, and Eveland 2001), and do so on the basis of the very structural factors that I argued in Chapter 2 would have to be

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historical context" (1991, 86).

relevant in contexts where interdependent coordination requires strong capabilities of intersubjective inference.

The third set of evidence that individuals cognize communication through the implicit construction of collective audiences, was produced by series of well-designed field experiments conducted by Mutz (1998). By introducing exogenous variation in the content of newspaper messages between two otherwise identical communities, Mutz demonstrates the critical importance of the distinction between egotropic effects and sociotropic effects. Egotropic judgements are those which concern the personal beliefs, values, and attitudes of a given individual, whereas sociotropic judgements are those which concern the aggregate perceptions of generic 'others' in one's community.

When the newspaper content in one community was altered to highlight the significance of the issue of homelessness and the newspaper content in the adjoining community was left unchanged, Mutz found that significant differences emerged between the two communities, but *not* in their egotropic judgements. Residents in both communities remained equally likely to report that they personally viewed homelessness as an important issue. In contrast, their sociotropic judgements differed substantially, with those residents who received the altered content becoming dramatically more likely to report that others in their community and country viewed homelessness as an important issue. As Mutz summarizes, "mass media may not be particularly influential in telling people what to think, or perhaps even what to think about, but media are tremendously influential in telling people what *others* are thinking about and experiencing" (1998, 5; see also Gunther 1998). Mirroring the claims made in Chapter 2, Mutz argues that the mass media messages

have such powerful sociotropic effects – in contrast to their anemic egotropic effects – because people exposed to such messages are aware that thousands or even millions of others are simultaneously sharing in their experiences (Mutz 1998, 19, 287).

This may explain an important, but apparently heretofore unnoticed paradox in the media effects literature: while psychologists have consistently found that the mass media exercise little influence over individual subjective attitudes, other researchers have consistently found that the mass media exercise substantial influence over collective behavior. In particular, a growing literature has demonstrated that local news consumption and especially local newspaper readership, consistently induce higher levels of local community integration and civic participation (Stamm 1985; Stamm and Fortini-Campbell 1983; Stamm and Weis 1986; Stamm and Guest 1991; Putnam 1995; McLeod et al. 1996; Friedland and McLeod 1999). In a similar vein, Strömberg (2001; 2004) finds that in the 1930s radio diffusion in a given U.S. county was associated with increased levels of public spending in the region, and Besley and Burgess (2002) show that in India, higher levels of newspaper circulation increase a state's ability to collectively demand government responsiveness to ecological crises. The primary finding to emerge from this literature is thus that local news sources are involved not just in the dissemination of information, but also in the construction of feelings of collective attachment towards the abstract entity that is the "local community", and a corresponding willingness to sacrifice for that symbolic identity (Paek, Yoon, and Shah 2005).

If this interpretation is correct, then the purportedly “minimal effects” that were demonstrated so consistently by earlier generations of researchers were found because they were measuring the wrong dependent variable, looking for *subjective* effects from a medium which primarily produces *intersubjective* effects. In it is on the basis of those intersubjective capabilities, induced by the structure of public communication, that mass media constituted on a local scale produce feelings of attachment and loyalty on that same local scale. Recall from Chapter 2, however, that the theoretical framework of communicative structuralism claims that the public and symbolic nature of the mechanism by which collective loyalties are constituted is the same, regardless of whether such constitution occurs on the scale of a single soccer stadium or on the scale of an entire continent. This study tests that conjecture on a cross-national scale by explicitly modeling the contextual and intersubjective nature of national mass media effects. Before turning to that model though, I first review the existing literature on group loyalty and the formation of collective attachments, and then explain the conceptual path forward that communicative structuralism provides.

#### ***4.4 Theories of Group Loyalty***

Accounts of collective group attachments generally begin with the proposition that human loyalties are rooted in the fulfillment of human needs. “Groups in general are organized to meet human needs, their structures and processes are in part molded by these needs” (Guetzkow 1957, 47). In particular, solidary groups serve to fulfill the individual’s need for self-transcendence (Druckman 1994), assuaging the

terrifying recognition of our own mortality by allowing an expansion of the subjective conception of the singular "I" to the intersubjective conception of an abstract "we." This formed the basis for Tajfel's (1981; 1982) "social identity theory" which argued that in-group biases arise because individual self-esteem comes to be linked to group membership and the esteem in which one's group is held. This framework then formed the basis for Turner's (1985; 1987; Turner et al. 1994) "self-categorization theory," which in contrast to social identity theory, places greater emphasis on the flexibility and multiplicity of the categorical lines along which individuals can choose to define themselves. Group loyalties are thus strongly defended because challenges to the group are simultaneously challenges to the terms in which the "self" has been defined.

A wide variety of experiments have since confirmed that the in-group biases identified by Tajfel and Turner are fundamental aspects of human social cognition. Even arbitrary, baseless group categorizations constructed on-the-spot in laboratory settings induce in-group favoritism and out-group discrimination (Brown 1995), even when striving for inter-group relative gains comes at the expense of absolute payoff levels (Brewer and Kramer 1985). Almost uniformly, subjects experience positive affect and associate positive valence characteristics with their group, while they experience negative affect and associate negative valence characteristics with those who lie outside the group's membership, despite the fact that the groups hold no substantive meaning for the participants (De Cremer and Van Vugt 1999; Gaertner and Dovidio 2000; Kramer and Brewer 1984; Mummendey et al. 2000). Moreover, these associations appear to be constructed implicitly and automatically, only minutes after the arbitrary groups are constructed (Otten and Wentura 1999).

These results have led many to conclude that humanity is doomed to an endless cycle of fragmentation into mutually antagonistic camps of “us” versus “them.” But this pessimistic vision is not the only possible conclusion to be drawn from the experimental evidence. Seen from an alternative perspective, the key insight demonstrated by this literature is the essentially arbitrary basis upon which collective loyalties can be constituted. Many observe the brutal and personal nature of the violence enacted during episodes of civil conflict and infer that the symbolic loyalties upon which such acts are based must be deeply and implacably rooted in the minds of those involved. However, experiments such as these show that we are far more flexible in our loyalties and attachments than is generally recognized.

In fact, while we seem to be evolutionarily hardwired to make affect-laden distinctions between “us” and “them”, the lines along which such cleavages are imagined remain remarkably open to manipulation and reinterpretation. In particular, a variety of experiments have indicated that social identities are multi-layered phenomena with lower levels of aggregation nested within higher levels of aggregation (see Figure 2). Moreover, while people can shift (or be shifted) relatively effortlessly between different levels, different modes of categorization seem to trade-off with one another (Gaertner et al. 1989). For instance, when the salience of a superordinate identity category is heightened, sub-group boundaries are rendered less relevant to distributional politics (Transue 2007). This is, in fact, part of a broader phenomenon, which Gaertner and Dovidio (2000) have attempted to capture with their Common Ingroup Identity Model (see also Gaertner et al. 1999), which demonstrates that divisive cleavages of all kinds can be overcome

through the symbolic deployment of encompassing identity categories, transforming out-group discrimination into in-group favoritism.

Humans are, in other words, far more complex animals than those atomized individuals imagined by most of the 'informational' perspectives on media effects reviewed in Section 4.2. Rather than cleanly atomized and unified individuals, we find ourselves faced with agents who symbolize their "selves" flexibly and contextually, who construct abstract categories of "we" by adopting decentered shifts of perspective that can be infinitely reconstructed along novel dimensions, and who form affect-laden associations between their conceptions of "I" and their conceptions of "we" that define the symbolic bounds of the communities for whom they will sacrifice. We are faced, that is, with humans whose loyalties are collective rather than personal, and intersubjective rather than subjective.

While the experiments reviewed here are to be commended for revealing the remarkably arbitrary and flexible nature of human group loyalties, there are nevertheless a number of limitations imposed by the laboratory environment that make certain questions difficult to answer. Participants in these experiments find themselves in an unfamiliar environment and surrounded by strangers. They are, in other words, almost completely unanchored from the networks of social and political attachments which would otherwise structure their behavior. In such a sparse environment, we should perhaps not be surprised that nearly any suggestion of a group boundary will be seized upon by the participants as a heuristic for imposing order on such unusual environs. The real world of sociopolitical conflict, however, is much different. As argued in Chapter 2 and modeled in Chapter 3, the actual playing field is quite competitive. Individuals find themselves bombarded at every turn with

conflicting calls for collective loyalty and mobilization in an ever-evolving ecology of communicative competitors. By abstracting away from such collective and competitive contexts, laboratory experiments make it impossible to analyze the conditions which structure the generation of actual group loyalties in real sociopolitical settings.

#### ***4.5 Communicative Structuralism Revisited***

The central claim of this chapter is that a productive synthesis between the otherwise isolated literatures on mass media effects and group loyalties can be achieved through the theoretical lens of communicative structuralism. Recall from Chapter 2, that this perspective treats the various mass media such as radio, television, and newsprint as members of a particular class of communicative structures which we can label *public communicative structures*. They are differentiated from private communicative processes, not by the pattern of linkages, but by the relationships between linkages. It is these relationships, I argue, which provide structural constraints on the production of intersubjectivity. A public communicative structure is one characterized by mechanisms which produce the following constraints between a set of communicative linkages originating from a common source:

- 1. Synchronized transmission:** This condition requires *that message transmission occur identically towards all recipients*. It is through this

condition that message transmission comes to be generalized as transmission to a collective audience.

- 2. Joint awareness of reception:** This condition requires *that message reception occur in a form that allows recipients to know that they are not alone in their reception of the message*. It is the condition through which the subjective experience of message reception is expanded into an intersubjective experience.

Seen from the “informational-individual” perspective, the various mass media encountered in modern human societies are nothing more than additional sets of linkages layered atop the network of social linkages, just another set of vectors through which information can be diffused between individuals. What this perspective misses is the irreducibly collective nature of mass media experiences. The problem with the existing literature reviewed in Section 4.2, is that media effects are treated solely as individual phenomena, a tendency borrowed from the psychological literatures on which such studies are based. But humans experience the mass media intersubjectively, just as they do all with all communication. There is always an implicit context, in the form of an implicit audience, against which judgements are made. Such judgements are themselves frequently implicit. We are not always consciously aware of the forces which drive us towards certain dimensions of self-categorization rather than others. This lack of awareness, however, does not diminish the power with which such forces influence behavior.

From the perspective of communicative structuralism, the mass media are an important tool for the construction of national loyalties because their breadth and their public quality give them a unique capacity to constitute the capability of intersubjective inference on a national scale. Public communicative structures make it possible for a group to gain an awareness of itself as a collective entity, because they represent arenas of shared expression in which it becomes possible to construct communities of symbolically shared experience.<sup>2</sup> When public communicative structures are national in scope, they constitute nations as symbolically cohesive collectives, by "offer[ing] the audience an image of itself and of the nation as a knowable community" (Morley and Robins 1995, 66). Constrained by the principles of synchronized transmission and joint awareness of reception, the medium forces both a generalization of message production and a generalization of message reception. It is the sharedness of such mass mediated experiences which reproduces on a national scale the feelings of local community integration and collective attachment that have previously been found to be produced by local news media (see Section 4.3).<sup>3</sup> It is this form of collective awareness, which arises in the presence of public communicative structures, leads people to form affective associations between their concept of "I" and their concept of "we." What we observe as collective loyalties are really the willingness of individuals to sacrifice on the basis of their membership in such publicly constructed *moral communities*.

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<sup>2</sup> Chayko (2002) refers to this as a "community of the mind" (60-63), arguing that when united by modern communication technologies, individuals "can mentally approach various phenomena from a common perspective and thus be brought experientially together, even from different spatial and temporal vantage points" (21).

<sup>3</sup> As Terhune notes, "The ways by which an individual relates to his nation have aspects in common with

We can therefore say that an experience produces an *intersubjective* effect when that effect is premised on some form of cognitive projection from “I” to “we.” In other words an intersubjective effect, such as the effect of mass media on group loyalties, is one that is founded on the capability to engage in *intersubjective inference*. It is precisely this class of mass media effects which we should expect to be conditioned by the characteristics of the collective audience constituted by a given public communicative structure, because it is that collective audience which provides the intersubjective context for the construction of group loyalties. For the purposes of the present chapter, our main outcome of interest is the national loyalty of a given individual; that is, their willingness to sacrifice for the abstract symbolic entity that is their “country.” If the above analysis is correct, then those same media effects which previous research found to be associated with effective sociotropic judgements – namely media exposure and media confidence (Tsfati 2003) – should be positively associated with the development of national loyalties. This leads directly to our first two hypotheses:

**H1:** *Ceteris paribus, respondents who experience mass media exposure will have a higher likelihood of expressing national loyalty.*

**H2:** *Ceteris paribus, respondents who feel confidence in the mass media will have a higher likelihood of expressing national loyalty.*

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the ways an individual relates to any group of which he is a member” (1964, 258).

However, recognition of the intersubjective nature of these effects allows us to derive an additional set of observable implications from the theory. Recall from Chapter 2 that the capability of intersubjective inference is greater under public communicative structures that have a high degree of *density*, because such structures generate more ubiquitously shared experiences and thus more robustly unified collective audiences. Density, in other words, influences the confidence with which the projection from “I” to “we” can be made at a given level of aggregation. Moreover, because the first two effects are hypothesized to be intersubjective effects, they should be rendered more forceful in precisely those contexts in which intersubjective inference has been rendered more facile. This leads directly to our third and final hypothesis:

**H3:** *The greater the national density of the broadcast network in a particular country, the greater the magnitude of the individual-level effects of mass media exposure and mass media confidence on national loyalty.*

The importance of this final hypothesis lies in recognizing the conditional nature of intersubjective mass media effects. While this is congruent with other researchers who have previously recognized the importance of context in conditioning the effects of media exposure (McLeod and Reeves 1980; Holbert and Stephenson 2003), this is the first study to recognize the structural nature of that conditioning context.

## **4.6 Data and Methods**

The data used to test these hypotheses come primarily from the European and World Values Surveys (Inglehart et al. 2005). Our sample consists of over 30,000 respondents from 38 countries who were surveyed between 1999 and 2001.

### **Dependent Variable**

The dependent variable is dichotomous, and is measured at the individual level using the following question:

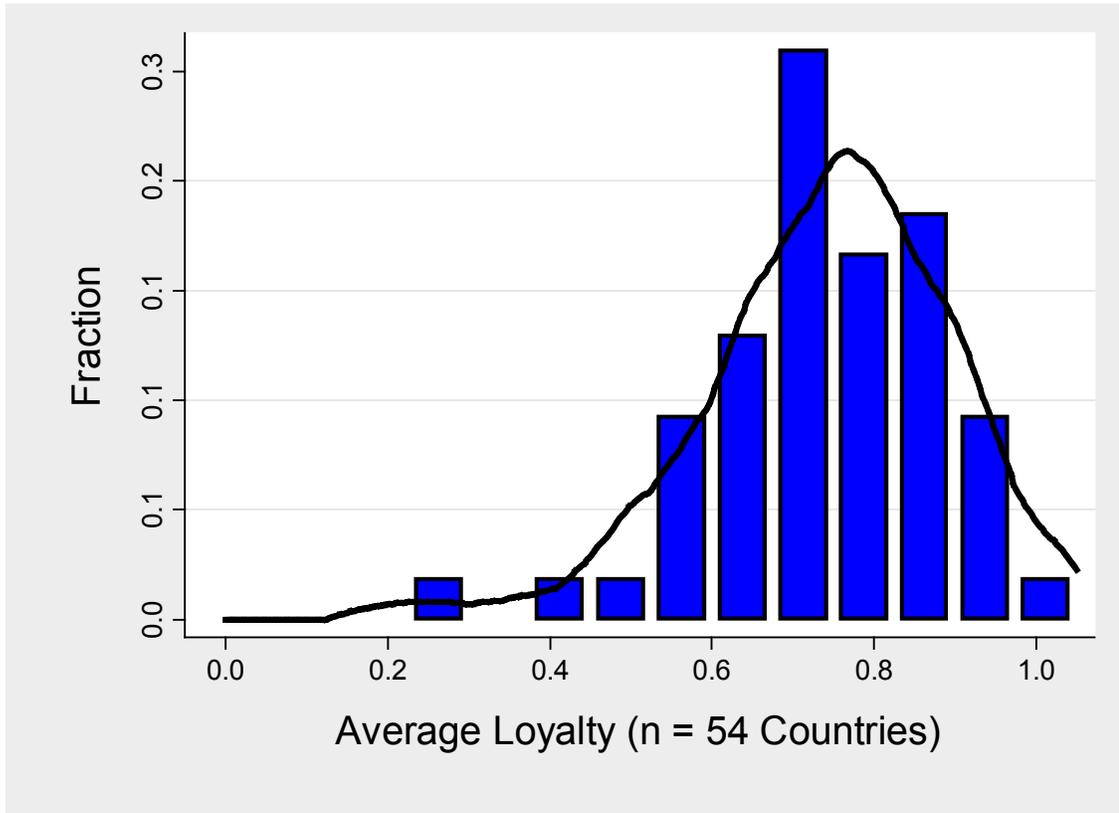
“Of course, we all hope that there will not be another war, but if it were to come to that, would you be willing to fight for your country?”

The variable **Loyal** is coded as 1 for all respondents who answered ‘yes’ to this question, and 0 otherwise. As can be seen in Figure 11, there is a great deal of cross-national variation in the rates at which individuals will indicate such a willingness to take up arms for their country. At one end of the spectrum, in Japan only 25% of the respondents answered ‘yes’ to this question, while at the other end of the spectrum, in Azerbaijan over 97% of the respondents answered ‘yes.’<sup>4</sup>

This question represents the perfect means to tap into the concept of national loyalty because it explicitly describes a severe sacrifice that would have to be borne collectively and explicitly describes the level of aggregation (‘your country’) at which

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<sup>4</sup> These country averages were calculated using the sampling weights provided by the World Values Survey in order to approximate a nationally representative sample.



Note: The blue bars represent the proportion of countries at each level of national loyalty, calculated for each country as a weighted average of *Loyalty* across all available respondents, using the sampling weights provided by the World Values Survey to approximate a nationally representative sample. The black curve is a kernel density plot based on the same data.

**Figure 11: National Loyalty Histogram**

this collective loyalty is to be imagined. However, it is also important to note what this variable is *not* measuring. First, *Loyalty* is not the same as the salience of an identity category. Respondents were asked which geographic level they “belonged to first”, with possible answers ranging from ‘locality’ to ‘the world.’ **Country Identification** is coded as 1 for all respondents who chose ‘country’, and 0 otherwise. While this may seem like a similar concept, this variable correlates only very weakly with *Loyalty* ( $r = 0.0853$ ), indicating that they are capturing quite different elements of the situation. Second, *Loyalty* is not the same as ideology. **Revolt** is coded as 1 if the respondent assents that “Society must be radically changed,” and 0 otherwise. While this may also seem like a similar concept, this variable correlates even more weakly with *Loyalty* ( $r = 0.0210$ ), indicating that it too is capturing a very different element of the situation. *Country Identification* and *Revolt* could be picking up any number of factors that could influence one’s personal values or attitudes, and will therefore be included as control variables in the following analyses, but it is *Loyalty* which allows us to answer our central question: whether, when the chips are down, one would be willing to collectively take up arms for the broader nation.

### **Independent Variables**

At the individual level, our key explanatory variables are **Media Exposure** and **Media Confidence**. Because there are multiple survey items that could be used to measure these concepts, I chose to construct two versions of each variable, one using ‘strict’ definition and one using a more ‘permissive’ definition. Under the ‘strict’ definitions, *Media Exposure* is coded as 1 if the respondent answers that they

“follow politics in the news” at least once a week, and *Media Confidence* is coded as 1 if the respondent indicates that they have “A great deal” or “Quite a lot” of confidence in the “The Press.” Under the ‘permissive’ definitions, *Media Exposure* is expanded to also include respondents who indicate that they “watch television” at least once a week, and *Media Confidence* is expanded to also include respondents who indicate that they have “A great deal” or “Quite a lot” of confidence in “Television.” Each version has its own advantages and drawbacks. The strict definitions ensure that we are singling out respondents who have contact with the political aspects of the national media discourse, but it risks excluding those whose contact with the mass media is purely apolitical. On the other hand, the permissive definitions risk including those whose contact with the mass media is so unsubstantial that they experience none of the shared symbolic touchstones that unite the abstract nation. In addition, the two coding schemes produce substantially different sample sizes, as summarized in Table 2. The strict definitions generate a sample of 25,341 respondents in 28 countries, whereas the permissive definitions allow for an expanded sample of 36,002 respondents in 38 countries. Note that under both the strict and permissive definitions of these concepts, there is almost no correlation between *Exposure* and *Confidence* ( $r = 0.0298$  and  $r = 0.0356$ , respectively), a finding mirrored by Tsfaty and Cappella (2003).

