

**A network-based study of ideological conflict in public policy and  
global governance**

by

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This thesis consists of material all of which I authored or co-authored: see Statement of Contributions included in the thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

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## Statement of contributions

Jinelle Piereder was the sole author for Chapters 1, 2, 4, and 5, which were written under the supervision of Dr. Thomas Homer-Dixon and not for direct publication.

Chapter 3 (or Article #2) of this dissertation is an expanded version of a published book chapter entitled “Ideology and Climate Change: A complex reflexive systems approach to energy transition discourse networks.” This chapter was co-authored by Dr. Scott Janzwood and Dr. Thomas Homer-Dixon and published in *The Routledge Handbook of Ideology and International Relations* (2023). Following the guidelines set forth by the University of Waterloo, this work is predominantly comprised of my intellectual contribution. The contribution of each author was: conceptualization (JP 60%; SJ 20%; THD 20%); research (JP 90%; SJ 10% ;THD 0%); analysis (JP 90%; SJ 10%; THD 0%); writing (JP 70%; SJ 30%; THD 0%).

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## Abstract

Humanity's ability to deal with its vast array of challenges depends on its capacity to understand how ideologies and worldviews inform and interact with decision-making processes. Once relegated to dusty library shelves, and declared “dead” at least twice, ideology seems to be more relevant to global politics than ever. Ideology plays a crucial role in how societies understand, frame, and attempt to solve collective problems; but when viewed as just a unidimensional phenomenon comprised of a few “big isms,” much of ideology’s causal influence/impact gets obscured. Further, existing scholarship tends to study ideology as primarily an individual-level or society-level phenomenon, setting aside questions about social context in the first instance and questions about the inner workings of the mind in the second instance.

This paper-based dissertation contributes to the existing scholarship on ideology by (1) synthesizing over a decade’s worth of efforts to map the multidisciplinary field of ideology studies, and (2) by developing a novel framework—grounded in a complexity ontology—to analyze the interconnections between ideologies, discourses, and social networks. Together, the three articles in this dissertation deepen our understanding of how ideologies shape and are shaped by the social and discourse networks in which they are embedded. By studying the role of these interacting elements in multiple governance contexts, the dissertation further shows how and why ideology matters across policymaking scales and spheres of influence.

The main goal of Article #1 is to provide a comprehensive look at the many different ways that ideology is conceptualized, understood, and studied. Building on several major mapping efforts, this chapter synthesizes the field of ideology studies using an Ideology Research Matrix comprised of three dimensions: the methodological approaches used, the underlying ontological commitments of scholars, and the typical research goals and designs that accompany those methods and commitments. After engaging systematically with the literature via the Matrix, the paper discusses the problems with current

approaches to ideology, especially around the particularly difficult challenge of studying ideological change. The paper calls for a more integrated approach and makes the case for a complex reflexive systems approach to conceptualizing and studying ideology. It fleshes out the details and benefits of a complexity ontology in this context, particularly around linking causation and social context through identifying feedback loops across social and discursive scales. Grounded in this much-needed complex systems shift, this article presents a new conceptual framework of trans-scalar ideological networks—and a proposed methodology that uses networks as both metaphor and modelling tool—that integrates the perspectives of existing ideology scholarship and moves forward our understanding of ideological change.

In Article #2, my co-authors and I operationalize the framework developed in Article #1 using a case study of energy transition discourse in Canadian Parliamentary proceedings. Skepticism about Canada's ability to meet its Paris Agreement targets, anxieties over economic and energy security, and major concerns about the impact of an energy transition on key vulnerable or marginalized communities have all led to a wide range of ideologically charged priorities for addressing the climate crisis and distributing the costs/benefits of energy transition. This chapter presents the first operationalization of the trans-scalar ideological networks framework, focusing on the energy transition discourse. The article first examines existing literature related to ideology and climate change, identifying gaps where it can contribute. It then argues that tracing "how and why ideological discourses have the influence they do" is both more difficult and more important in non-polarized contexts, as