Additionally, I include a wide variety of individual-level control variables that might be causally associated with *Loyalty*. **Age** is included as a continuous measure along with its quadratic transformation **Age<sup>2</sup>**, to capture the expectation that inclinations towards military service will increase with age up to a certain point, but then decline as respondents become too old to serve effectively. The remaining

**Table 2: Survey Data Availability, By Country**

<b>Country</b>	<b># Respondents</b>
<b>Albania</b>	<b>687</b>
<b>Argentina</b>	<b>747</b>
Armenia	1,483
Australia	1,592
<b>Austria</b>	<b>918</b>
Azerbaijan	1,379
<b>Bangladesh</b>	<b>1,222</b>
<b>Belarus</b>	<b>691</b>
Brazil	1,019
<b>Canada</b>	<b>1,409</b>
<b>Chile</b>	<b>802</b>
Dominican Republic	240
Georgia	1,699
<b>India</b>	<b>1,274</b>
<b>Italy</b>	<b>1,210</b>
<b>Japan</b>	<b>537</b>
<b>Lithuania</b>	<b>465</b>
<b>Mexico</b>	<b>847</b>
<b>Morocco</b>	<b>1,154</b>
New Zealand	500
<b>Peru</b>	<b>1,327</b>
<b>Philippines</b>	<b>1,108</b>
<b>Republic of Korea</b>	<b>1,109</b>
<b>Republic of Macedonia</b>	<b>860</b>
<b>Republic of Moldova</b>	<b>553</b>
<b>Russian Federation</b>	<b>1,708</b>
<b>Slovenia</b>	<b>539</b>
<b>South Africa</b>	<b>1,932</b>
<b>Spain</b>	<b>693</b>
Switzerland	722
Taiwan Province of China	581
<b>Uganda</b>	<b>461</b>
<b>Ukraine</b>	<b>693</b>
<b>United Republic of Tanzania</b>	<b>688</b>
<b>United States of America</b>	<b>923</b>
Uruguay	690
<b>Venezuela</b>	<b>895</b>
<b>Zimbabwe</b>	<b>645</b>
<b>Totals</b>	
<b>'Strict' Definitions</b>	
# Countries	28
# Respondents	25,341
<b>'Permissive' Definitions</b>	
# Countries	38
# Respondents	36,002

Note: Countries in bold-face are available under both the 'strict' and 'permissive' definitions of media exposure and media confidence, while countries in standard font are only available under the 'permissive' definitions of media exposure and media confidence.

controls are all dummy variables. **Male** equals 1 if the respondent is male, **Secondary Education** equals 1 if the respondent completed high school or the equivalent, **Higher Education** equals 1 if the respondent attended a university, **Low Income** equals 1 if the respondent reports being in the lowest third of their country's income distribution, **High Income** equals 1 if the respondent reports being in the highest third of their country's income distribution, **Married** equals 1 if the respondent is currently married, **Parent** equals 1 if the respondent has any children, and **Military Personnel** equals 1 if the respondent is a member of the armed services.

At the country level, our main explanatory variable is **Media Density**, which measures the national density of mass media structures using the number of radio receivers or the number of television receivers – whichever is larger – in use for broadcasts to the general public, per 100 people.<sup>5</sup> I also include country-level controls for **GDP Per Capita**<sup>6</sup> and the level of **Democracy**.<sup>7</sup>

### **Hierarchical Linear Model**

Difficulties arise when attempting to make causal inferences with this style of data, because different variables have been measured at different levels of

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<sup>5</sup> Ideally, this variable would measure the percentage of households with either a radio or a television, as that would more accurately capture the percentage of people who are reachable by popular broadcasts, but such data are not available. The data for this variable are taken from the Banks (2002) Cross-National Times Series database and the World Bank's (2004) World Development Indicators database. In the case of disagreements between the two sources, the Banks data was generally prioritized, except for a small number of obvious typos.

<sup>6</sup> Data taken from the Penn World Tables (Heston, Summers, and Aten 2002).

<sup>7</sup> Data taken from the Polity IV data set (Marshall and Jaggers 2002). The 21-point scale results from subtracting the Polity IV *Autocracy* score from the *Democracy* score

aggregation (i.e. individual and country). Each respondent, for instance, has a level of *Democracy* associated with their observation in the data set, but there are not really 36,002 independently drawn observations of *Democracy*, there are only 38. Standard OLS procedures, blind to this multilevel structure, will therefore result in biased inferences. Hierarchical linear models (also known as “multilevel models” or “mixed-effects models”) solve this difficulty by explicitly modeling the nested nature of the observations and estimating separate “fixed effects” and “random effects” components for each level (Raudenbush and Bryk, 2002). HLM is especially useful in the present context because it allows one to estimate cross-level interaction terms through a “random coefficients” specification, in which the slope coefficients for particular variables at the individual level are modeled as functions of the country-level variables with their own independently drawn error terms (Paek, Yoon, and Shah 2005; Pan and McLeod, 1991). Simultaneously estimating the individual-level effects, the country-level effects, and the cross-level interactions predicted by the three hypotheses above, thus produces a model of the following form:

### **Level 1 Model**

$$\text{Prob}(Loyal_{ij} = 1 | \beta_j) = \varphi_{ij}$$

$$\text{Log}[\varphi_{ij} / 1 - \varphi_{ij}] = \eta_{ij}$$

$$\begin{aligned} \eta_{ij} = & \beta_{0j} + \beta_{1j}(MediaExp_{ij}) + \beta_{2j}(MediaConf_{ij}) + \beta_{3j}(Revolt_{ij}) + \\ & \beta_{4j}(CountryID_{ij}) + \beta_{5j}(Age_{ij}) + \beta_{6j}(Age2_{ij}) + \beta_{7j}(Male_{ij}) + \\ & \beta_{8j}(SecEdu_{ij}) + \beta_{9j}(HighEdu_{ij}) + \beta_{10j}(LowInc_{ij}) + \beta_{11j}(HighInc_{ij}) + \\ & \beta_{12j}(Married_{ij}) + \beta_{13j}(Parent_{ij}) + \beta_{14j}(Military_{ij}) \end{aligned}$$

### **Level 2 Model**

$$\begin{aligned} \beta_{0j} &= \gamma_{00} + \gamma_{01}(GDP_j) + \gamma_{02}(Dem_j) + \gamma_{03}(MediaDens_j) + u_{0j} \\ \beta_{1j} &= \gamma_{10} + \gamma_{11}(GDP_j) + \gamma_{12}(Dem_j) + \gamma_{13}(MediaDens_j) + u_{1j} \\ \beta_{2j} &= \gamma_{20} + \gamma_{21}(GDP_j) + \gamma_{22}(Dem_j) + \gamma_{23}(MediaDens_j) + u_{2j} \end{aligned}$$

## 4.7 Results

Model 1 takes the form described above except that it omits the cross-level interaction terms. Model 1 is therefore essentially a model of the the individual-level effects, with the country-level variables entering only as adjustments to the intercept. The results are reported in Table 3, and are strongly supportive of Hypotheses 1 and 2. The coefficients on both *Media Exposure* and *Media Confidence* are both positive and strongly significant ( $p < 0.001$  and  $p = 0.030$ , respectively). This indicates, as predicted by the theory, that both the individual-level experience of mass media messages and the individual-level attitude of trust towards the mass media exercise powerful influence over the formation of national loyalties.

The control variables generally behave as expected. *Age* and  $Age^2$  form the expected convex relationship ( $p = 0.012$  and  $p = 0.005$ , respectively). *Higher Education* is negatively related to national loyalty while *Low Income* is positively related ( $p = 0.006$  and  $p = 0.034$ ). *Parent* and *Military Personnel* are both positively related ( $p = 0.045$  and  $p = 0.003$ ).

Models 2 and 3 take the form described above, adding cross-level interactions to the specification examined in Model 1. Model 2 uses the strict definitions of exposure and confidence, whereas Model 3 uses the permissive definitions. While we are interested primarily in the interactions between the individual-level variables of *Media Exposure* and *Media Confidence* and the country-level variable of *Media Density*, I also include the additional cross-level interactions with *GDP* and *Democracy* to ensure that spurious significance is not attached to the interactions of

**Table 3: HLM – Individual-Level Effects**

	Model 1		
	Coefficient	Robust S.E.	<i>p</i> -value
<b>Fixed Effects</b>			
<b>Country-Level Control Variables</b>			
GDP per capita	-0.000080	0.000027	0.005 ***
Democracy	-0.020370	0.039604	0.608
Media Density	0.006551	0.005020	0.197
<b>Individual-Level Control Variables</b>			
<b>Attitudinal Variables</b>			
Revolt	-0.239682	0.048815	0.000 ***
Country Identification	0.260704	0.064141	0.000 ***
<b>Demographic Variables</b>			
Age	0.028993	0.011440	0.012 **
Age2	-0.000396	0.000141	0.005 ***
Male	0.698723	0.054526	0.000 ***
Secondary Education	-0.013108	0.057757	0.821
Higher Education	-0.146844	0.053288	0.006 ***
Low Income	0.074625	0.035337	0.034 **
High Income	-0.066610	0.049278	0.177
Married	0.070193	0.055612	0.207
Parent	0.095265	0.047572	0.045 **
Military Personnel	0.613310	0.199357	0.003 ***
<b>Media Effects</b>			
<b>Media Exposure</b>	0.410563	0.054589	0.000 ***
<b>Media Confidence</b>	0.091738	0.042316	0.030 **
<b>Intercept</b>	0.706374	0.652240	0.283
<b>Random Effects</b>			
	Standard Deviation	Variance Component	<i>p</i> -value
<b>U0 (Intercept)</b>	0.71951	0.5177	0.000

Note: Model 1 uses the 'strict' definitions of media exposure and media confidence.  
 \**p* < 0.1, \*\**p* < 0.05, \*\*\**p* < 0.01

**Table 4: HLM – Cross-Level Interactions**

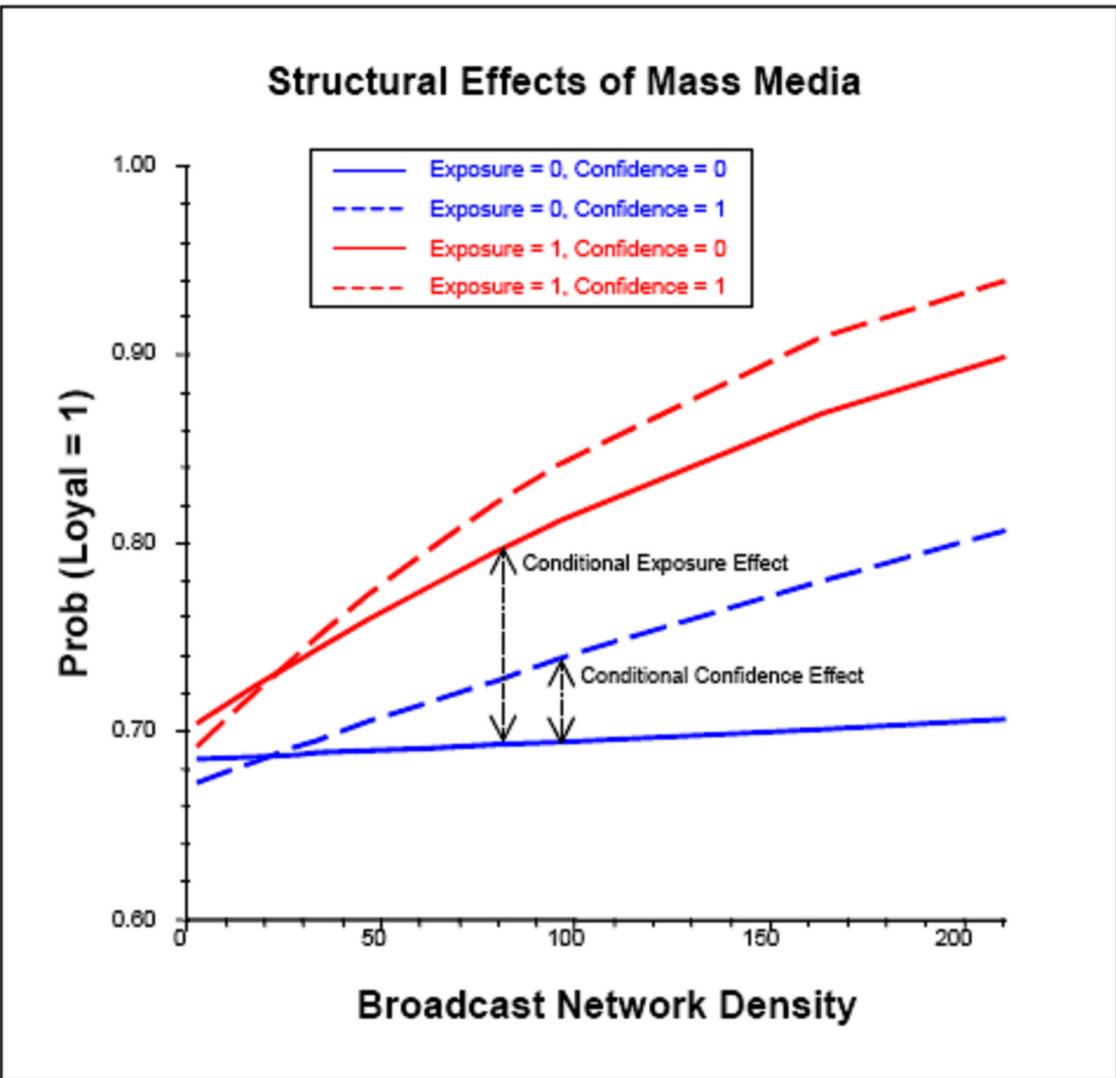
	Model 2			Model 3		
	Coefficient	Robust S.E.	p-value	Coefficient	Robust S.E.	p-value
<b>Fixed Effects</b>						
<b>Country-Level Control Variables</b>						
GDP per capita	-0.000046	0.000035	0.190	-0.000027	0.000031	0.400
Democracy	-0.031750	0.047564	0.507	-0.052967	0.050938	0.303
Media Density	0.000248	0.006279	0.969	-0.000143	0.004605	0.976
<b>Individual-Level Control Variables</b>						
<b>Attitudinal Variables</b>						
Revolt	-0.245448	0.049595	0.000 ***	-0.244333	0.045880	0.000 ***
Country Identification	0.260036	0.064025	0.000 ***	0.290294	0.051839	0.000 ***
<b>Demographic Variables</b>						
Age	0.028803	0.011353	0.011 **	0.035789	0.009205	0.000 ***
Age2	-0.000396	0.000140	0.005 ***	-0.000448	0.000109	0.000 ***
Male	0.700214	0.054847	0.000 ***	0.725914	0.056859	0.000 ***
Secondary Education	-0.011343	0.058340	0.846	-0.038962	0.055027	0.479
Higher Education	-0.144500	0.051247	0.005 ***	-0.146199	0.039836	0.000 ***
Low Income	0.071957	0.035376	0.042 **	0.049322	0.032856	0.133
High Income	-0.069171	0.049502	0.162	-0.059920	0.040227	0.136
Married	0.069822	0.055842	0.211	0.053966	0.043965	0.220
Parent	0.088779	0.046850	0.058 *	0.066096	0.044082	0.134
Military Personnel	0.606115	0.203246	0.003 ***	0.834364	0.146402	0.000 ***
<b>Media Effects</b>						
<b>Media Exposure</b>						
Intercept	0.010713	0.145919	0.942	0.071762	0.255144	0.779
ME X GDP	-0.000032	0.000014	0.023 **	-0.000031	0.000017	0.074 *
ME X Democracy	0.024356	0.011901	0.044 **	0.014274	0.015796	0.370
ME X Media Density	0.005854	0.001843	0.003 ***	0.005751	0.002358	0.018 **
<b>Media Confidence</b>						
Intercept	0.246834	0.160277	0.128	0.360392	0.197048	0.071 *
MC X GDP	-0.000016	0.000010	0.127	-0.000012	0.000008	0.132
MC X Democracy	-0.008955	0.009571	0.353	-0.015395	0.012074	0.207
MC Media Density	0.003093	0.001803	0.090 *	0.002434	0.001268	0.059 *
<b>Intercept</b>	<b>0.889258</b>	<b>0.768330</b>	<b>0.252</b>	<b>1.003346</b>	<b>0.873132</b>	<b>0.255</b>
<b>Random Effects</b>						
	<b>Standard Deviation</b>	<b>Variance Component</b>	<b>p-value</b>	<b>Standard Deviation</b>	<b>Variance Component</b>	<b>p-value</b>
<b>U0 (Intercept)</b>	0.81735	0.66806	0.000	0.94300	0.88925	0.000
<b>U1 (Media Exposure)</b>	0.21645	0.04685	0.000	0.13950	0.01941	0.005
<b>U2 (Media Confidence)</b>	0.13206	0.01744	0.005	0.38226	0.14619	0.000

Note: Model 2 uses the 'strict' definitions of media exposure and media confidence, whereas Model 3 uses the 'permissive' definitions of media exposure and media confidence. \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$

interest. Models 2 and 3 also serve as robustness checks for each other by utilizing different definitions of the same key independent variables.

The results for these models are reported in Table 4, and are both strongly supportive of Hypothesis 3. The coefficient on the *Media Exposure x Media Density* interactive term is positive and strongly significant in both models ( $p = 0.003$  and  $p = 0.018$ , respectively). This indicates that the expansion of perspective from “I” to “we” is facilitated by the structural density of public communicative structures. This is powerful evidence that when exposed to mass-media messages, individuals interpret them not only subjectively but also *intersubjectively*. That is, they interpret them on the basis of implicitly constructed collective audiences, and attach greater weight to their media experiences when acting under a highly dense public communicative structure. Additional support for Hypothesis 3 is provided by the *Media Confidence x Media Density* interaction, as reported in Table 4. The coefficients are positive in both models but only moderately statistically significant ( $p = 0.090$  and  $p = 0.059$ ).

However, such interactive effects are difficult to visualize simply on the basis of coefficients. I therefore present the results from Model 2 in graphical form in Figure 12, simulating hypothetical conditions in which *Media Exposure*, *Media Confidence*, and *Media Density* are systematically varied while holding all other variables constant at their means. The solid blue line represents the condition under which an individual has no media exposure and no confidence in the media. The flat slope of the line indicates that *Media Density* exercises its effects solely through the individual-level variables of *Media Exposure* and *Media Confidence* (as also indicated by the statistical insignificance of the *Media Density* coefficient in all three models).



Note: Simulated probabilities are based on coefficients and standard errors from Model 2, with all other variables held at their means.

**Figure 12: Conditional Mass Media Effects**

In other words, the spillover effects that would be expected by the 'informational-individual' account are nowhere to be found. It is not that countries with higher *Media Density* simply have higher levels of *Loyalty*. Rather, these results indicate that media messages are experienced differently in high density countries, having greater effects precisely because the relevant collective audience has been more robustly constituted.

The solid red line represents the condition where *Exposure* = 1 and *Confidence* = 0. The substantive impact of *Media Exposure* can be judged by comparing the height of the solid red line and the height of the solid blue line (marked as the "Conditional Exposure Effect" in Figure 12). We see that at low values of *Media Density* this impact becomes indistinguishable from 0, while at high values of *Media Density* exposure generates an increase of almost 20% in the probability of expressing national loyalty. Similarly, by comparing the height of the solid blue line to the height of the dashed blue line we can see that the "Conditional Confidence Effect" is also indistinguishable from zero at low levels of *Media Density* but generates an increase of over 10% in the probability of expressing national loyalty at high levels of *Media Density*.

## **4.8 Discussion**

In this chapter, using hierarchical linear models to directly test for cross-level interaction effects between individual-level variables and country-level variables, I confirmed the following implications of the theory: (1) the greater an individual's *exposure* to the mass media or *confidence* in the mass media, the greater their

likelihood of indicating allegiance to their national community, as measured by their willingness to fight for their country in the event of a war, and (2) the greater the density of the broadcast network in a particular country, the greater the magnitude of the individual-level effects of mass media exposure and confidence on national allegiance. In other words, while higher exposure to the mass media and higher confidence in the mass media are always associated with higher probabilities of nation-state allegiance (at the level of the individual), those effects become far more pronounced when an individual is operating in a country with a dense mass media network. These results thus represent individual-level evidence that a central predictive implication of the theory of communicative structuralism is correct: when individuals interact with the mass media, they do so on the basis of implicitly imagined collective audiences, perspectives imagined from the intersubjective viewpoint of “we” rather than the subjective viewpoint of “I.” When more of their fellow citizens are involved in the experience, greater weight is attached to the experience, and it thereby becomes a symbolic platform upon which more cohesive collective loyalties can be constructed.

These results have thus provided strong confirmation of the intersubjective account of mass media effects, representing systematic cross-national evidence that mass media effects are conditioned by communicative structure. Moreover, it is difficult to imagine how an alternative story could account for all of the observed regularities simultaneously. While a critic could claim that these results were somehow the result of individuals’ endogenous selection into mass media experiences, the results presented here render this an unlikely interpretation. First, the results hold even when controlling for a wide variety of demographic factors –

including age, income, and education – that would be expected to influence an individual’s position and integration within their country’s population. Second, the results hold when even when controlling for the attitudinal factors – identification with one’s country and the desire to see its institutions overturned – that would be expected to generate spurious influences on the construction of national loyalties. Third, the results hold for two different operationalizations of the key independent variables, *Media Exposure* and *Media Confidence*, reducing the likelihood that the findings are an artifact of any particular coding scheme. Moreover, any alternative causal story would have to account simultaneously for both the individual-level effects of *Media Exposure* and *Media Confidence*, and the country-level conditioning of those effects by *Media Density*, despite the fact that *Media Exposure* and *Media Confidence* are uncorrelated.

That being said, the evidence presented in this chapter certainly cannot prove definitively that there is no alternative causal story which could account for these observed regularities. That is why, as I noted at the end of Chapter 2, this dissertation adopts the strategy of repeatedly returning to the theory to derive additional observable implications. The strength of the theoretical framework of communicative structuralism lies in its ability to generate testable hypotheses not just at the micro-level, as presented in this chapter, but also at the macro-level. I turn now to a discussion of those macro-level implications.

## **Chapter 5. Mass Media Structure, Economic Development, and the Emergence of Civil Conflict**

### ***5.1 Introduction***

In recent years, a burgeoning quantitative literature has begun tackling a variety of questions revolving around the onset of large-scale civil conflict. This newfound interest is unsurprising given the enormity of the carnage and devastation that has resulted from intra-state violence in the past half-century. One estimate puts the death toll for civil wars since World War II at over 16.2 million, nearly five times the number of battle deaths resulting from interstate wars during the same period (Fearon and Laitin 2003, 75). Moreover, the number of ongoing civil conflicts has been steadily increasing for most of the past half-century, with over a third of the states in the international system having experienced civil conflicts which killed more than a 1,000 people. Academics and policymakers alike have thus been at great pains to identify the causal factors that encourage or inhibit the outbreak of large-scale civil conflict.

Scholars from multiple traditions have converged on the idea that “civilian loyalties” are central to the dynamics of collective violence in domestic warfare (Wood 2003, 132, 135; Ellis 1995). Loyalties are the symbolic bonds of attachment which incline an individual, in the face of competing mobilizational appeals, to prioritize the provision of resources to one side rather than another. Such

attachments provide the psychological foundation for construction of group boundaries and maintenance of group cohesion.<sup>1</sup> The collective and multisided nature of the violence enacted in civil wars thus requires, almost by definition, a corresponding fragmentation of loyalties through the prioritization of attachments which are sub-national in scope. Qualitative accounts of civil conflict are rife with descriptions of what we might term the *localization of attachments*, whether through the bonds of family, class, clan, tribe, neighborhood, village, or ethnicity (Kalyvas 2003; Lacquer 1998). Indeed, both popular fragmentation and elite fragmentation have long been recognized as key to the emergence of domestic warfare (Tilly 1993; Skocpol 1979; Lachman 1997). Moreover, scholars are increasingly coming to the realization that the cleavages upon which such fragmentation is based are not necessarily pre-existing (at least in a political sense), but rather frequently emerge endogenously as the violence erupts (Kalyvas 2006).

This means that in attempting to study the patterns of loyalty fragmentation which underlie collective violence, there is the danger of a tautology: if we claim that loyalty fragmentation causes collective violence, while at the same time using the observation of collective violence to infer the presence of a proclivity towards loyalty fragmentation, then we find ourselves in an unfalsifiable explanatory loop. We are thus in need of a theory which would allow us to measure the proclivity towards such fragmentation *ex ante*; that is, separately from our measurement of the actual occurrence of collective violence. This chapter argues that the theoretical framework

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<sup>1</sup> As Gould argues, "When someone responds positively to an appeal for to solidarity, then, he or she has acknowledged membership in the group whose boundaries are defined by the terms of the appeal" (1995, 14).

of *communicative structuralism* provides a way forward, which rather than focusing on the dynamics of the violence itself, focuses on the structural mechanisms which facilitate the maintenance of national unity and cohesion.

The structural conditions analyzed in the extant literature on civil war onset have generally been composed either of material structures or institutional structures. While these studies have produced great strides in our understanding of the conditions under which such conflicts are likely to occur, I argue that important deficiencies in the most prominent statistical models in the civil war literature have resulted from a failure to adequately theorize the *communicative* context that underlies the *intersubjective* constitution of national unity and cohesion. As a result, an important category of structures – communicative structures – has been consistently overlooked in theoretical and empirical studies of civil conflict. To remedy this deficiency, I draw on classic and contemporary theories of nationalism to extend and refine the arguments for *communicative structuralism* presented in Chapter 2. As opposed to discursive or interpretative analyses which focus on the details of message construction, the central claim of communicative structuralism is that the structure through which messages travel is as important, if not more so, than the specific contents of the messages themselves.

By focusing on large-scale civil conflict as the outcome of interest, the argument presented here has been purposely positioned in a 'difficult' empirical domain, to demonstrate the intersubjective power of mass communication in a setting which seems so driven by the brute materiality of violence that 'mere' communication should play no substantive role. Moreover, against much of the extant literature, I argue that mass media structures can be powerful forces for

domestic peace and stability. While examinations of hateful and inflammatory mass media messages in Rwanda, Yugoslavia, and elsewhere have convinced many that the mass media are some of the primary culprits in fomenting inter-group divisions and animosities,<sup>2</sup> these conclusions have generally rested on questionable evidentiary foundations. The central problem with such studies is that they essentially select on the dependent variable, only observing mass media behavior in countries which have already experienced the outbreak of large-scale civil conflict. Moreover, the focus is almost always on the *content* of mass media messages, which is likely to be endogenous to the conflict itself. The fact that in the midst of a bloody civil war the mass media have been observed to transmit inflammatory messages is hardly surprising, but it does not constitute evidence that the mass media messages *caused* the outbreak of violence, nor does it give us any insight into the factors which allow some countries to avoid the outbreak of conflict in the first place. The solution to this inferential difficulty, as I have argued throughout this dissertation, is to focus our analysis on the *structure* of mass communication, rather than its content.

Defining a *communicative structure* as a system of interlocking constraints on (and opportunities for) the transmission of messages amongst some set of agents, I have argued that national-level communicative structures, such as mass media, serve as constraints on the ease with which the sub-national fragmentation of loyalty attachments can be achieved. This perspective treats various mass media (i.e.

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<sup>2</sup> For an examination of the role played by the mass media in the breakup of Yugoslavia, see Thompson (1999), Gagnon (1994/1995), and Silber and Little (1997). On the role played by the mass media in the Rwandan genocide, see Des Forges (1999) and Metzl (1997).

radio, television, newspaper, cinema, etc.) as members of a class of communicative structures called *public communicative structures*, which are defined by two structural properties: (1) synchronized transmission and (2) joint awareness of reception. These properties, which will be discussed further below, allow public communicative structures to create broad arenas of shared experience. That is, they constitute collective audiences as sets of individuals who are jointly aware of themselves as symbolically united groups.

Communicative structuralism makes the claim that this mode of group cohesion, the *esprit de corps* that has long been known to arise amongst effective military units, sports teams, tribes, and nations is based not on a unity of beliefs, but on the shared symbolic attachments which arise from publicly shared experiences. By allowing messages to be publicly transmitted and received on a geographically dispersed basis, mass media makes possible the formation of shared experiences and cohesive group attachments on a scale which transcends the bonds of clan, tribe, and village. As a result, as national-level mass media structures increase in strength, there is a corresponding decrease in a population's propensity towards sub-national fragmentation of loyalty attachments.

This perspective stands in stark contrast to accounts that characterize mass media simply as a mechanism for the diffusion of information. Such accounts treat as paradigmatic the face-to-face process, which I have labeled *private communication*, by which information (i.e. some piece of data about the external world) is transferred from one human mind to another. When seen from this perspective, mass media structures appear to simply provide another set of linkage vectors along which data can travel. While communicative structuralism certainly

does not deny that mass media messages transmit information to those receiving them, it does claim that the structural effects of mass media, as members of the class of public communicative structures, are far more profound than the *mere* diffusion of information. Public communicative structures constitute zones of collective awareness which facilitate the intersubjective cohesion of human groups.

The advantage of conceptualizing intersubjectivity as being structurally produced, lies in the resulting ability to investigate varying propensities to sub-national fragmentation through an analysis of variation in national public communicative structures. To test this argument, I collected data on mass media structures in 177 countries for the period 1945-1999. The primary finding, reported below, is that as the density (i.e. per capita reception capability) of national mass media structures increases, the probability of civil war onset decreases dramatically. Moreover, I demonstrate that the most prominent predictor of civil war onset in the extant statistical literature, per capita GDP, actually exercises no direct influence on civil war onset once the effects of media density are taken into account.

Given the inherent difficulty of introducing a novel set of independent variables which have been wholly absent from the civil conflict literature, while simultaneously challenging one of that literature's most widely accepted findings, my methodological strategy is to triangulate on the question through the application of a wide variety of quantitative approaches, many of which have never been applied to the analysis of civil of conflict. Utilizing a combination of standard regression analysis with careful attention paid to alternative specifications and alternative indicators of economic modernization and informational diffusion, non-parametric tests of predictive accuracy, Bayesian model averaging, and structural equation

modeling, I demonstrate that the effect of mass media density in preventing the onset of civil war is one of the most robust empirical relationships yet to be discovered in the study of large-scale domestic violence. Taken as a whole, the results indicate the necessity of incorporating structural communicative effects into our theoretical and empirical models of civil conflict.

## ***5.2 Structural Causes of Civil Conflict***

In contrast to earlier qualitative accounts which focused on the severity of individual motivations to rebel against a given regime (i.e. 'grievances'), the contemporary quantitative literature on civil conflict has generally focused on the structural causes of conflict and stability. For structural accounts, what matters is not intensity of particular grievances vis-à-vis the state, but the structural arrangement of opportunities and constraints facing those who engage in competing appeals for mobilization (Goodwin 2001; Wickham-Crowley 1997). Such arguments have generally taken one of two forms, focusing either on institutional structures or on material structures. I will briefly discuss each in turn.

Leading the quantitative study of the relationship between institutional structures and large-scale domestic conflict, Hegre et al. (2001) argue that the level of democracy will exert effects on the outbreak of civil war both by influencing the production of grievances and by channeling the expression of the discontent along particular avenues of contestation. In a similar vein, Reynal-Querol (2002) argues that democracy will reduce the probability of civil conflict by providing lower barriers to entry for aggrieved parties. A wide array of studies have now found that there is

an “inverted-U” relationship between democracy and civil war onset, with consolidated democracies and harshly authoritarian states having relatively few civil wars compared to ‘transitional’ or ‘intermediate’ regimes (Ellingsen 2000; Sambanis 2001). Hegre et al. (2001) take this argument even further, demonstrating that it is not the case that intermediate regimes experience more conflicts simply because they tend to be in transition, nor is it the case that transitional regimes experience more conflict simply because they tend to be not fully consolidated at either end of the democracy-autocracy spectrum, but rather these two effects each exert independent statistical influence on the outbreak of domestic unrest.

At the other end of the structural spectrum, Collier and Hoeffler (2004) examine the relationship between material structures and the emergence of civil conflict, using cross-national data to demonstrate that indicators of economic opportunities for rebel mobilization are far more powerful predictors of civil war onset than indicators of grievances. Economic dependence on primary commodity exports and a high degree of geographic dispersion of the population both increase the likelihood of civil war, while high per capita GDP reduces the likelihood of civil war.<sup>3</sup> In contrast, measures of economic inequality, political rights, ethnic fractionalization, and religious polarization are all insignificant in their statistical models. Collier and Hoeffler argue that this should not necessarily be taken to mean that grievances are unimportant in the initiation of civil violence. Rather, grievances may simply be ubiquitous. Every sufficiently large society is likely to have some sub-

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<sup>3</sup> The relationship between natural resources and civil conflict has since been further examined by Weinstein (2005) and Synder and Bhavnani (2005). For a critique of the original Collier and Hoeffler finding concerning primary commodity exports, see Fearon (2005).

population that is dissatisfied with some aspect of the governing regime. As a result, indicators of grievances do not give us much leverage in determining which countries are likely to fragment and which countries are likely to remain stable.

Using similar logic, Fearon and Laitin (2003) argue that the diversity of political agendas, motivations, and grievances which motivate rebel groups makes this set of factors an unlikely candidate for systematic, cross-national explanations of civil conflicts. They claim that what unites these conflicts are not their specific grievances, but rather the conditions that favor a particular form of political action: namely, *insurgency*. Insurgency is conceptualized as a “technology of military conflict characterized by small, lightly armed bands practicing guerilla warfare from rural base areas,” which rebels use in an attempt to either extract concessions from the state, or overthrow it (Fearon and Laitin 2003, 75). They find that several physical conditions which favor insurgency are statistically significant predictors of civil war onset, including oil exports, mountainous terrain, and large populations. As with Collier and Hoeffler, they also find that low per capita GDP is a strong predictor of civil war onset. Indeed, the finding that countries with higher levels of economic development are less likely to experience civil war is arguably the most robust statistical relationship in the civil conflict literature.<sup>4</sup> However, as I will demonstrate more fully below, the models upon which this finding is based suffer from an

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<sup>4</sup> In a recent review of a wide variety of civil war datasets, Sambanis (2004) finds that the negative relationship between per capita GDP and civil war onset is one of the very few findings that is robust to shifting definitions of civil conflict and differing model specifications. It has, however, been subject to differing interpretations. Collier and Hoeffler (2004) claim that per capita GDP is a measure of the economic opportunity costs facing potential rebels, whereas Fearon and Laitin (2003) claim that it is a proxy for a state’s capacity to police its terrain.

inadequate conceptualization of state strength, which serves to obscure the intersubjective foundations of national stability and cohesion.

### **5.3 Nationalism and the Structures of Mass Communication**

Notably absent from all of the structural accounts discussed above is any mention of communicative structures. In contrast, the theoretical linkage between patterns of communication and the construction of national unity has a long history in the literature on the development of nationalism. One of the earliest and most prominent descriptions of this relationship was given by Deutsch (1953), who famously claimed that boundaries between national communities were defined first and foremost by “relative barriers to communication” (22). For Deutsch, linguistic and cultural barriers to effective communication across national boundaries, while frequently appearing to be merely symbolic, function to heighten the social and political relevance of national cleavages, producing a prioritization of intra-national attachments over extra-national attachments. In this account, the primary driver of national identification is the ability to transmit information from person to person: “the observable ability of certain groups of men and women to share with each other a wide range of whatever might be in their minds, and their observable inability to share these things nearly as widely with outsiders” (Deutsch 1953, 65). The relevant communicative structures are thus those which constrain patterns of *social* communication, and hence the diffusion of information, between individuals.

This informational account has since provided the basis for numerous studies of mobilization and rebellion. Granovetter argued that the clustered nature of strong

social ties should be expected to produce "local cohesion" which would lead to fragmentation on a broader scale (1973, 1378). Gould (1991) and Opp and Gern (1993) find that social networks are key to collective mobilization because individuals generally learn of protest opportunities from their friends. Moreover, Gould (1993) and Petersen (2001) have argued that dense intra-group connections create more cohesive communities that can more easily overcome the barriers to collective action. As Petersen puts it, dense social ties "promote rebellion by producing accessible information, reducing communication costs, and facilitating recruitment" (2001, 15-16). In a similar vein, Fearon and Laitin argue that a breakdown of cooperation between ethnic groups can be caused by a lack of inter-group social ties, claiming that "At bottom, the problem is informational" (1996, 718). In each of these accounts, the relevant communicative structure is characterized as a network of linkages which facilitate or inhibit the diffusion of information between individuals.

Seen from this perspective, mass media such as radio, television, and newsprint simply represent additional linkage vectors through which information can travel.<sup>5</sup> Studies of mass media effects have thus frequently focused on the content of mass media messages, whether it be their accuracy (Synder 2000; Slantchev 2006), their diversity (Van Belle 1996; Mutz and Martin 2001), or the frames which they render salient (Iyengar and Kinder 1987). However, there is an alternative perspective provided by scholars of nationalism which instead focuses on the

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<sup>5</sup> Indeed, this is exactly how Deutsch characterizes the role of mass media, as "facilities to spread information" (1953, 51). More recently, Snyder (2000, 58) argued that it is the inaccuracy of the information transmitted through the mass media of newly democratizing states which allows exclusionary nationalism to flourish, the implication being that in the presence of full and accurate information, people would be persuaded of the disadvantages of nationalist cleavages and therefore reject them.

structural effects of the media through which messages travel. Gellner (1983) argues forcefully that communicative structures mattered far more to the development of nationalism than the details of message content:

“But the usual formulation of the connection between nationalism and the facility of modern communications is somewhat misleading. It gives the impression that a given idea (nationalism) happens to be there, and then the printed word and the transistor and other media help this notion to reach audiences in distant valleys and self-contained villages and encampments, audiences which in an age not blessed with mass media would have remained untouched by it.

“That is altogether the wrong way to see it. The media do not transmit an idea which happens to have been fed into them. It matters precious little what has been fed into them: it is the media themselves, the pervasiveness and importance of abstract, centralized, standardized, one to many communication, which itself automatically engenders the core idea of nationalism, quite irrespective of what in particular is being put into the specific messages transmitted” (127).

Seen from this structural perspective, mass media represent far more than mere vectors for the diffusion of information. As communicative structures, they do not *persuade* audiences of the truthfulness of national identity categories, but rather induce a particular mode of collective awareness through which nationalism is *experienced*. For Gellner, such structural effects are so powerful that they render the details of the messages themselves nearly irrelevant.

Anderson (1991) develops this point further, arguing that “unified fields of exchange and communication” which were first constructed on a national basis in the 17<sup>th</sup> and 18<sup>th</sup> centuries, were “the embryo of the nationally imagined community” (44). Anderson, however, places greater emphasis on one particular technological development: namely, the rise of “print capitalism” and the concomitant emergence of the ability to mass-produce daily newspapers. For Anderson, the invention of mass printing technology represented one of the primary factors which originally allowed European nation-states to cohere as collective entities. Such effects arose

not because of an increased rate of informational diffusion, but rather because daily consumption of the day's news in printed form represented an "extraordinary mass ceremony" which was remarkable precisely because "each communicant is well aware that the ceremony he performs is being replicated simultaneously by thousands (or millions) of others" (1991, 35). Because the national community is composed of thousands or millions of members whom a given individual will never have the opportunity to meet face-to-face, it is only through the synchronization of this mass ritual that such widely dispersed individuals could arrive at congruent notions of their shared identities. In other words, newspapers were different from previous modes of communication because they facilitated the intersubjective construction of collective awareness on a national scale. Thus, while it would be a mistake to follow Gellner in claiming that message content is wholly irrelevant, it nevertheless seems that an exclusive focus on message content obscures important *structural* effects of mass communication that cannot be reduced to the diffusion of specific pieces of information.

#### ***5.4 Communicative Structuralism Revisited***

The theoretical framework of communicative structuralism generalizes the insights of Gellner and Anderson by characterizing national collective awareness as a structurally induced condition. This framework treats mass media such as radio, television, and newsprint as members of a particular class of communicative structures which we can label *public communicative structures*. They are differentiated from private communicative processes, not by the pattern of linkages,

but by the relationships between linkages. It is these relationships, I argue, which provide structural constraints on the production of intersubjectivity. Recall from Chapter 2 that a public communicative structure is one characterized by mechanisms which produce the following constraints between a set of communicative linkages originating from a common source:

- 1. Synchronized transmission:** This condition requires *that message transmission occur identically towards all recipients*. It is through this condition that message transmission comes to be generalized as transmission to a collective audience.
  
- 2. Joint awareness of reception:** This condition requires *that message reception occur in a form that allows recipients to know that they are not alone in their reception of the message*. It is the condition through which the subjective experience of message reception is expanded into an intersubjective experience.

Historically, public communicative structures have been constituted through a wide variety of mechanisms, ranging from the acoustic amplification of ancient Rome's coliseum, to the proclamations of medieval courts issued via handwritten scrolls, and to the modern technologies of the printing press, the cinema, and the transmission of electromagnetic signals. The central claim of communicative structuralism is that messages disseminated through loudspeakers in central squares, through highly visible events in soccer stadiums, and through boisterous

ethnic processions down city streets, share important structural properties with messages that are delivered through radio, television, and newsprint. Such structures are powerful precisely because they communicate messages in such a way as to make clear that many others are receiving them simultaneously. What they're actually communicating is the event of others hearing the same message and hearing it in a way that will ensure they know that others are listening.

Seen from the informational perspective, each of the numerous public communicative structures encountered in modern human societies – religious congregations, street rallies, television broadcasts, etc. – is nothing more than an additional set of linkages layered atop the network of social linkages, just another vector through which information can be diffused between individuals. However, when present together, these constraints constitute a different kind of communicative structure: one which creates the conditions for the public constitution of intersubjectivity. Public communicative structures make it possible for a group to gain an awareness of itself as a collective entity, because they represent arenas of shared expression in which it becomes possible to construct communities of symbolically shared experience.<sup>6</sup> When public communicative structures are national in scope, they constitute nations as symbolically cohesive collectives, by “offer[ing] the audience an image of itself and of the nation as a knowable community” (Morley

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<sup>6</sup> Chayko (2002) refers to this as a “community of the mind” (60-63), arguing that when united by modern communication technologies, individuals “can mentally approach various phenomena from a common perspective and thus be brought experientially together, even from different spatial and temporal vantage points” (21). This argument is also consistent with the findings of a series of field experiments conducted by Mutz (1998), which demonstrated that “mass media may not be particularly influential in telling people what to think, or perhaps even what to think about, but media are tremendously influential in telling people what others are thinking about and experiencing” (5).

and Robins 1995, 66).<sup>7</sup> Constrained by the principles of synchronized transmission and joint awareness of reception, the medium forces both a generalization of message production and a generalization of message reception. It is the sharedness of such mass mediated experiences which reproduces on a national scale the *esprit de corps* that has long been known to arise locally amongst effective military units, sports teams, and tribes.<sup>8</sup> The experience of cohesion, in other words, is produced through a cohesion of experience.

Cohesion and fragmentation, however, are necessarily relative concepts. Cohesion on a sub-national level may represent fragmentation at the national level, just as cohesion at the national level may represent fragmentation at the global level. When we speak of *national fragmentation*, then, we mean the prioritization of sub-national symbolic attachments over national symbolic attachments. In authoritarian and democratic regimes alike, there are always interests to be served by group mobilization along particular lines rather than others and on certain scales rather than others, and thus always a variety of conflicting mobilizational appeals competing intensely to be heard. Price (1995; 2002) has referred to this competitive structure as a “market for loyalties” and Snyder (2000) has characterized the

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<sup>7</sup> Although the structural component has never been fully specified, many scholars have shared the intuition that mass media messages have nationally unifying effects. Calhoun (1991) argues that mass media expands the possibilities for the construction of nationally unified imagined communities. Schlesinger (1991) notes that even in liberal democratic states the mass media tend to transmit messages which “emphasize the integrity of the social order” (36). Servaes (1997) claims that “In most countries mass media are used strategically to reinforce the myth of the unitary nation and to interpolate the textual subjects as willing members of the nation” (83). Even a former child soldier, interviewed by Krin and Richards (1998), recognizes that the construction of national unity is a communicative process: “The government comes, [with] their mass media, to make things normal” (201).

<sup>8</sup> Laqueur (1998) argues that even in purportedly ideological civil wars *esprit de corps*, a “feeling of togetherness and team spirit,” has a far greater impact on mobilization and loyalty than ideological persuasion (399). Meyrowitz (1997) generalizes this point, arguing that the boundaries of cohesive communities are generally coterminous with their structured patterns of shared experience.

emergence of exclusionary nationalism in poorly regulated media environments as an instance of “market failure,” but the market metaphor is not quite correct. The key point made by communicative structuralism is that these divergent symbolic schemas are not competing on a level playing field, but one that is *structured*. There are indeed regularities to the pursuit of group mobilization and cohesion, but they are not the regularities of symmetrical exchange. They are, rather, the regularities induced by the intersubjective structure of public communication. Nations are not *persuaded* to cohere through the diffusion of information. Their coherence is *structurally induced* by the topology of publicly shared experiences.

### **5.5 Mass Media and National Fragmentation**

The advantage of conceptualizing the symbolic cohesion of nations as being structurally produced, lies in the resulting ability to investigate varying propensities to sub-national fragmentation through an analysis of variation in national public communicative structures. While public communicative structures take a wide variety of forms, the focus here will be on the mass media technologies of radio, television, and newsprint, both because they are among the most powerful public communicative structures in contemporary societies, and because their attributes are relatively easy to measure on a cross-national basis. In particular, we will focus on the concept of *density* as the key dimension along which public communicative structures vary.

The *density* of a public communicative structure simply refers to the proportion of a given population that has the capability to receive its messages. For

instance, the density of the public communicative structure constituted by television broadcasts in the United States would be equal to the proportion of residents with access to television receivers. The density of a public communicative structure determines the strength with which the joint awareness and cohesion of its audience is constituted. Because higher density structures create more ubiquitously shared experiences they also generate more robustly unified symbolic attachments. Higher density public communicative structures at the national level should therefore be expected to produce stronger tendencies towards national cohesion, relative to the strength of sub-national symbolic attachments. Sociopolitical fragmentation, the division of loyalties into competing camps of mutual antagonism and objectification, can then be seen as the result of an insufficient density of public communicative structures on the scale of a given state's territorial claims. Civil conflict is thus a form of collective action which is structurally facilitated not only by material weakness and institutional weakness, but also by *communicative weakness*.

Of course, the mere presence of a dense public communicative structure does not ensure the ubiquity of shared experiences. Different people may watch different television channels, read different newspapers, ignore what they see and hear, or arrive at partially divergent interpretations of identical messages. The theory of communicative structuralism does not deny the potential for such variation. Rather, the claim is that dense public communicative structures delimit bounds on the *possibility* of generating broadly shared experiences, and thereby act as structural constraints on the ease with which loyalties can be fragmented along new symbolic cleavages.

Communicative structuralism thus provides a means by which we can measure a population's propensity to fragmentation separately from our measurement of pre-existing cleavages and separately from our measurement of actual armed conflict. Moreover, the fragmentation of both popular and elite loyalties has long been recognized as key ingredients to the emergence of civil warfare (Skocpol 1979; Tilly 1993; Lachman 1997), because they provide the fundamental basis for emergence of sub-national security dilemmas and the spiral of escalating violence that such security dilemmas induce. We should therefore expect that dense public communicative structures which enhance national cohesion and render the fragmentation of loyalties more difficult should be negatively associated with civil war onset. This leads directly to our main hypothesis:

**H1:** *Ceteris paribus, the higher the national density of public communicative structures in a country, the less likely it is to experience the onset of civil war.*

## **5.6 Empirical Tests**

### **5.6.1 Data and Methods**

To test these hypotheses I compiled data on mass media structures in 177 countries for the period 1945-1999. The two key independent variables are defined as follows:

**Broadcast Density** measures the national density of mass media structures using the number of radio receivers or the number of television receivers – whichever is larger – in use for broadcasts to the general public, per 100 people.<sup>9</sup>

**Newspaper Density** measures the national density of mass media structures using the circulation of daily newspapers (those published at least four times a week), per 100 people.<sup>10</sup>

In addition, several control variables are included in the analysis, all of which have figured prominently in the literature on civil war.<sup>11</sup> **GDP per capita** measures a country's level of economic development and wealth. **Land Area**<sup>12</sup>, **Population**, and **%Mountainous** are included as measures of the difficulties faced by governments seeking to control large populations across broad and difficult terrain. As in most previously reported models, *Population* and *%Mountainous* are log-transformed because they are expected to have diminishing effects as they grow

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<sup>9</sup> Because radio receivers represent earlier and cheaper technology than television, they are more common in nearly all of the country-years under investigation. Television receivers were more dense in less than 2% of the observations. Ideally, this variable would measure the percentage of households with either a radio or a television, as that would more accurately capture the percentage of people who are reachable by popular broadcasts, but such data are not available.

<sup>10</sup> The data for the both mass media variables, in addition to the data on telephones, literacy, and education discussed below, are taken from the Banks (2002) Cross-National Times Series database and the World Bank's (2004) World Development Indicators database. In the case of disagreements between the two sources, the Banks data was generally prioritized, except for a small number of obvious typos. Missing values were linearly interpolated (but not extrapolated) within a given time series. The interpolated values represent less than 2% of the observations, and excluding them from the estimations reported below does not substantively alter the results.

<sup>11</sup> Unless otherwise noted, data for the control variables were taken from Fearon and Laitin (2003) and Sambanis (2004).

<sup>12</sup> Data taken from Banks (2002).

larger.<sup>13</sup> **Oil Exporter** is a dummy variable which equals 1 if a country derives at least one-third of its export revenues from fossil fuels. **Democracy** is measured using the standard 21-point scale derived from the Polity IV data set<sup>14</sup>, and **Democracy<sup>2</sup>** is included to capture the “inverted-U” relationship found in previous studies. Finally, **Ethnic Fractionalization** and **Religious Fractionalization** are included to control for the presence of pre-existing identity cleavages in the society. To guard against spurious results due to reverse causation, all independent variables are lagged by one year.

To test Hypotheses 1 and 2 the dependent variable, **Civil War Onset**, equals 1 for all country-years in which a civil war started and 0 for all others. Following Sambanis (2004), a civil war is defined as an armed conflict if:

- (1) The war takes place within the territory of a state that is a member of the international system with a population of 500,000 or greater.
- (2) The parties are politically and militarily organized, and they have publicly stated political objectives.
- (3) The government is a principal combatant.
- (4) The main insurgent organization(s) are locally represented and recruit locally.
- (5) The conflict causes at least 500 deaths in the first year, or cumulative deaths in the first 3 years exceed 1,000.

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<sup>13</sup> See Fearon and Laitin (2003) and Sambanis (2004).

<sup>14</sup> The scale results from subtracting the Polity IV *Autocracy* score from the *Democracy* score. The scale is transformed to range from 1 to 21 (rather than -10 to 10) to ease interpretation of the coefficients.

The results reported below are based on logistic regressions, using Huber/White robust standard errors adjusted for clustering by country. As a check against the potential bias produced by duration dependence I also include ***Peace Years***, which measures the number of years since the last civil war onset in a particular country, along with a natural cubic spline of peace years, as per the recommendations of Beck, Katz, and Tucker (1998).

### 5.6.2 Main Models

The first set of results is reported in Table 5. Model 1 is a baseline specification with control variables, including *GDP per capita*, drawn from the previous literature. Model 2 removes the *GDP* variable while adding *Broadcast Density* and *Newspaper Density* to the baseline specification. Model 3 presents the combined specification, with both *GDP* and the mass media variables included in a single model. The evidence drawn from these models is strongly supportive of Hypothesis 1. The coefficients for both *Broadcast Density* and *Newspaper Density* are negative and statistically significant ( $p = 0.007$  and  $p = 0.019$ , respectively). To ensure that these results are robust to alternative statistical specifications Model 3 was re-estimated, first using a rare events logit estimator, second using a population-averaged GEE estimator with an AR(1) error correlation structure, and finally using a fixed-effects specification. In all three cases, the results are

**Table 5: Logit Regressions - Civil War Onset**

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<b>GDP per capita</b>	-0.2336*** (0.0669)		-0.0130 (0.0379)	-0.0162 (0.0446)	-0.0065 (0.0350)	-0.0013 (0.0363)
<b>Land Area</b>	-0.0127 (0.0231)	0.0184 (0.0428)	0.0229 (0.0449)	0.0230 (0.0452)	0.0183 (0.0466)	-0.0075 (0.0481)
<b>Log (%Mountainous)</b>	0.1697** (0.0668)	0.1204* (0.06745)	0.1207* (0.0685)	0.1201* (0.0686)	0.1247* (0.0711)	0.1583** (0.0682)
<b>Log (Population)</b>	0.2059*** (0.0591)	0.2254*** (0.0655)	0.2208*** (0.0692)	0.2209*** (0.0693)	0.2081*** (0.0727)	0.2504*** (0.0758)
<b>Oil Exporter</b>	0.8907*** (0.2038)	0.6053*** (0.2062)	0.6525*** (0.2145)	0.6594*** (0.2222)	0.6575*** (0.2161)	0.6370*** (0.2219)
<b>Democracy</b>	0.1937*** (0.0663)	0.2155*** (0.0757)	0.1891** (0.0761)	0.1901** (0.0775)	0.1876** (0.0766)	0.1512* (0.0776)
<b>Democracy<sup>2</sup></b>	-0.0082*** (0.0028)	-0.0086*** (0.0032)	-0.0074** (0.0033)	-0.0074** (0.0033)	-0.0073** (0.0033)	-0.0057* (0.0033)
<b>Ethnic Fract.</b>	0.2663 (0.2967)	0.0858 (0.3140)	0.0512 (0.3298)	0.0471 (0.3302)	0.2048 (0.3494)	-0.0653 (0.3393)
<b>Religious Fract.</b>	1.0846** (0.4436)	1.3771*** (0.4673)	1.3124*** (0.5049)	1.3131*** (0.5044)	1.3801*** (0.5050)	1.3506** (0.5380)
<b>Broadcast Density</b>		-0.0185** (0.0073)	-0.0217*** (0.0080)	-0.0225*** (0.0105)	-0.0237*** (0.0085)	-0.0334*** (0.0098)
<b>Newspaper Density</b>		-0.0768** (0.0304)	-0.0769** (0.0329)	-0.0779** (0.0331)	-0.0791** (0.0379)	-0.0656** (0.0323)
<b>Telephones</b>				0.0038 (0.0246)		
<b>Literacy</b>					0.0030 (0.0045)	
<b>Secondary Education</b>						0.0200 (0.0426)
<b>Constant</b>	-7.6826*** (1.0487)	-8.2926*** (1.1195)	-8.0394*** (1.1663)	-8.0365*** (1.1666)	-8.1264*** (1.1776)	-8.4293*** (1.2535)
<b>Peace Years</b>	-0.1607*** (0.0595)	-0.0648 (0.0643)	-0.0862 (0.0653)	-0.0858 (0.0655)	-0.0759 (0.0683)	-0.1124 (0.0753)
<b>Splines(1-3)</b>	N/S	N/S	N/S	N/S	N/S	N/S
<b>N</b>	6275	6136	6013	6013	5949	5874

Note: All independent variables lagged by one year. Robust standard errors in parentheses.  
 \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$

substantively identical to those reported in Model 3, so I omit them here in the interest of space.<sup>15</sup>

In addition to being statistically significant, the mass media variables are also quite significant in substantive terms. Holding all other variables constant at their means, a shift from the 5<sup>th</sup> percentile to the 95<sup>th</sup> percentile of *Broadcast Density* results in a five-fold decrease in the probability that a country will experience a civil war.<sup>16</sup> Even more striking, the same shift in *Newspaper Density* reduces a country's probability of civil war onset by over ten times. As can be seen more clearly in Figure 13, the magnitude of these effects outstrips the substantive impacts of every other statistically significant variable in the model.

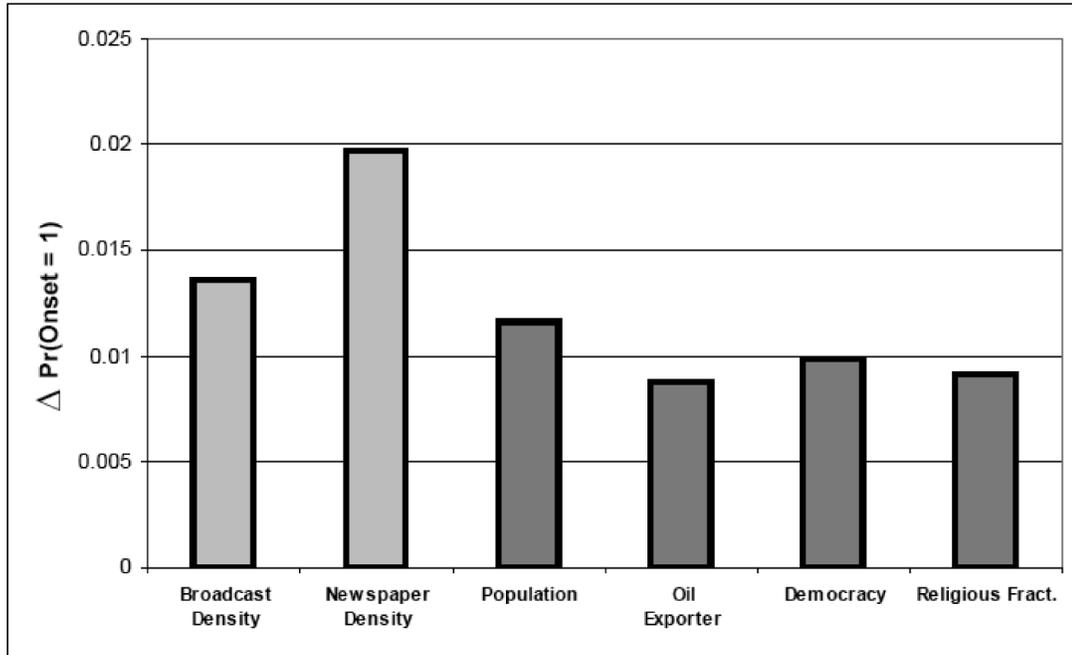
### **5.6.3 Media Density vs. Economic Development**

It is also interesting to note that once we add *Broadcast Density* and *Newspaper Density* to the combined model specification, the impact of *GDP per capita* is reduced so dramatically that it ceases to be statistically significant. This is surprising because the finding that rich countries are less likely to experience civil war is one of the few results that has been consistent across multiple authors and specifications throughout the civil conflict literature. At first glance, it seems plausible that this finding is simply an artifact of multicollinearity, but there are several reasons to reject that explanation. First, while *GDP per capita* is certainly

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<sup>15</sup> Results available from the author upon request.

<sup>16</sup> All predicted probabilities were calculated using Tomz, Wittenberg, and King's *Clarify* software. For details, see Tomz, Wittenberg, and King (2001) and King, Tomz, and Wittenberg (2000).

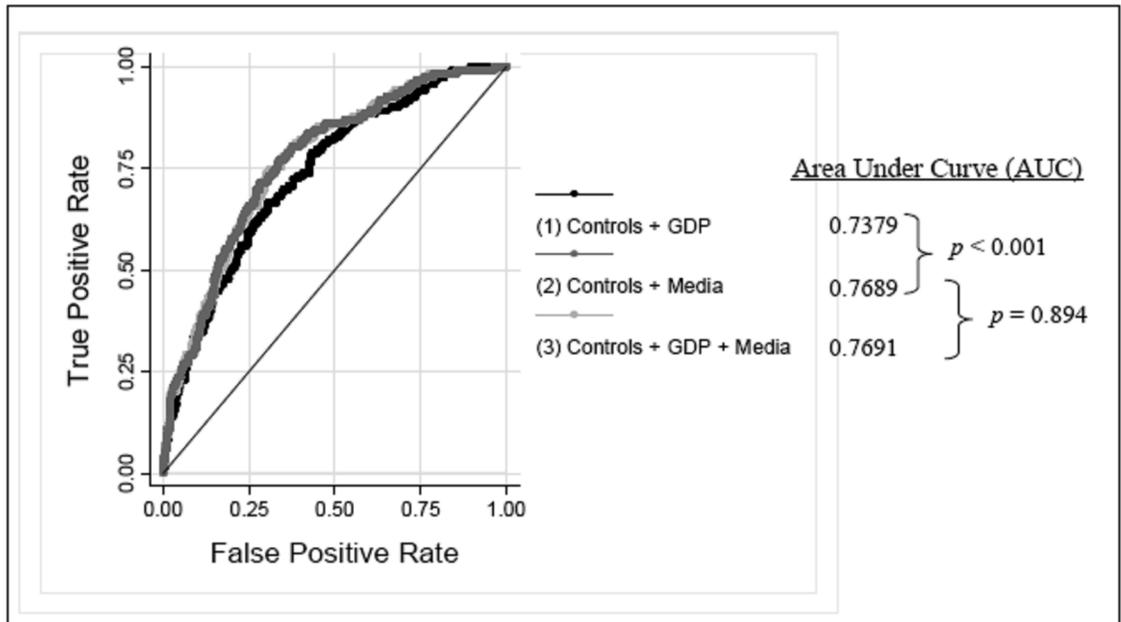


*Note:* Based on coefficients and standard errors from Model 3. First differences are calculated by holding all other variables at their means while shifting the variable of interest from its 5th percentile to its 95th percentile. The only exception is for *Democracy*, which is shifted from a value of 1 (pure authoritarianism, which produces the lowest probability of civil war onset) to a value of 13 (the type of mixed regime which maximizes the probability of civil war onset). While presented on a common axis to ease comparison, the bars for the media variables are shaded to denote that they represent negative values.

**Figure 13: Civil Conflict - Substantive Effects**

correlated with *Broadcast Density* and *Newspaper Density* ( $r = 0.68$  and  $r = 0.57$ , respectively), if we compare Model 1 to Model 3 we see that the standard error of the *GDP per capita* coefficient actually shrinks when *Broadcast Density* and *Newspaper Density* are added to the model, rather than expanding as we would expect if multicollinearity were the culprit.

Second, if mass media density is simply serving as a (presumably noisy) proxy for economic development, then the information contained in the media density variables should provide no additional predictive leverage in selecting country-years which are likely to experience the onset of civil war. To test this conjecture, I generate Receiver Operating Characteristic (ROC) curves for Models 1, 2, and 3 (see Figure 14). The area under each curve, the AUC statistic, represents a measure of the overall predictive accuracy of each model. Because the AUC statistics are each Chi-square distributed, the differences between them are also Chi-square distributed and can therefore be used as a non-parametric test of differences in predictive accuracy between competing models. Comparing Model 1 to Model 2 reveals that *Broadcast Density* and *Newspaper Density* strongly outperform *GDP per capita* as a predictor of civil war onset ( $p < 0.001$ ). Moreover, comparing Model 2 to Model 3 reveals that once the information contained in the *Broadcast Density* and *Newspaper Density* variables is known, no statistically significant increase in predictive accuracy can be gained by adding *GDP per capita* to the specification ( $p = 0.894$ ). Finally, comparing Model 1 to Model 3 reveals that the reverse is not the case: even once the information contained in the *GDP per capita* variable is known, statistically significant increases in predictive accuracy *can* be gained by adding *Broadcast Density* and *Newspaper Density* to the specification ( $p < 0.001$ ). In other



Note: Numbers in parentheses refer to Models 1-3 from Table 5. AUC statistics are calculated for each corresponding model. The  $p$ -values test likelihood that two AUC statistics are equal, that is,  $H_0: AUC_i - AUC_j = 0$ .

**Figure 14: Civil Conflict - ROC Curves**

words, if on purely instrumentalist grounds one cared only about accurately predicting which country-years were likely to experience the onset of civil war, then one should always prefer to make such predictions on the basis of mass media density rather than economic development.

#### 5.6.4 Testing Alternative Specifications

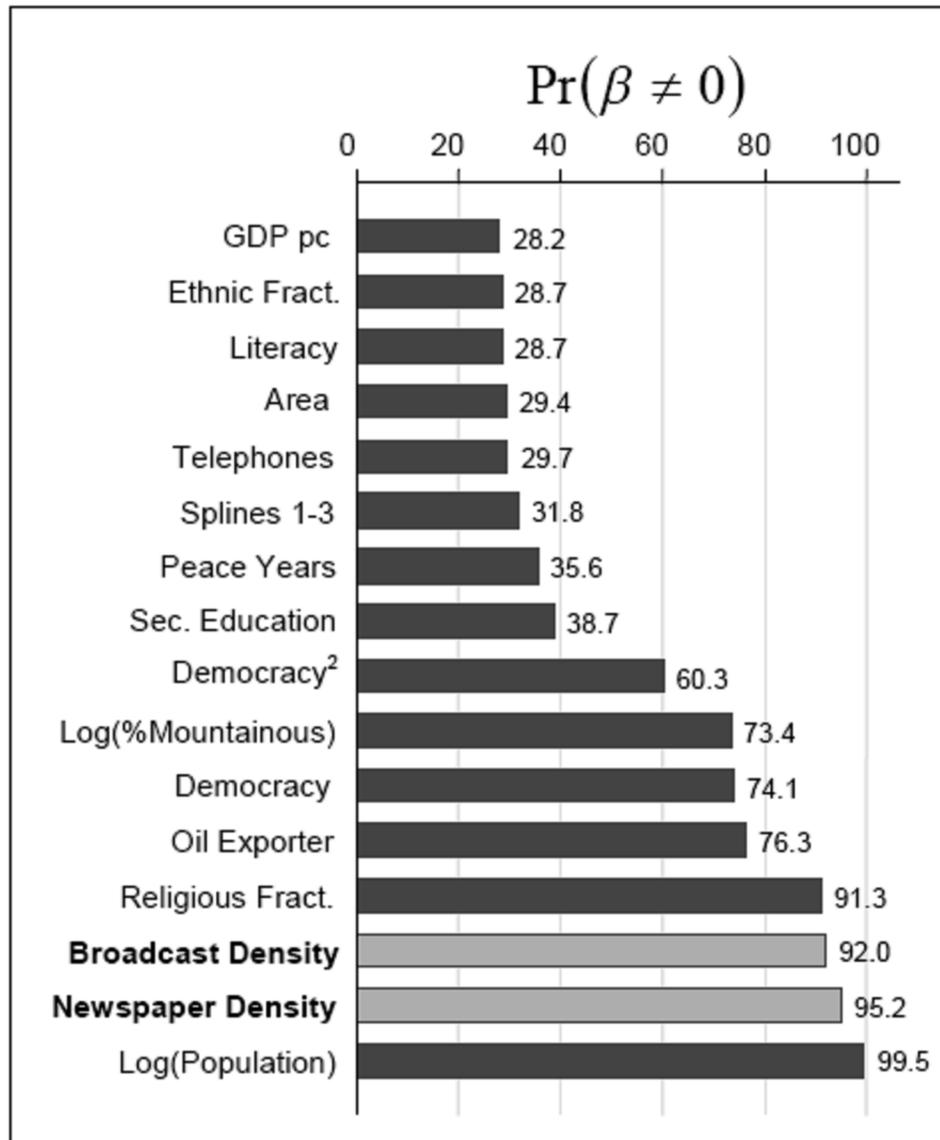
However, with the existence of such strong correlations between these three independent variables, one might still suspect that the measures of mass media density are simply serving as proxies for the aggregate effects of modernization, especially the effects of increased informational diffusion in more economically advanced societies. In contrast, the theoretical framework of communicative structuralism explicitly claims that the unifying effects of mass media density are due not to the modernizing forces of economic development, or the increased diffusion of information, but to the *public* constitution of collective awareness. To test this claim more explicitly, Models 4-6 add measures for three variables that are typical indicators of economic modernization and which should increase the density of informational flows between individuals, but which do not represent public communicative structures because they do not generate synchronization or joint awareness. **Telephones** measures the number of telephone mainlines per capita, **Literacy** measures per capita adult literacy rates, and **Secondary Education** measures per capita enrollment in secondary schools.<sup>17</sup> The results are again

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<sup>17</sup> Data for each of these variables are taken from Banks (2002) and World Bank (2004). See fn. 10.

reported in Table 5. None of newly added variables reach conventional levels of statistical significance, and their addition to Model 3 does nothing to reduce the statistical or substantive significance of *Broadcast Density* or *Newspaper Density*. In addition to demonstrating that merely increasing the diffusion of information has no discernable effect on the probability of civil warfare, these results also provide additional confirmation that the mass media variables are not simply serving as proxies for the presence of a more educated or more technologically advanced society. It thus appears, as predicted by the theory, that it is specifically *public* communicative structures which reduce the propensity towards national fragmentation.

Nevertheless, it is well-known that such statistical results can change dramatically when different combinations of independent variables are included in the model. Unfortunately, if there are a total of  $n$  independent variables, then there are  $2^n$  possible model configurations. Traditional regression analysis leaves the reader with no means for determining whether the presented models are actually reflective of this universe of potential model specifications, or whether they were cherry-picked to reflect the analyst's theoretical expectations. A recently developed solution to this difficulty, known as Bayesian model averaging (BMA), averages over a variety of potential model specifications to generate a posterior distribution of the likelihood that each parameter will be non-zero in the best model specifications (Bartels 1997; for a comprehensive review, see Clyde and George 2004). Here, model probabilities are judged using the Akaike Information Criterion (AIC) prior. Following the advice of Montgomery and Nyhan (2008), I allow the BMA algorithm to



Note: Dependent variable is *Civil War Onset*. Bars represent posterior inclusion probabilities for each independent variable, using the Akaike Information Criterion (AIC) prior, and the full search space of 65,536 potential model specifications.

**Figure 15: Civil Conflict - Bayesian Model Averaging**

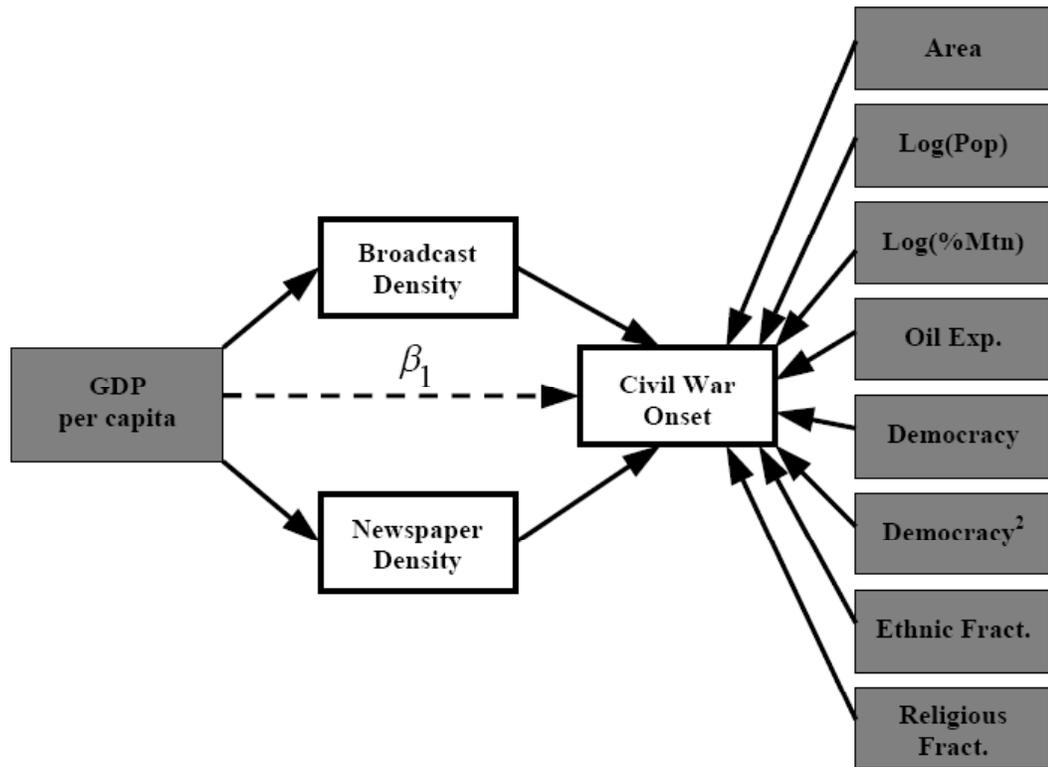
search the entire space of potential model configurations using the full set of independent variables from Table 5, with the only restriction being that the three cubic splines must enter or leave the specification as a group. This generates a search space of 65,536 potential model specifications.

The results, presented graphically in Figure 15, show the posterior probability of inclusion – i.e.  $\Pr(\beta \neq 0)$  – for each independent variable. The differences between the mass media density variables and the other indicators of economic development could not be more stark. *Broadcast Density* and *Newspaper Density* achieve some of the highest inclusion probabilities of any of the variables considered, 92.0% and 95.2% respectively, with only *Log(Population)* scoring higher. In contrast, *GDP per capita* emerges with the lowest probability of inclusion of any of the variables considered: 28.2%. The other three modernization indicators, *Telephones*, *Secondary Education*, and *Literacy* do not fare much better, with posterior inclusion probabilities ranging from 28.7% to 38.7%. This indicates that the statistical and substantive significance of mass media density is neither the result of convenient specification choices, nor an artifact of multicollinearity between various indicators of modernization. Rather, these results represent strong evidence that the specific effect of mass media density in preventing the onset of civil war is one of the most robust empirical relationships yet to be discovered in the study of civil conflict.

### 5.6.5 Testing the Causal Mechanism

That being said, the 'black box' of Bayesian model averaging yields little insight into *why* economic development and mass media density yield this pattern of effects. The most plausible interpretation of these results seems to be that *GDP per capita* occupies an earlier position on a causal chain which runs from economic development, to communicative structure, and then to civil conflict. The implication is not that economic development is unimportant in inhibiting civil conflict, but rather that is important precisely because it facilitates the construction of dense public communicative structures. To test this conjecture more rigorously, I conduct a formal test of causal mediation using two competing structural equation models (see MacKinnon et al. 2002), depicted in Figure 16. Structural equation modeling allows the analyst to specify the causal paths through which independent variables are hypothesized to influence both the dependent variable and each other, while also accounting for the error covariances between endogenous regressors. The two models specified here both include the full set of independent variables from Model 3 as predictors of civil war onset, while also including causal paths running from *GDP per capita* to both *Broadcast Density* and *Newspaper Density*. The models differ only in one parameter, the direct effect of *GDP per capita* on *Civil War Onset*, labeled  $\beta_1$  in Figure 16, which is estimated as a free parameter in Model 7 and restricted to zero in Model 8.

The results, presented in Table 6, are strongly supportive of the mediational hypothesis. First, three separate fit statistics – the normed fit index (NFI), the goodness of fit index (GFI), and the standardized root mean square residual (SRMR)



*Note:* Arrows represent causal relations included in the structural equation models. The dashed arrow is included as a free parameter in Model 7 and restricted to zero in Model 8. The error covariance between *Broadcast Density* and *Newspaper Density*, not depicted in the diagram, is also estimated as a free parameter in both models.

**Figure 16: Civil Conflict - Structural Equation Models**

**Table 6: Civil War Structural Equation Models**

	Model 7	Model 8
GDP per capita → CW Onset	0.000018 (0.000646)	--
Land Area → CW Onset	-0.000307 (0.000772)	-0.000308 (0.000767)
Log (%Mountainous) → CW Onset	0.001629 (0.001378)	0.001631 (0.001373)
Log (Population) → CW Onset	0.006340*** (0.001455)	0.006346*** (0.001455)
Oil Exporter → CW Onset	0.014596*** (0.005888)	0.014548*** (0.005777)
Democracy → CW Onset	0.003701*** (0.001493)	0.003707*** (0.001470)
Democracy <sup>2</sup> → CW Onset	-0.000139** (0.000065)	-0.000139** (0.000063)
Ethnic Fract. → CW Onset	0.005373 (0.007372)	0.005390 (0.007248)
Religious Fract. → CW Onset	0.028220*** (0.009294)	0.028223*** (0.009251)
Broadcast Density → CW Onset	-0.000251** (0.000098)	-0.000253** (0.000088)
Newspaper Density → CW Onset	-0.000572*** (0.000191)	-0.000573*** (0.000187)
GDP per capita → Broadcast Density	4.389156*** (0.059371)	4.389156*** (0.059371)
GDP per capita → Newspaper Density	1.693836*** (0.030459)	1.693836*** (0.030459)
Error Covariance Broadcast Dens. & Newspaper Dens.	96.371021 (3.073316)	96.371021 (3.073316)
<i>N</i>	6013	6013
NFI	0.90	0.90
GFI	0.94	0.94
SRMR	0.082	0.082
$\chi^2$	3044.315611 (d.f. = 16)	3044.316449 (d.f. = 17)
$H_0 : \chi_i^2 - \chi_j^2 = 0$	$p = 0.9769$	

Note: Path coefficients, estimated via maximum likelihood, refer to the models depicted in Figure 16. All independent variables lagged by one year. Standard errors in parentheses.  
\* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$

– all indicate reasonably good fit for both models.<sup>18</sup> Second, in both models the coefficients for the causal paths running from *GDP per capita* to *Broadcast Density* and *Newspaper Density* are positive and highly significant ( $p < 0.001$ ). Third, in both models the coefficients running from *Broadcast Density* and *Newspaper Density* to *Civil War Onset* are negative and statistically significant ( $p < 0.05$  and  $p < 0.01$ , respectively). Finally, the last leg of the mediational hypothesis – the insignificance of the direct effect of *GDP per capita* on *Civil War Onset* – can be formally tested by taking the difference of the two Chi-square model fit statistics (Holmbeck 1997). Because the models are nested and differ only in the fixing of  $\beta_1 = 0$ , the Chi-square difference can be used as test of the absence of a direct effect of *GDP per capita* on *Civil War Onset*. As this calculation shows that the difference in model fit between the two specifications is very nearly zero, the null hypothesis  $H_0 : \beta_1 = 0$  cannot be rejected ( $p = 0.9769$ ).

Taken together, these results indicate that *GDP per capita* most likely impacts the probability of *Civil War Onset* only indirectly, through the mediating causal linkage of communicative structure. The clear implication is that mass media density is the proximate cause of the reduction in civil war likelihood that in previous analyses had been attributed to aggregate levels of economic development. Again, the argument is not that economic development is unimportant in inhibiting civil

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<sup>18</sup> When interpreting these statistics, remember that for NFI and GFI higher scores indicate better fit, while for SRMR lower scores indicate better fit.

conflict, but rather that it is important precisely because it facilitates the construction of dense public communicative structures.

### **5.6.6 Structural Bias and Conflict Type**

Up to this point, we have treated increases in the density of radios, televisions, and newspapers equivalently in their implications for the emergence of civil conflict. However, if we examine the structure constituted by these technologies more closely, it becomes clear that they are involved in the construction of very different kinds of collective audiences. Recall from Chapter 2, that the *bias* of a public communicative structure refers to the correlation between a particular individual-level trait and the probability of message reception. This is not the more common conception of “bias,” which treats it as a property of messages which deviate in systematic ways from the truth, but rather a structural characteristic concerning the means through which messages are disseminated. In the empirical tests reported below, we will examine variance in the bias of public communicative structures by comparing different mass communication technologies. More specifically, we will be interested in the degree of “elite-bias” in a given communicative structure. Communication technologies influence the degree of elite-bias in a communicative structure through the impact of two kinds of costs: the cost of transmission and the cost of reception.

Consider the communicative structures constituted by newspapers. Economies of scale in production, combined with high costs of distribution (i.e. high transmission costs), generally relegate newspaper distribution to urban centers and

especially state capitals. Moreover, the requirements of money, literacy, and time (i.e. high reception costs) generally relegate newspaper readership to the upper strata of a given society.<sup>19</sup> As a result, newspapers represent a paradigmatic example of what we might term *elite public communicative structures*. That is, they are public communicative structures with a relatively high degree of elite-bias. While newspaper distribution is not entirely restricted to elites, the ability to receive messages transmitted through newspapers is strongly correlated with one's wealth and status in a given society. In contrast, broadcast technologies based on electromagnetic transmission, such as radio and television, render the distribution of messages to larger audiences nearly cost-free. Anyone who can afford to construct a transmission tower (a fairly low-cost prospect even for most developing countries) can instantly reach thousands of listeners or viewers, and anyone who can afford a receiver (a fairly low-cost prospect even for most rural populations) can be instantly linked to the network.<sup>20</sup> As a result, radio and television represent paradigmatic examples of what we might term *popular public communicative structures*, because the ability to receive messages from such structures is relatively uncorrelated with wealth or status, and the resulting collective audience is generally not restricted to a particular political or economic stratum.

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<sup>19</sup> Mickiewicz (2000) notes that "In Soviet times, party officials called newspapers 'small caliber.' Given their more narrow, relatively well-educated range of readers, their impact was less likely to trigger reactions in the masses," (91) relative to the 'large caliber' of television. Marletti and Roncarlo (2000) describe Italian newspapers as, in contrast to television, being largely a medium for intra-elite communication. Taking a broader view, Hallin and Mancini (2004) argue that the newspapers of Southern Europe, and to a lesser extent the newspapers of Northern Europe and North America, have political effects through the creation of an arena for intra-elite communication and bargaining.

<sup>20</sup> See Briggs (2002), who notes that radio broadcasting "set out to reach the whole population even in the most remote places, in a quite different way from other media like the press and the cinema" (231).

The account given above claims that dense public communicative structures render nation-states more cohesive and stable by reducing the audience's propensity to loyalty fragmentation. If this is correct, then the causal impacts of public communicative structures should be strongest amongst those populations or sub-populations towards which they are structurally biased. In other words, the theory should lead us to expect that elite public communicative structures will exercise greater effects in reducing a nation's propensity towards elite fragmentation, whereas popular public communicative structures will exercise greater effects in reducing a nation's propensity towards popular fragmentation. Moreover, the divergence of these causal pathways should have profound effects on the specific strategies adopted by insurgents when attempting to mount an insurrection. Whether through explicit calculation, or through trial and error, intelligent insurgents should be more likely to gravitate towards strategies focused on elite fragmentation when the structural cohesion of elites is low, and more likely to gravitate towards strategies focused on popular fragmentation when the structural cohesion of the broader population is low. The observable implication of this account is that the density of elite public communicative structures should primarily influence the likelihood of insurgent attempts to overthrow the central regime, whereas popular public communicative structures should primarily influence the likelihood of insurgent attempts to engage in territorial secession. We thus have following hypotheses:

**H2:** *Ceteris paribus, the higher the density of elite public communicative structures in a country (i.e. newspaper density), the less likely it is to experience the onset of a centrist civil war.*

**H3:** *Ceteris paribus, the higher the density of popular public communicative (i.e. broadcast density) structures in a country, the less likely it is to experience the onset of a secessionist civil war.*

To test these hypotheses, I constructed two new dependent variables.

**Centrist Onset** equals 1 for any country-year in which a centrist civil war begins and 0 for all other country-years, and **Secessionist Onset** equals 1 for any country-year in which a secessionist civil war begins and 0 for all other country-years.<sup>21</sup> A centrist civil war is defined as a civil war in which insurgents seek to overthrow the central government, and a secessionist civil war is defined as a civil war in which insurgents seek partial or complete autonomy for a region within a preexisting territorial state, without seeking the actual overthrow of the ruling regime.

I then re-ran the specification from Model 3, switching the dependent variable first to *Centrist Onset* and then to *Secessionist Onset*. The results are reported in Table 7 and the evidence seems to strongly support Hypotheses 2 and 3. As can be seen more clearly in Figure 17, dense elite public communicative structures greatly inhibit the likelihood of centrist civil wars, but have a far smaller (and statistically insignificant) effect on the likelihood of secessionist civil wars. In contrast, dense popular public communicative structures greatly inhibit the likelihood of secessionist

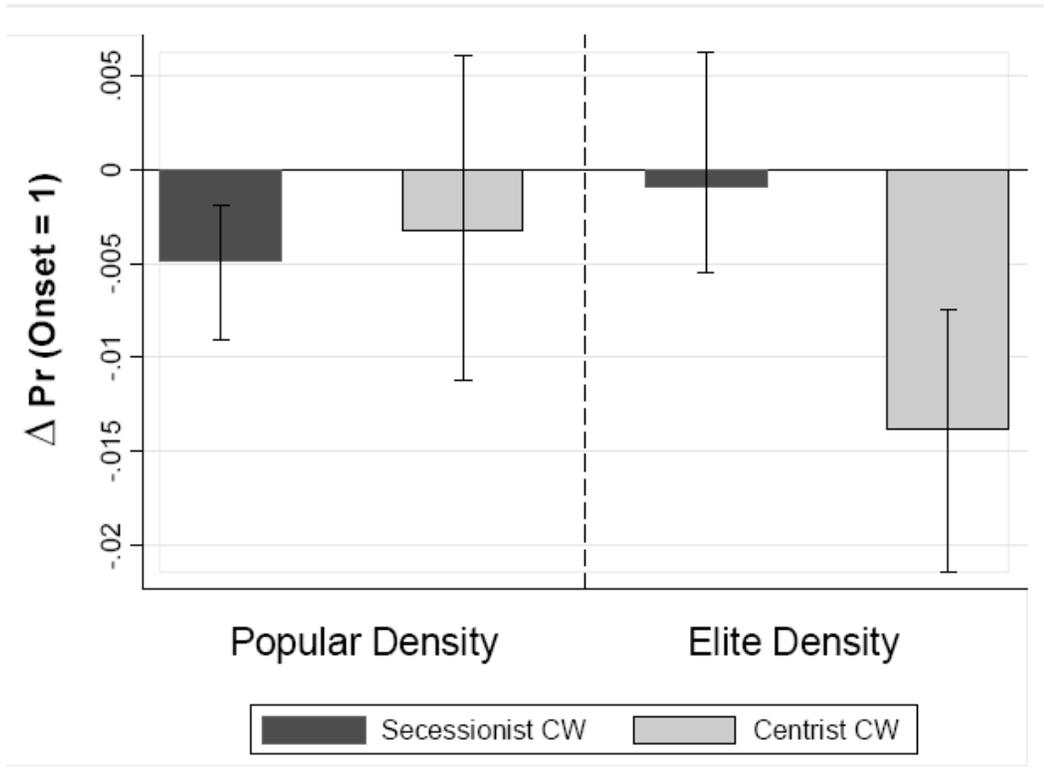
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<sup>21</sup> The data for this variable are taken from "war aims" codings in the Fearon and Laitin (2003) data, and various secondary sources for those civil wars which were not included in the Fearon and Laitin data. A residual category of civil wars with "mixed" or "ambiguous" insurgent aims is excluded from both definitions. Including these conflicts in either category does not substantively alter the results.

**Table 7: Secessionist vs. Centrist Civil Wars**

	<b>Model 9 (Secessionist CW)</b>	<b>Model 10 (Centrist CW)</b>
GDP per capita	0.0599* (0.0316)	-0.0302 (0.0516)
Land Area	-0.0025 (0.0551)	0.0207 (0.0615)
Log (%Mountainous)	-0.0310 (0.1362)	0.1342 (0.0982)
Log (Population)	0.6209*** (0.1170)	0.0210 (0.0971)
Oil Exporter	1.6275*** (0.3892)	-0.0283 (0.4075)
Democracy	0.2994* (0.1786)	0.2699*** (0.0898)
Democracy <sup>2</sup>	-0.0104 (0.0080)	-0.0122*** (0.0039)
Ethnic Fract.	0.6164 (0.5729)	-0.5661 (0.4628)
Religious Fract.	1.0920 (1.1467)	1.5441** (0.6072)
Popular Density	-0.0345** (0.0135)	-0.0108 (0.0113)
Elite Density	-0.0182 (0.0288)	-0.1064*** (0.0349)
Constant	-16.8116*** (2.1023)	-5.2779*** (1.6226)
Peace Years	-0.0509 (0.0976)	-0.0986 (0.0822)
Splines(1-3)	N/S	N/S
<b>N</b>	6013	6013

Note: All independent variables lagged by one year. Robust standard errors in parentheses.  
\* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$



Note: Based on coefficients and standard errors from Models 9 and 10. First differences are calculated by holding all other variables at their means while shifting the variable of interest from its 5<sup>th</sup> percentile to its 95<sup>th</sup> percentile. Bars represent 95% confidence intervals.

**Figure 17: Secessionist vs. Centrist Civil Wars**

civil wars, but have a far smaller (and statistically insignificant) effect on the likelihood of centrist civil wars.<sup>22</sup> These results provide additional confirmation that it is specifically through the causal pathway of loyalty fragmentation that public communicative structures exercise their stabilizing effects.

### 5.6.7 Structural Bias and Media Freedom

The final set of observable implications to be derived from the theory concerns the conditions under which we should expect public communicative structures to have their greatest effects. Up to this point, the state has largely been treated as a passive actor, forced to make do with the communicative structures that exogenous events have given it. While this may approximate reality concerning the density of public communicative structures, it certainly does not accurately portray the state's abilities regarding the actual messages that are transmitted through such structures. The centralized nature of mass media technology makes it possible to regulate or censor messages in nearly any way the state sees fit. But what impacts should we expect content constraints to have on the communicate effects described above?

If the informational account is correct, and public communicative structures have effects only to the extent that they facilitate the diffusion of accurate

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<sup>22</sup> Note that while the results are strongly supportive of hypotheses 2 and 3, they do not prove the more specific claim that *Popular Density* has a greater effect on the probability of secessionist civil war than on the probability of centrist civil war. The difference between those two substantive effects (shown in Figure 1) is not statistically significant, even though one is significant and the other is not. In contrast, we have strong statistical evidence for the claim that *Elite Density* has a greater effect on the probability of centrist civil war than on the probability of secessionist civil war.

information to greater numbers of citizens, then the answer is clear. Content restrictions generated by regime elites should reduce the overall accuracy of the information transmitted to receiving audiences, and should therefore be expected to reduce the effectiveness of public communicative structures, whereas high levels of media freedom should enhance the effectiveness of public communicative structures. On the other hand, if the theory of communicative structuralism is correct, then the story becomes a bit more complicated. While the focus here has been on structure, no part of this theoretical framework denies the obvious importance of differences in message content. Instead, the claim is that the impacts of message content are *conditional* on the structures through which messages travel.

Because public communicative structures represent the means through which collectives become aware of themselves *as* collectives, they also serve to delimit bounds on the set of perspectives which are intersubjectively relevant. According to this account, the critical factor is not the informational accuracy of message content, nor the identity of those actually engaged in writing or speaking, but rather the diversity of perspectives which are allowed into the public arena. Restrictions which favor a narrow class of elite perspectives while excluding some portion of the broader array of popular perspectives should inhibit the ability of the broader population to construct a full and complete image of itself, and should therefore be expected to reduce the effectiveness of popular public communicative structures. Those who find their perspectives coercively underrepresented in public discourse could hardly be expected to experience the cohesive effects of the resulting shared experiences. In contrast, because elite public communicative structures are used to facilitate intersubjective awareness primarily amongst elites, the exclusion of certain popular

perspectives which differ from those of the regime's elites (arguably the only kinds restrictions that states impose) should only enhance the efficacy of elite public communicative structures because it is only elite perspectives which are intersubjectively relevant to the community constituted by such structures. In other words, while greater levels of content *freedom* should be expected to magnify the intersubjective impacts of popular public communicative structures, greater levels of regime-imposed content *restriction* should be expected magnify the intersubjective impacts of elite public communicative structures. We thus have two competing hypotheses:

**H4a (Informational Account):** *Ceteris paribus, media freedom will enhance the pacifying effects of both popular public communicative structures and elite public communicative structures.*

**H4b (Structural Account):** *Ceteris paribus, media freedom will enhance the pacifying effects of popular public communicative structures, but diminish the pacifying effects of elite public communicative structures.*

To test these hypotheses I coded a new independent variable, **Media Freedom**, which equals 1 for any country-year in which the mass media were free from politically-based content restrictions or censorship, and 0 otherwise.<sup>23</sup> I then

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<sup>23</sup> Coded by the author using the Freedom House Press Freedom Survey (2005) and Van Belle's (1997) press freedom data. The variable equals one when the state is coded in the top category of press freedom in either source. Disagreements between these two sources were resolved by privileging whichever

re-ran the specification from Model 3, adding the *Media Freedom* variable to the model and also adding two interaction terms: *Popular Density \* Media Freedom* and *Elite Density \* Media Freedom*. The results are reported in Table 8. Both interaction terms are statistically and substantively significant. As predicted by both hypotheses 4a and 4b, media freedom greatly increases the efficacy of popular public communicative structures. As can be seen more clearly in Figure 18, the presence of media freedom nearly triples the substantive impact of *Popular Density*. In contrast, as predicted by hypothesis 4b but *not* 4a, media freedom reduces the efficacy of elite public communicative structures by more than a factor of ten, rendering the magnitude of the effect of *Elite Density* statistically indistinguishable from 0.

These results provide strong confirmation of the expectations derived from the theoretical framework of communicative structuralism, in the form of effects that would be inexplicable from a purely informational perspective. The results also indicate that state leaders find themselves on the horns of a difficult dilemma. Those policies which allow the regime to effectively construct collective awareness and cohesion amongst elites are the very same policies which serve to inhibit the formation of collective awareness and cohesion amongst the broader population. It should therefore not be surprising that authoritarian governments are more likely to institute restrictions on media freedom, as it is precisely those kinds of regimes with narrow, elite-based selectorates who we would expect to prioritize the construction of elite cohesion over the construction of popular cohesion.

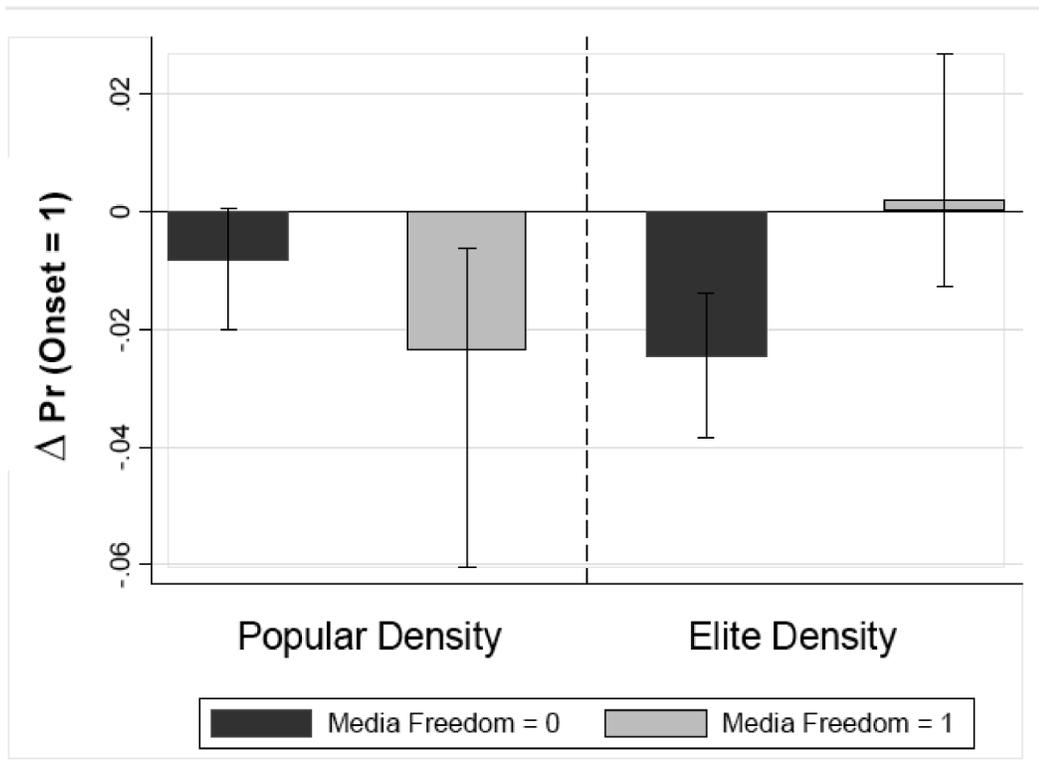
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indicator represented a greater level of censorship, as errors of omission (i.e. failing to see censorship that actually exists) were thought to be more likely than errors of commission (i.e. seeing censorship when none actually exists).

**Table 8: Media Freedom and Civil War**

	<b>Model 11</b>
GDP per capita	-0.0056 (0.0361)
Land Area	0.0322 (0.0540)
Log (%Mountainous)	0.1462** (0.0719)
Log (Population)	0.2048*** (0.0753)
Oil Exporter	0.6495*** (0.2301)
Democracy	0.2274*** (0.0807)
Democracy2	-0.0088** (0.0036)
Ethnic Fract.	0.1950 (0.3627)
Religious Fract.	1.2602** (0.5462)
Popular Density	-0.0143* (0.0081)
Elite Density	-0.1078*** (0.0384)
Media Freedom (MF)	-0.4704 (0.7269)
Pop Dens * MF	-0.0353** (0.0170)
Elite Dens * MF	0.1081** (0.0449)
Constant	-8.2311*** (1.2271)
Peace Years	-0.0539 (0.0711)
Splines(1-3)	N/S
<b>N</b>	5776

Note: All independent variables lagged by one year. Robust standard errors in parentheses.  
\* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$



Note: Based on coefficients and standard errors from Model 11. First differences are calculated, conditional on the presence or absence of *Media Freedom*, by holding all other variables at their means while shifting the variable of interest from its 5<sup>th</sup> percentile to its 95<sup>th</sup> percentile. Bars represent 95% confidence intervals.

**Figure 18: Media Freedom Interactive Effects**

## **5.7 Discussion**

The goal of this chapter was to provide a theory which would allow scholars of civil conflict to predict, *ex ante*, which populations are most vulnerable to national fragmentation. As recent world events make clear, academics and policymakers alike are in desperate need of theoretical tools with which address such questions. The answer proposed here is that national cohesion of symbolic attachments is facilitated by *dense* and *public* communicative structures, which exert centripetal pressures through the constitution of broad arenas of shared experience. To be clear, my claim is not that mass media exert no effects through the transmission of information, nor is my claim that social networks of face-to-face contacts are uninvolved in the process of recruitment and mobilization. Rather, the claim made here is that the structural effects of communication are not nearly exhausted by these mechanisms. Moreover, I argue that the near exclusive focus on the material and institutional bases of state strength that has characterized the contemporary quantitative literature on civil conflict, has obscured the critical role played by the intersubjective construction of symbolic attachments. The statistical evidence presented above thus represents an important step towards justifying the claim that the intersubjective effects of public communicative structures must be thoroughly incorporated into our theories of civil conflict.

In the future, the empirical focus of this research program could be expanded in a number of directions. While ease of measurement makes mass media structures an attractive empirical target, they represent only one example of the vast array of public communicative structures which permeate modern societies. If this theory is

correct, then the basic structural regularities described here should be observable in a wide variety of domains, ranging from soccer stadiums to religious congregations. Furthermore, density is certainly not the only important dimension along which public communicative structures vary. Transmission and reception patterns vary in the degree to which they are temporally synchronized, the degree to which they are geographically constrained, and in countless other ways which might influence the strength or the character of their effects. It seems clear, then, that the results presented here have only scratched the surface.

However, the policy implications of these results could not be more stark. Media density is not only a more proximate cause of civil peace than economic development; it is also a more a far more readily manipulatable causal factor. Compared to the difficulty of converting an impoverished country into an economically advanced country, or the difficulty of converting a non-democratic regime into a democratic regime, the prospect of merely attempting to increase the structural density of relatively inexpensive items like radios, televisions, and newspapers, appears remarkably plausible. Communicative structure thus represents a rare combination of power and flexibility. Given the robustness of the empirical evidence detailed above, academics and policymakers alike should begin to consider whether the ever-growing list of internal conflicts which have been deemed unavoidable and intractable, have been characterized as such because the wrong tools have been applied to their suppression and resolution.

## Chapter 6. Conclusion

After having covered so much conceptual territory in the preceding pages, it may be helpful to engage in a brief summarization of exactly what has been claimed in this dissertation:

**Security dilemmas are generated by divided group loyalties.** This is true regardless of the level of analysis or the scale upon which the groups have been constituted.

**Group loyalties, and the divisions that emerge within them, are intersubjective phenomena.** The conceptual difficulty stems from characterizing the security dilemma in entirely individualist and entirely materialistic terms. Security dilemmas are not simply the result of a particular configuration of weapons and defenses, or the biased decision-making of regime leadership structures. They are also the result of a particular configuration of collective loyalties.

**Public communicative structures drive the construction of collective loyalties because they facilitate joint capabilities of intersubjective inference.** It is on the basis of such capabilities that individuals become aware of themselves as members of broader collectives, that groups become aware of themselves as groups. It is through this mechanism that subjective perceptions are transformed into collective attachments.

**Finally, higher density mass media structures incentivize 'broadcasting' communicative strategies over 'narrowcasting' strategies, enhance the intersubjective force of mass media messages, construct more**

**robustly unified collective loyalties, and decrease a population's vulnerability to the emergence of fragmentary sub-group cleavages.**

### **Moving Forward: Material Power, Communicative Power, and the Future of the Nation-State**

One of the fundamental problems of political order, at all levels, is to reach an equilibration between the distribution of benefits and the distribution of power. While this basic dynamic has long been recognized in analyses of both domestic and international politics,<sup>1</sup> most prominent theories have characterized "power" entirely in terms of material resources and capabilities. Seen from this perspective, power is simply a matter of the possession of weapons, capital, land, etc., and the capability to deploy those resources in coercive forms. However, seen from the perspective of communicative structuralism, power is not simply a material phenomenon. Power is also *communicative power*, that is, the capability to engage in popular mobilization through the constitution of collective loyalties. The effective construction of political institutions, whether domestic or international in scope, thus requires attention not only to the balance of material power, but also to the balance of communicative power. Institutions that 'bend' only in response to the application of material power are likely to find themselves overturned by the forces of collective mobilization constituted along lines that were previously unforeseen. Indeed, the great genius of an effectively constructed democracy is that it gives institutional rewards in direct

proportion to the level of mobilizational success achieved by a particular group, regardless of the basis upon which they were constituted, and thus removes the incentive for a resort to collective violence against the state.

Until recently, the importance of this distinction between material power and communicative power has been partially obscured by nature of the modern international system. The scientific study of international relations came of age at a unique historical moment: when the effective range of public communicative structures and state coercive capacities had been rendered largely coterminous, at least for consolidated nation-states. It was arguably the achievement of this structural congruence which has defined the nation-state as a world-historical entity. This situation did not arise naturally or spontaneously. Consider, for instance, the spatial reach of radio and television signals. The “national” character of these broadcast media was not technologically determined, but rather produced via domestic institutions and via agreements between states to mutually refrain from “spillover” transmissions.<sup>2</sup> Modern nation-states were thus created by boundary constraints, not just on the exercise of material power, but on the excise of communicative power.

Moreover, while the rumors of the death of the nation-state have been greatly exaggerated, we nevertheless appear to be entering an era in which the congruence of material and communicative boundaries can no longer be assumed (if it ever truly could). For most of human history, the available means through which to constitute

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<sup>1</sup> See for instance, Knight (1992), North (1990), and Gilpin (1981).

<sup>2</sup> For more on the history of this process, see Price (2002) and Briggs and Burke (2002).

public communicative structures have produced strength gradients which declined with geographic distance. As long as message transmission required the transportation of physical objects, the strength of a public communicative structure was necessarily spatially constrained, stronger at the center and weaker in the periphery. The great innovation of electromagnetic communication technologies, such as radio and television, has been to create public communicative structures with strength gradients that are nearly constant with respect to geographic distance. Boundaries between national public communicative structures were henceforward maintained not by technological determinants, but by linguistic and institutional barriers.

While those barriers remain for terrestrial broadcasts, burgeoning technological advances are currently in the process of overwhelming their effectiveness. Especially important in this regard has been the development of orbital satellite broadcast capabilities and the emergence of the internet. From the 'informational-network' perspective, these developments simply represent additional linkages through which the diffusion of information can proceed. However, from the perspective of communicative structuralism, these developments have important implications for the constitution of group identities.

Let us first consider the implications of satellite broadcasting. Broadcasts from a satellite in geosynchronous orbit are still somewhat spatially constrained by the satellite's geographic coverage. However, there is nothing to force those constraints to follow nation-state boundaries. For instance, at this moment there is an Egyptian-owned Nilesat satellite receiving uploads from an unknown location (probably in Syria), and broadcasting the "Al-Zawraa" television station to the vast

majority of the Middle East and Northern Africa. Set up by Mishan al-Jabouri, a Sunni leader from Iraq, the station broadcasts strong anti-Shia messages to anyone in the region with a satellite dish and the inclination to listen.<sup>3</sup> The station is thus publicly constituting an intersubjective audience that transcends the bounds of every Middle Eastern state, promoting transnational cleavages within some states and between others. In this way, we might say that satellite broadcasts represent a *de-nationalization* of public communication.

The public communicative opportunities constituted by the structure of the internet take this principle even further. Freed from all geographic bounds, internet communications represent not just a de-nationalization of public communication, but a *de-spatialization* of public communication. The internet thus makes possible the constitution of intersubjective communities that are entirely unconstrained by distance or location. Perhaps even more importantly, the internet represents a radical *de-centralization* of communicative power, giving any individual with a computer and an internet connection the ability to be publicly heard on scale that was previously reserved for a narrow class of communication professionals and political elites. The full implications of this shift in the distribution of communicative power have only just begun to be observed.

How then, should we expect contemporary nation-states to respond to this burgeoning state of affairs? The response that will come most naturally to some states will be an attempt to reimpose public communicative boundaries through domestic legal restrictions, international regimes, or outright physical coercion. Such

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<sup>3</sup> "Row over Iraq's insurgency TV." BBC World News. 2/8/2007.

a response, however, would be shortsighted. First, the global and decentralized nature of these technologies tends to render attempts at restriction either prohibitively difficult or downright impossible. The restrictions that previously maintained the integrity of national public communicative structures may therefore simply be infeasible. But there is a more fundamental normative objection: such technologies hold open the possibility that capabilities of intersubjective inference might be constituted on broader scales than ever before in human history. It is a dangerous situation when the scale of our interdependencies exceeds the scale of our collective imaginations. As globalization multiplies our interdependencies, we will thus face ever greater needs to widen our bases of joint symbolic awareness, to bridge those intersubjective gaps into which collective violence flows.

## References

- Abizadeh, Arash. 2005. "Does Collective Identity Presuppose an Other? On the Alleged Incoherence of Global Solidarity." *American Political Science Review* 99 (1): 45-60.
- Anderson, Benedict. 1991. *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. 2<sup>nd</sup> ed. New York: Verso.
- Arendt, Hannah. 1958. *The Human Condition*. University of Chicago Press.
- Aumann, Robert. 1976. "Agreeing to Disagree." *Annals of Statistics* 4: 1236-1239.
- Bacharach, Michael and Michele Bernasconi. 1997. "The Variable Frame Theory of Focal Points: An Experimental Study." *Games and Economic Behavior* 19: 1-45.
- Bacharach, Michael and Dale O. Stahl. 2000. "Variable-Frame Level-n Theory." *Games and Economic Behavior* 32: 220-246.
- Baldassarri, Delia. 2007. *Crosscutting Social Spheres? Political Polarization and the Social Roots of Pluralism*. Ph.D. dissertation, Department of Sociology, Columbia University, New York, NY.
- Banks, Arthur S. CROSS-NATIONAL TIME SERIES, 1815-2002 [Computer file]. Databanks International ed. Binghamton, NY: Databanks International [Producer and Distributor], 2002.
- Bates, Robert H., Rui J. P. de Figueiredo, Jr. and Barry R. Weingast. 1998. "The Politics of Interpretation: Rationality, Culture, and Transition." *Politics & Society* 26: 603-642.
- Barabási, Albert-László, and Réka Albert. 2002. "Statistical mechanics of complex networks." *Reviews of Modern Physics* 74: 47-97.
- Bardsley, Nicholas, Judith Mehta, Chris Starmer, and Robert Sugden. 2006. "The Nature of Salience Revisited: Cognitive Hierarchy Theory versus Team Reasoning." Unpublished manuscript. Accessed 2/8/2007 at: [http://www.uea.ac.uk/eco/people/add\\_files/sugden/coordination%2045a.pdf](http://www.uea.ac.uk/eco/people/add_files/sugden/coordination%2045a.pdf)
- Bartels, Larry M. 1997. "Specification Uncertainty and Model Averaging." *American Journal of Political Science* 41 (2): 641-674.
- Beck, Nathaniel, Jonathan N. Katz, and Richard Tucker. 1998. "Taking Time Seriously: Time-Series-Cross-Section Analysis with a Binary Dependent Variable." *American Journal of Political Science* 42 (4): 1260-1288.

- Besley, Timothy, and Robin Burgess. 2002. "The Political Economy of Government Responsiveness: Theory and Evidence from India." *Quarterly Journal of Economics* 117 (4): 1415-1452.
- Brass, Paul R. 1997. *Theft of an Idol: Text and Context in the Representation of Collective Violence*. Princeton University Press.
- Briggs, Asa and Peter Burke. 2002. *A Social History of the Media: From Gutenberg to the Internet*. Cambridge, UK: Polity Press.
- Brewer, Marilyn B., and Roderick M. Kramer. 1985. "The Psychology of Intergroup Attitudes and Behavior." *Annual Review of Psychology* 36: 219-43.
- Brown, R. J. 1995. *Group Processes: Dynamics Within and Between Groups*. Oxford: Blackwell.
- Burg, Steven L. and Michael L. Berbaum. 1989. "Community, Integration, and Stability In Multinational Yugoslavia." *American Political Science Review* 83: 535-554.
- Calhoun, Craig. 1991. "Indirect Relationships and Imagined Communities: Large-Scale Social Integration and the Transformation of Everyday Life." In Pierre Bourdieu and James S. Coleman (eds.) *Social Theory for a Changing Society*. Boulder, CO: Westview Press. pp. 95-121.
- Cederman, Lars-Erik. 1994. "Emergent Polarity: Analyzing State-Formation and Power Politics." *International Studies Quarterly* 38 (December): 501-533.
- Cederman, Lars-Erik. 1997. *Emergent Actors: How States and Nations Develop and Dissolve*. Princeton University Press.
- Chaudhuri, Ananish, Andrew Schotter, and Barry Sopher. 2001. "Talking Ourselves to Efficiency: Coordination in Inter-Generational Minimum Games with Private, Almost Common and Common Knowledge of Advice." Unpublished manuscript. Accessed 2/8/2007 at: <http://cess.nyu.edu/0007:2001-12.pdf>.
- Chayko, Mary. 2002. *Connecting: How We Form Social Bonds and Communities in the Internet Age*. Albany, NY: State University of New York Press.
- Chiu, Chi-yue, Robert M. Krauss, and Ivy Yee-Man Lau. 1998. "Some Cognitive Consequences of Communication." In S. R. Fussell and R. J. Kreuz (eds.) *Social and Cognitive Approaches to Interpersonal Communication*. Hillsdale, NJ: Erlbaum. pp. 259-278.
- Chwe, Michael Suk-Young. 1998. "Culture, Circles, and Commercials: Publicity, Common Knowledge, and Social Coordination." *Rationality and Society* 10 (1): 47-75.
- Clyde, Merlise and Edward I. George. 2004. "Model Uncertainty." *Statistical Science* 19 (1): 81-94.

- Coase, Ronald H. 1974. "The Market for Goods and the Market for Ideas." *American Economic Review* 64 (2): 384-91.
- Collier, Paul, and Anke Hoeffler. 2004. "Greed and Grievance in Civil War." *Oxford Economic Papers* 56 (4): 563-595.
- Davison, W. P. 1983. "The Third-Person Effect in Communication." *Public Opinion Quarterly* 47: 1-15.
- de Marchi, Scott. 2005. *Computational and Mathematical Modeling in the Social Sciences*. Cambridge University Press.
- Denitch, Bogdan. 1996. *Ethnic Nationalism: The Tragic Death of Yugoslavia*. University of Minnesota Press.
- Denzau, Arthur T and Douglass C. North. 1994. "Shared Mental Models: Ideologies and Institutions." *Kyklos* 47 (1): 3-31.
- Des Forges, Alison. 1999. *Leave None to Tell the Story: Genocide in Rwanda*. New York: Human Rights Watch.
- Deutsch, Karl W. 1953. *Nationalism and Social Communication: An Inquiry into the Foundations of Nationality*. Cambridge, MA: MIT Press.
- Djankov, Simeon, Carlee McLiesh, Tatiana Nenova, and Andrei Shleifer. 2003. "Who Owns the Media?" *Journal of Law and Economics* 46 (2): 341-81.
- Doob, L. 1935. *Propaganda, Its psychology and Technique*. New York: Holt.
- Druckman, Daniel. 1994. "Nationalism, Patriotism, and Group Loyalty: A Social Psychological Perspective." *Mershon International Studies Review* 38 (1): 43-68.
- Durkheim, Emile. 1898/1953. "Individual and Collective Representations." In *Sociology and Philosophy*, D. Pocock (trans.). pp. 1-34. Glencoe: Free Press.
- Ellingsen, Tanja. 2000. "Colorful Community or Ethnic Witches' Brew: Multiethnicity and Domestic Conflict During and After the Cold War." *Journal of Conflict Resolution* 44 (2): 228-249.
- Ellis, John. 1995. *From the Barrel of a Gun: A History of Guerrilla, Revolutionary and Counter-Insurgency Warfare, from the Romans to the Present*. London: Greenhill Books.
- Epstein, Joshua M. and Robert Axtell. 1996. *Growing Artificial Societies: Social Science from the Bottom Up*. Cambridge, MA: MIT Press.

- Epstein J, Steinbruner J and Parker M. 2001. "Modeling Civil Violence: An Agent-Based Computational Approach." Working paper. Washington D C: Center on Social and Economic Dynamics, Brookings Institution.
- Fearon, James D. 2005. "Primary Commodity Exports and Civil War." *Journal of Conflict Resolution* 49 (4): 483-507.
- Fearon, James D. and David D. Laitin. 1996. "Explaining Interethnic Cooperation." *American Political Science Review* 90 (4): 715-735.
- Fearon, James and David Laitin. 2000. "Violence and the Social Construction of Ethnic Identity." *International Organization* 54: 845-877.
- Fearon, James D. and David D. Laitin. 2003. "Ethnicity, Insurgency, and Civil War," *American Political Science Review* 97 (1): 75-90.
- Fischer, Peter, Eva Jonas, Dieter Frey, and Stefan Schulz-Hardt. 2005. "Selective Exposure to Information: The Impact of Information Limits." *European Journal of Social Psychology* 35 (4): 469-492.
- Flache, Andreas and Rainer Hegselmann. 2001. "Do Irregular Grids make a Difference? Relaxing the Spatial Regularity Assumption in Cellular Models of Social Dynamics." *Journal of Artificial Societies and Social Simulation* 4 (4): <<http://www.soc.surrey.ac.uk/JASSS/4/4/6.html>>
- Foucault, Michel. 1979. *Discipline and Punish*. New York: Vintage Books.
- Foucault, Michel. 1980. *Power/Knowledge*. New York: Pantheon.
- Friedland, Lewis A. and Jack M. McLeod. 1999. "Community Integration and Mass Media: A Reconsideration." In David P. Demers and Kasisomayajula Viswanath (eds.) *Mass Media, Social Control, and Social Change: A Macrosocial Perspective*. pp. 197-226. Ames: Iowa State University Press.
- Fussell, Susan. R. and Krauss, Robert. M. 1989. "The Effects of Intended Audience on Message Production and Comprehension: Reference in a Common Ground Framework." *Journal of Experimental Social Psychology* 25: 203-219.
- Fussell, Susan R. and Krauss, Robert M. 1991. "Accuracy and Bias in Estimates of Others' Knowledge." *European Journal of Social Psychology* 21: 445-454.
- Fussell, Susan. R. and Krauss, Robert. M. 1992. "Coordination of Knowledge in Communication: Effects of Speakers' Assumptions About Others' Knowledge." *Journal of Personality and Social Psychology* 62: 378-391.
- Gaertner, Samuel L., and John F. Dovidio. 2000. *Reducing Intergroup Bias: The Common Ingroup Identity Model*. Philadelphia: Psychology Press of Taylor and Francis.

- Gaertner, Samuel L., Jeffrey Mann, Audrey Murrell, and John F. Dovidio. 1989. "Reducing Intergroup Bias: The Benefits of Recategorization." *Journal of Personality and Social Psychology* 57 (2): 239-49.
- Gaertner, Samuel L., John F. Dovidio, Jason A. Nier, Christine M. Ward, and Brenda S. Banker. 1999. "Across Cultural Divides: The Value of a Superordinate Identity." In D. A. Prentice and D. T. Miller (eds.) *Cultural Divides: Understanding and Overcoming Group Conflict*, pp. 173-212. New York: Russell Sage Foundation.
- Gagnon, V. P. 1994/95. Ethnic Nationalism and International Conflict: The Case of Serbia. *International Security* 19 (3): 130-166.
- Gellner, Ernest. 1983. *Nations and Nationalism*. Cornell University Press.
- Geertz, Clifford. 1973. *The Interpretation of Cultures*. New York: Basic Books.
- Gentzkow, Matthew and Jesse M. Shapiro. 2006. "Media Bias and Reputation." *Journal of Political Economy* 114 (2): 280-316.
- Gilbert, Margaret. 1987. "Modeling Collective Belief." *Synthese* 73: 185-204.
- Gilpin, Robert. 1981. *War and Change in World Politics*. Cambridge University Press.
- Gitlin, Todd. 1979. "Prime Time Ideology: The Hegemonic Process in Television Entertainment." In Horace Newcomb (ed.) *Television: The Critical View - Fifth Edition* [1994]. New York: Oxford University Press.
- Glaeser, Edward L. 2005. "The Political Economy of Hatred." *Quarterly Journal of Economics* 120 (1): 45-86.
- Goodwin, Jeff. 2001. *No Other Way Out: States and Revolutionary Movements, 1945-1991*. Cambridge: Cambridge University Press.
- Gould, R. V. 1991. "Collective Action and Network Structure." *American Sociological Review* 56: 716-729.
- Gould, R. V. 1993. "Multiple Networks and Mobilization in the Paris Commune, 1871." *American Sociological Review* 58: 182-196.
- Gould, Roger V. 1995. *Insurgent Identities: Class, Community, and Protest in Paris from 1848 to the Commune*. University of Chicago Press.
- Graber, Doris. 1984. *Processing the News: How People Tame the Information Tide*. New York: Longman Press.
- Gramsci, Antonio. 1971. *Selections from the Prison Notebooks*. Edited and translated by Quintin Hoare and Geoffrey Nowell Smith. London: Lawrence and Wishart.

- Granovetter, Mark. 1973. "The Strength of Weak Ties." *American Journal of Sociology* 81: 1287-1303.
- Granovetter, M. 1978. "Threshold Models of Collective Behavior." *American Journal of Sociology* 83: 1420-1443.
- Guetzkow, Harold. 1957. "Isolation and Collaboration: A Partial Theory of International Relations." *Journal of Conflict Resolution* 1: 46-68.
- Gunther, Albert C. 1998. "The Persuasive Press Inference: Effects of Mass Media on Perceived Public Opinion." *Communication Research* 25 (5): 486-504.
- Hall, Stuart. 1982. "The Rediscovery of 'Ideology': Return of the Repressed in Media Studies." In Michael Gurevitch, Tony Bennett, James Curran, and Janet Woollacott (eds.) *Culture, Society and the Media*. pp. 56-90. London: Methuen.
- Hardin, Russell. 1995. *One for All: The Logic of Group Conflict*. Princeton University Press.
- Hardin, Curtis D. and E. Tory Higgins. 1996. "Shared Reality: How Social Verification Makes the Subjective Objective." In Richard M. Sorrentino and E. Tory Higgins (eds.) *Handbook of Motivation and Cognition, Vol. 3, The Interpersonal Context*. pp. 28-84. New York: Guilford.
- Harton, Helen C. and Martin J. Bourgeois. 2004. "Cultural Elements Emerge From Dynamic Social Impact." In Mark Schaller and Christian S. Crandall (eds.) *The Psychological Foundations of Culture*. Mahwah, New Jersey: Lawrence Erlbaum Associates. pp. 41-75.
- Hegre, Håvard, Tanja Ellingsen, Scott Gates and Nils Petter Gleditsch. 2001. "Toward A Democratic Civil Peace? Democracy, Political Change, and Civil War 1816-1992." *American Political Science Review* 95 (1): 16-33.
- Heston, Allen, Robert Summers, and Bettina Aten. 2002. *Penn World Table Version 6.1*, October, Center for International Comparisons at the University of Pennsylvania (CICUP).
- Holbert, Lance R. and Michael T. Stephenson. 2003. "The Importance of Indirect Effects in Media Effects Research: Testing for Mediation in Structural Equation Modeling." *Journal of Broadcasting & Electronic Media* 47 (4): 556-572.
- Holmbeck, Grayson N. 1997. "Toward Terminological, Conceptual, and Statistical Clarity in the Study of Mediators and Moderators: Examples From the Child-Clinical and Pediatric Psychology Literatures." *Journal of Consulting and Clinical Psychology* 65(4): 599-610.
- Horowitz, Donald. 1985. *Ethnic Groups in Conflict*. Cambridge University Press.

- Hovland, C. I., I. Janis, and H. H. Kelley. 1953. *Communication and Persuasion*. New Haven, CT: Yale University Press.
- Ignatieff, Michael. 1993. *Blood and Belonging: Journey into the New Nationalism*. New York: Farrar Strauss
- Inglehart, R. et al. 2005. "European and World Values Surveys Integrated Data File, 1999-2002, Release 1", 2nd ICPSR version, ICPSR 3975, University of Michigan: Ann Arbor, MI.
- Iyengar, Shanto and Donald R. Kinder. 1987. *News That Matters: Television and American Opinion*. University of Chicago Press.
- Jervis, Robert. 1978. "Cooperation Under the Security Dilemma." *World Politics* 30 (2): 167-214.
- Johnson, James. 2000. "Why Respect Culture?" *American Journal of Political Science* 44 (3): 405-418.
- Johnson, James. 2002. How Conceptual Problems Migrate: Rational Choice, Interpretation, and the Hazards of Pluralism. *Annual Review of Political Science* 5: 223-248.
- Kalyvas, Stathis N. 2003. "The Ontology of 'Political Violence: Action and Identity in Civil Wars.'" *Perspectives on Politics* 1 (3): 475-494.
- Kalyvas, Stathis N. 2006. *The Logic of Violence in Civil War*. Cambridge University Press.
- Kaplan, Robert D. 1993. *Balkan Ghosts: A Journey Through History*. New York: St. Martin's Press.
- Kashima, Yoshihisa. 2000. "Maintaining Cultural Stereotypes in the Serial Reproduction of Narratives." *Personality and Social Psychology Bulletin* 26: 594-604.
- Katz, D. and P. R. Lazarsfeld. 1955. *Personal Influence*. New York: Free Press.
- Katz, Elihu, Jay G. Blumler, and Michael Gurevitch. 1973-1974. "Uses and Gratifications Research." *The Public Opinion Quarterly* 37 (4): 509-523.
- Katz, Elihu, Jay G. Blumler, and Michael Gurevitch. 1974. "Utilization of Mass Communication by the Individual." In Jay G. Blumler and Elihu Katz (eds.), *The Uses of Mass Communications: Current Perspectives on Gratifications Research*. pp.19-32. Beverly Hills, CA: Sage.
- Keohane, Robert O. 1984. *After Hegemony: Cooperation and Discord in the World Political Economy*. Princeton University Press.

- King, Gary, Michael Tomz, and Jason Wittenberg. 2000. "Making the Most of Statistical Analyses: Improving Interpretation and Presentation." *American Journal of Political Science* 44 (2): 347-61.
- King, Gary, and Langche Zeng. 2001. "Logistic Regression in Rare Events Data." *Political Analysis* 9 (2): 137-163.
- Klapper, J. T. 1960. *The Effects of Mass Communication*. New York: Free Press.
- Knight, Jack. 1992. *Institutions and Social Conflict*. Cambridge University Press.
- Krauss, Robert M. and Susan R. Fussel. 1991a. "Constructing Shared Communicative Environments." In Lauren B. Resnick, John M. Levine, and Stephanie D. Teasley (eds.) *Perspectives on Socially Shared Cognition*. pp. 172-200. Washington, DC: American Psychological Association.
- Krauss, Robert M. and Susan R. Fussel. 1991b. "Perspective-Taking in Communication: Representations of Others' Knowledge in Reference." *Social Cognition* 9: 2-24.
- Krauss, Robert M., Susan R. Fussell, and Yihsiu Chen. 1995. "Coordination of Perspective in Dialogue: Intrapersonal and Interpersonal Processes." In I. Markova, C. G. Graumann and K. Foppa (eds.) *Mutualities in Dialogue*. Cambridge University Press. pp. 124-145.
- Kuhn, Thomas S. 1962. *The Structure of Scientific Revolutions*. University of Chicago Press.
- Kurki, Milja. 2006. "Causes of a Divided Discipline: Rethinking the Concept of Cause in International Relations Theory." *Review of International Studies* 32: 189-216.
- Lachman, Richard. 1997. "Agents of Revolution: Elite Conflicts and Mass Mobilization from the Medici to Yeltsin." In John Foran (ed.) *Theorizing Revolutions*. pp. 73-101. New York: Routledge.
- Lake, David A. and Rothchild, Donald. 1996. "Containing Fear: The Origins and Management of Ethnic Conflict." *International Security* 21 (2): 41-75.
- Lambe, Jennifer L. and Douglas M. McLeod. 2005. "Understanding Third-Person Perception Processes: Predicting Perceived Impact on Self and Others for Multiple Expressive Contexts." *Journal of Communication* 55 (2): 277-291.
- Lasswell, H. W. 1927. *Propaganda Techniques in the World War*. New York: Peter Smith.
- Latané, Bibb. 1996. "Dynamic Social Impact: The Creation of Culture by Communication." *Journal of Communication* 46 (4): 13-25.

- Latané, Bibb and Martin J. Bourgeois. 1996. "Experimental Evidence for Dynamic Social Impact: The Emergence of Subculture." *Journal of Communication* 46 (4): 35-47.
- Latané, Bibb and James H. Liu. 1996. "The Intersubjective Geometry of Social Space." *Journal of Communication* 46 (4): 26-34.
- Latané, Bibb and Andrzej Nowak. 1994. "Attitudes as Catastrophes: From Dimensions to Categories with Increasing Involvement." In R. Vallacher and A. Nowak (eds.) *Dynamical Systems in Social Psychology*. pp. 219-249. New York: Academic Press.
- Latané, Bibb and Andrzej Nowak. 1997. "Self-Organizing Social Systems: Necessary and Sufficient Conditions for the Emergence of Consolidation, Clustering, and Continuing Diversity." In G. Barnett and F. Boster (eds.), *Progress in Communication Sciences: Persuasion Vol. 13*. pp. 43-74. Norwood, NJ: Ablex.
- Lau, Ivy Yee-Man., Chi-yue Chiu, and Sau-lai Lee. 2001. "Communication and Shared Reality: Implications for the Psychological Foundations of Culture." *Social Cognition* 19 (3): 350-371.
- Lau, Ivy Yee-Man and Chi-yue Chiu. 2001. "I Know What You Know: Assumptions About Others' Knowledge and Their Effects on Message Construction." *Social Cognition* 19 (6): 587-600.
- Lavine, Howard and Bibb Latané. 1996. "A Cognitive-Social Theory of Public Opinion: Dynamic Social Impact and Cognitive Structure." *Journal of Communication* 46 (4): 48-56.
- Laqueur, Walter. 1998. *Guerrilla Warfare: A Historical and Critical Study*. New Brunswick, NJ: Transaction Publishers.
- Lavine, Howard, Eugene Borgida and John L. Sullivan. 2000. "On the Relationship Between Attitude Involvement and Attitude Accessibility: Toward a Cognitive-Motivational Model of Political Information Processing." *Political Psychology* 21 (1): 81-106.
- Lawson, Barry G. and Steve Park. 2000. "Asynchronous Time Evolution in an Artificial Society Model." *Journal of Artificial Societies and Social Simulation* 3 (1): <<http://www.soc.surrey.ac.uk/JASSS/3/1/2.html>>
- Lazarsfeld, P., B. Berelson, and H. Gaudet. 1948. *The People's Choice*. New York: Columbia University Press.
- Lewis, David. 1969. *Convention: A Philosophical Study*. Harvard University Press.
- Lippmann, Walter. 1922. *Public Opinion*. New York: MacMillan.
- Little, Daniel. 1991. *Varieties of Social Explanation*. Boulder: Westview.

- Lustick, Ian. 2000. "Agent-Based Modeling of Collective Identity: Testing Constructivist Theory." *Journal of Artificial Societies and Social Simulations* 3 (1): <http://jasss.soc.surrey.ac.uk/3/1/1.html>.
- Lustick, Ian. 2002. "PS-I: A User-Friendly Agent-Based Modeling Platform for Testing Theories of Political Identity and Political Stability." *Journal of Artificial Societies and Social Simulations* 5 (3): [<http://jasss.soc.surrey.ac.uk/5/3/7.html>](http://jasss.soc.surrey.ac.uk/5/3/7.html)
- Lustick, Ian, Dan Miodownik and Roy J. Eidelson. 2004. "Secessionism in Multicultural States: Does Sharing Power Prevent or Encourage It?" *American Political Science Review* 98 (2): 209-229.
- Lyons, Anthony and Yoshihisa Kashima. 2001. "The Reproduction of Culture: Communication Processes Tend to Maintain Cultural Stereotypes." *Social Cognition* 19: 372-394.
- MacKinnon, David P., Chondra M. Lockwood, Jeanne M. Hoffman, Stephen G. West, and Virgil Sheets. 2002. "A Comparison of Methods to Test Mediation and Other Intervening Variable Effects." *Psychological Methods* 7 (1): 83-104.
- McIntyre, Allison, Anthony Lyons, Anna Clark, and Yoshihisa Kashima. 2004. "The Microgenesis of Culture: Serial Reproduction as an Experimental Simulation of Cultural Dynamics." In Mark Schaller and Christian S. Crandall (eds.) *The Psychological Foundations of Culture*. pp. 227-258. Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Mckeown, Gary and Noel Sheehy. 2006. "Mass Media and Polarisation Processes in the Bounded Confidence Model of Opinion Dynamics." *Journal of Artificial Societies and Social Simulation* 9 (1): [<http://jasss.soc.surrey.ac.uk/9/1/11.html>](http://jasss.soc.surrey.ac.uk/9/1/11.html)
- McLeod, D. M., Detenber, B. H., & Eveland, W. P. 2001. "Behind the Third-Person Effect: Differentiating Perceptual Processes for Self and Other." *Journal of Communication* 51: 678-695.
- McLeod, D. M., Kosicki, G. M., & McLeod, J. M. 2002. "Resurveying the Boundaries of Political Communication Effects." In J. Bryant and D. Zillmann (eds.) *Media Effects: Advances in Theory and Research*, 2nd ed. pp. 215-268. Mahwah, NJ: Erlbaum.
- McLeod, Jack M., Katie Daily, Zhongshi Cuo, William P. Eveland, Jan Bayer, Seungchan Yang, and Hsu Wang. 1996. "Community Integration, Local Media Use, and Democratic Processes." *Communication Research* 6: 463-87.
- McLeod, J. M. and Reeves, B. 1980. "On The Nature of Mass Media Effects." In S. B. Withey and R. P. Abeles (eds.) *Television and Social Behavior: Beyond Violence and Children*. pp. 17-54. Hillsdale, NJ: Erlbaum.

- McGuire, William J. 1986. "The Myth of Massive Media Impact." In G. Comstock (ed.) *Public Communication and Behavior*, Vol. 1. New York: Academic Press.
- McGuire, William J. 1996. "The Yale Communication and Attitude Change Program in the 1950s." In E. E. Dennis and E. Wartella (eds.) *American Communication Research: The Remembered History*. pp. 39-59. Mahwah, NJ: Lawrence Erlbaum Associates.
- McPherson, Miller, Lynn Smith-Lovin, and James M. Cook. 2001. "Birds of a Feather: Homophily in Social Networks." *Annual Review of Sociology* 27: 415-444.
- Mead, George Herbert. 1934. *Mind, Self, and Society*. University of Chicago Press.
- Mercer, Jonathan. 1995. "Anarchy and Identity." *International Organization* 49 (2): 229-252.
- Metzl, Jamie Frederic. 1997. Rwandan Genocide and the International Law of Radio Jamming. *American Journal of International Law* 91 (4): 628-651.
- Meyrowitz, Joshua. 1985. *No Sense of Place*. Oxford: Oxford University Press.
- Meyrowitz, Joshua. 1997. "Shifting Worlds of Strangers: Medium Theory and Changes in 'Them' Versus 'Us.'" *Sociological Inquiry* 67 (1): 59-71.
- Milošević, Milan. 1997. "The media wars: 1987-1997." In Jasmina Udovicki and James Ridgeway (eds.) *Burn This House Down: the Making and Unmaking of Yugoslavia*. Durham: Duke University Press
- Monderer, Dov and Dov Samet. 1989. "Approximating Common Knowledge with Common Beliefs." *Games and Economic Behavior* 1: 170-190.
- Montgomery, Jacob and Brendan Nyhan. 2008. "Bayesian Model Averaging: Theoretical Developments and Practical Applications." Poster presented at the Annual Meeting of the Society for Political Methodology.
- Morley, David and Kevin Robins. 1995. *Spaces of Identity: Global Media, Electronic Landscapes and Cultural Boundaries*. New York: Routledge.
- Morris, James P., Nancy K. Squires, Charles S. Taber, and Milton Lodge. 2003. "Activation of Political Attitudes: A Pyschophysiological Examination of the Hot Cognition Hypothesis." *Political Psychology* 24 (4): 727-745.
- Mughan, Anthony and Richard Gunther. 2000. "The Media in Democratic and Nondemocratic Regimes: A Multilevel Perspective." In Richard Gunther and Anthony Mughan (eds.) *Democracy and the Media: A Comparative Perspective*. Cambridge University Press.
- Mullainathan, Sendhil and Andrei Shleifer. 2005. "The Market for News." *The American Economic Review* 95 (4): 1031-1053.

- Mummendey, Amelie, Sabine Otten, Uwe Berger and Thomas Kessler. 2000. "Positive-Negative Asymmetry in Social Discrimination: Valence of Evaluation and Salience of Categorization." *Society for Personality and Social Psychology* 26 (10): 1258-1270.
- Murphy, Kevin M. and Shleifer, Andrei. 2004. "Persuasion in Politics." *American Economic Review* 94 (2): 435-39.
- Mutz, Diana C. 1998. *Impersonal Influence: How Perceptions of Mass Collectives Affect Political Attitudes*. Cambridge University Press.
- Mutz, Diana C. and Paul S. Martin. 2001. "Facilitating Communication across Lines of Political Difference: The Role of Mass Media." *American Political Science Review* 95 (1): 97-114.
- North, Douglass C. 1990. *Institutions, Institutional Change and Economic Performance*. Cambridge University Press.
- Opp, Karl-Dieter and Christiane Gern. 1993. "Dissident Groups, Personal Networks, and Spontaneous Cooperation: The East German Revolution of 1989." *American Sociological Review* 58 (5): 659-680.
- Osborne, Martin J. and Ariel Rubinstein. 1978. *A Course in Game Theory*. Cambridge, MA: MIT Press.
- Otten, Sabine and Dirk Wentura. 1999. "About the Impact of Automaticity in the Minimal Group Paradigm: Evidence from an Affective Priming Task." *European Journal of Social Psychology* 29: 1049-1071.
- Paek, Hye-Jin, So-Hyang Yoon, and Dhavan V. Shah. 2005. "Local News, Social Integration, and Community Participation: Hierarchical Linear Modeling of Contextual and Cross-Level Effects." *Journalism and Mass Communication Quarterly* 82 (3): 587-606.
- Pan, Zhongdang and Jack M. McLeod. 1991. "Multilevel Analysis in Mass Communication Research." *Communication Research* 18: 140-173.
- Paul, B., Salwen, M. B., & Dupagne, M. 2000. "The Third-Person Effect: A Meta-Analysis of the Perceptual Hypothesis." *Mass Communication & Society* 3: 57-85.
- Perloff, Richard M. 1999. "The Third-Person Effect: A Critical Review and Synthesis." *Media Psychology* 1 (4): 353-378.
- Peters, Krijn and Paul Richards. 1998. "'Why We Fight': Voices of Youth Combatants in Sierra Leone." *Africa* 68 (2): 183-210.
- Petersen, Roger D. 2001. *Resistance and Rebellion: Lessons from Eastern Europe*. Cambridge: Cambridge University Press.

- Petty, R. E., & Cacioppo, J. T. 1986. *Communication and Persuasion: Central and Peripheral Routes to Attitude Change*. New York: Springer-Verlag.
- Petty, Richard E., Joseph R. Priester, and Pablo Briñol. 2002. "Mass Media Attitude Change: Implications of the Elaboration Likelihood Model of Persuasion." In J. Bryant and D. Zillmann (eds.) *Media Effects: Advances in Theory and Research*. 2nd ed. pp. 155-198. Mahwah, NJ: Lawrence Erlbaum.
- Posen, Barry, 1993. "The Security Dilemma and Ethnic Conflict." *Survival* 35 (1): 27-47
- Price, Monroe E. 1995. *Television, Public Sphere and National Identity*. Oxford University Press.
- Price, Monroe E. 2002. *Media and Sovereignty: The Global Information Revolution and Its Challenge to State Power*. Cambridge, MA: MIT Press.
- Putnam, Robert D. 1995. "Tuning In, Tuning Out: The Strange Disappearance of Social Capital in America." *Political Science and Politics* 28: 664-683
- Rabin, Matthew and Schrag, Joel L. 1999. "First Impressions Matter: A Model of Confirmatory Bias." *Quarterly Journal of Economics* 114 (1): 37-82.
- Raudenbush, Stephen W. and Anthony S. Bryk. 2002. *Hierarchical Linear Models: Applications and Data Analysis Methods*. Thousand Oaks: Sage.
- Read, Stephen J. and Darren I. Urada. 2003. "A Neural Network Simulation of the Outgroup Homogeneity Effect." *Personality and Social Psychology Review* 7 (2): 146-169.
- Read, Stephen J. and Lynn C. Miller. 1998. "On the Dynamic Construction of Meaning: An Interactive Activation and Competition Model of Social Perception." In Stephen J. Read and Lynn C. Miller (eds.) *Connectionist Models of Social Reasoning and Behavior*. Mahwah, NJ: Erlbaum.
- Reynal-Querol, Marta. 2002. "Ethnicity, Political Systems, and Civil Wars." *Journal of Conflict Resolution* 46 (1): 29-54.
- Richards, Diana. 2001. "Coordination and Shared Mental Models." *American Journal of Political Science* 45 (2): 259-276.
- Rommetveit, Ragnar. 1974. *On Message Structure: A Framework for the Study of Language and Communication*. New York: John Wiley & Sons.
- Rommetveit, Ragnar. 1992. "Outlines of a Dialogically Based Social-Cognitive Approach to Human Cognition and Communication." In Astri Heen Wold (ed.) *The Dialogical Alternative: Towards a Theory of Language and Mind*. Oslo: Scandinavian University Press. pp. 19-44.

- Rosengren, K. E. 1974. "Uses and Gratifications: A Paradigm Outlined." In Jay G. Blumler and Elihu Katz (eds.) *The Uses of Mass Communications: Current Perspectives on Gratifications Research*. pp. 269-286. Beverly Hills, CA: Sage.
- Rubin, A. M. 2002. "The Uses-And-Gratifications Perspective of Media Effects." In J. Bryant and D. Zillmann (eds.) *Media Effects: Advances in Theory and Research*. 2nd ed. pp. 525-548. Mahwah, NJ: Lawrence Erlbaum.
- Rubinstein, Ariel. 1989. "The Electronic Mail Game: Strategic Behavior Under 'Almost Common Knowledge.'" *American Economic Review* 79 (3): 385-391.
- Rumelhart, David E., James L. McClelland, and the PDP Research Group. 1986. *Parallel Distributed Processing: Explorations in the Microstructure of Cognition: Volume 1*. Cambridge, MA: MIT Press/Bradford.
- Sally, David. 2002. "'What an Ugly Baby!': Risk Dominance, Sympathy, and the Coordination of Meaning" *Rationality and Society* 14 (1): 78-108.
- Sambanis, Nicholas. 2001. "Do Ethnic and Nonethnic Civil Wars Have the Same Causes: A Theoretical and Empirical Inquiry." *Journal of Conflict Resolution* 45 (3): 259-282.
- Sambanis, Nicholas. 2004. "What Is Civil War? Conceptual and Empirical Complexities of an Operational Definition." *Journal of Conflict Resolution* 48 (6): 814-858.
- Saussure, Ferdinand de. 1959. *Course in General Linguistics*. New York: McGraw-Hill.
- Schelling, Thomas. 1960. *The Strategy of Conflict*. Harvard University Press.
- Schiffer, Stephen. 1972. *Meaning*. Oxford University Press.
- Schlesinger, Philip. 1991. *Media, State, and Nation: Political Violence and Collective Identities*. London: Sage Publications.
- Schudson, Michael. 1984. *Advertising: The Uneasy Persuasion*. New York: Basic Books.
- Scott, John. 2000. *Social Network Analysis: A Handbook*. 2nd Ed. Newberry Park, CA: Sage.
- Severin, Werner J. and James W. Tankard, Jr. 1992. *Communication Theories: Origins, Methods and Uses in the Mass Media*, 3rd ed. New York: Longman Group, Ltd.
- Servaes, Jan. 1997. "Mass Media and Fragmented Identities." In Jan Servaes and Rico Lie (eds.) *Media and Politics in Transition: Cultural Identity in the Age of Globalization*. Leuven: Acco.

- Silber, Laura and Allan Little. 1997. *Yugoslavia: Death of a Nation*. New York: Penguin Books.
- Skocpol, Theda. 1979. *State and Social Revolutions: A Comparative Analysis of France, Russia, and China*. Cambridge University Press.
- Slantchev, Branislav L. 2006. "Politicians, the Media, and Domestic Audience Costs." *International Studies Quarterly* 50 (2): 445-477.
- Snijders, Tom A.B. 1996. "Stochastic Actor-Oriented Models for Network Change." *Journal of Mathematical Sociology* 21: 149-172.
- Snijders, Tom A.B. 2001. "The Statistical Evaluation of Social Network Dynamics." In M.E. Sobel and M.P. Becker (eds.) *Sociological Methodology*. pp. 361-395. Boston and London: Basil Blackwell.
- Snijders, Tom A.B. 2005. "Models for Longitudinal Network Data." In P. Carrington, J. Scott, and S. Wasserman (eds.) *Models and Methods in Social Network Analysis*. New York: Cambridge University Press.
- Snyder, Jack. 2000. *From Voting to Violence: Democratization and Nationalist Conflict*. New York: W. W. Norton & Company.
- Snyder, Richard and Ravi Bhavnani. 2005. "Diamonds, Blood, and Taxes: A Revenue-Centered Framework for Explaining Political Order." *Journal of Conflict Resolution* 49 (4): 563-597.
- Sperber, Dan. 1996. *Explaining Culture: A Naturalistic Approach*. Oxford: Blackwell.
- Sperber, Dan and Deirdre Wilson. 1986. *Relevance: Communication and Cognition*. Harvard University Press.
- Srbljinovic, Armano, Drazen Penzar, Petra Rodik and Kruno Kardov. 2003. "An Agent-Based Model of Ethnic Mobilisation." *Journal of Artificial Societies and Social Simulation* 6 (1): <<http://jasss.soc.surrey.ac.uk/6/1/1.html>>
- Stamm, Keith R. 1985. *Newspaper Use and Community Ties: Toward a Dynamic Theory*. Norwood, NJ: Ablex.
- Stamm, Keith R. and Lisa Fortini-Campbell. 1983. "The Relationship of Community Ties to Newspaper Use." *Journalism Monographs* 84: 2-27.
- Stamm, Keith R. and Avery M. Guest. 1991. "Communication and Community Integration: An Analysis of the Communication Behavior of Newcomers." *Journalism Quarterly* 68: 644-57.

- Stamm, Keith R. and Robert J. Weis. 1986. "The Newspaper and Community Integration: A Study of Ties to a Local Church Community." *Communication Research* 13: 125.
- Stocker, Rob, David G. Green and David Newth. 2001. "Consensus and cohesion in simulated social networks." *Journal of Artificial Societies and Social Simulation* 4 (4): <<http://www.soc.surrey.ac.uk/JASSS/4/4/5.html>>
- Strömberg, David. 2001. "Mass Media and Public Policy." *European Economic Review* 45 (4): 652-63.
- Strömberg, David. 2004. "Radio's Impact on Public Spending." *Quarterly Journal of Economics* 119 (1): 189-221.
- Tajfel, Henri and John. C. Turner. 1979. "An Integrative Theory of Intergroup Conflict." In William G. Austin & Stephan Worchel (eds.), *The Social Psychology of Intergroup Relations*. Monterey: Brooks/Cole.
- Tajfel, Henri. 1981. *Human Groups and Social Categories: Studies in Social Psychology*. Cambridge: Cambridge University Press.
- Tajfel, Henri. 1982. "Social Psychology of Intergroup Relations." *Annual Review of Psychology* 33 (1): 1-39.
- Tajfel, Henri and John. C. Turner. 1986. "The Social Identity Theory of Intergroup Behaviour." In Stephan Worchel and William G. Austin (eds.), *Psychology and Intergroup Relations*. Chicago: Nelson/Hall.
- Tambiah, Stanley. 1997. *Leveling Crowds: Ethnonationalist Conflicts and Collective Violence in South Asia*. University of California Press.
- Taylor, Charles. 1971. "Interpretation and the Sciences of Man." Review of *Metaphysics* 25: 3-51.
- Terhune, Kenneth W. 1964. "Nationalism among Foreign and American Students: An Exploratory Study." *Journal of Conflict Resolution* 8: 256-270.
- Thompson, Mark. 1999. *Forging War: The Media in Serbia, Croatia, and Bosnia-Herzegovina*. London, UK: Article 19.
- Tilly, Charles. 1993. *European Revolutions, 1492-1992*. Oxford: Blackwell.
- Tomz, Michael, Jason Wittenberg, and Gary King. 2003. CLARIFY: Software for Interpreting and Presenting Statistical Results. Version 2.1. Stanford University, University of Wisconsin, and Harvard University. January 5. Available at <http://gking.harvard.edu/>
- Transue, John E. 2007. "Identity Salience, Identity Acceptance, and Racial Policy Attitudes: American National Identity as a Uniting Force." *American Journal of Political Science* 51 (1): 78-91.

- Tsfati, Yariv. 2003. "Media Skepticism and Climate of Opinion Perception." *International Journal of Public Opinion Research* 15 (1): 65-82.
- Tsfati, Y., and Cappella, J. N. 2003. "Do People Watch What They Do Not Trust? Exploring the Association Between News Media Skepticism and Exposure." *Communication Research* 30: 504-529.
- Turner, John C. 1985. "Social Categorization and the Self-Concept: A Social Cognitive Theory of Group Behavior." *Advances in Group Processes* 2: 77-122.
- Turner, John C. 1987. *Rediscovering the Social Group: A Self-Categorization Theory*. New York: Basil Blackwell.
- Turner, John C., Penelope J. Oakes, S. Alexander Haslam, and Craig McGarty. 1994. "Self and Collective: Cognition and Social Context." *Personality and Social Psychology Bulletin* 20 (5): 454-63.
- Upal, M. Afzal. 2005. "Simulating the Emergence of New Religious Movements." *Journal of Artificial Societies and Social Simulation* 8 (1): <<http://jasss.soc.surrey.ac.uk/8/1/6.html>>
- Van Belle, Douglas. 1997. "Press Freedom and the Democratic Peace." *Journal of Peace Research* 34 (4): 405-414.
- Verdery, Katherine. 1999. *The Political Lives of Dead Bodies: Reburial and Postsocialist Change*. New York: Columbia University Press.
- Waltz, Kenneth. 1979. *Theory of International Politics*. Reading, MA: Addison-Wesley.
- Wasserman, Stanley and Katherine Faust. 1994. *Social Network Analysis: Methods and Applications*. Cambridge University Press.
- Watts, Duncan J. and Steven H. Strogatz. 1998. "Collective Dynamics of 'Small-World' Networks." *Nature* 393 (6684): 440-442.
- Weeden, Lisa. 2002. "Conceptualizing Culture: Possibilities for Political Science." *American Political Science Review* 96 (4): 713-728.
- Weinstein, Jeremy M. 2005. "Resources and the Information Problem in Rebel Recruitment." *Journal of Conflict Resolution* 49 (4): 598-624.
- Wendt, Alexander. 1999. *Social Theory of International Politics*. Cambridge University Press.

- Wertsch, James V. 1991. "A Sociocultural Approach to Socially Shared Cognition." In Lauren B. Resnick, John M. Levine, and Stephanie D. Teasley (eds.) *Perspectives on Socially Shared Cognition*. Washington, DC: American Psychological Association.
- Wheeler, Scott. 2005. "It Pays to Be Popular: a Study of Civilian Assistance and Guerilla Warfare." *Journal of Artificial Societies and Social Simulation* 8 (4): <<http://jasss.soc.surrey.ac.uk/8/4/9.html>>
- Wickham-Crowley, Timothy P. 1997. "Structural Theories of Revolution." In John Foran (ed.) *Theorizing Revolutions*. New York: Routledge. pp. 38-72.
- Windrum, Paul, Fagiolo, Giorgio and Moneta, Alessio. 2007. "Empirical Validation of Agent-Based Models: Alternatives and Prospects." *Journal of Artificial Societies and Social Simulation* 10 (2): <<http://jasss.soc.surrey.ac.uk/10/2/8.html>>.
- Wittgenstein, Ludwig. 2001[1953]. *Philosophical Investigations*. G.E.M. Anscombe (trans.). 3rd edition. Malden, MA: Blackwell Publishing.
- Wood, Elisabeth Jean. 2003. *Insurgent Collective Action and Civil War in El Salvador*. Cambridge University Press.
- Woodward, Susan. 1995. *Balkan Tragedy: Chaos and Dissolution After the Cold War*. Washington, D. C.: The Brookings Institution.
- World Bank. 2004. *World Development Indicators*, data file, Washington D.C.
- Zaller, John R. 1992. *The Nature and Origins of Mass Opinion*. Cambridge: Cambridge University Press.

## **Biography**

T. Camber Warren was born on June 16, 1980 in Rochester, NY. After growing up primarily on the West Coast he returned to the University of Rochester for his bachelor's degree, where he graduated magna cum laude with honors with a Bachelor of Arts degree in Political Science (2002). Camber then went on to enter the Ph.D. program in Political Science at Duke University. In his time at Duke, he has won a James B. Duke Fellowship (2002-2007), a Katherine Stern Dissertation Fellowship (2007-2008), a Triangle Institute for Security Studies / Carnegie Foundation Summer Research Grant (2004), and has received two honorable mentions for the National Science Foundation Graduate Research Fellowship (2003 & 2004). He is receiving his Ph.D. in Political Science from Duke University in the spring of 2008 and is appointed as a Postdoctoral Research Associate at the Niehaus Center for Globalization and Governance at Princeton University for the 2008-2009 academic year.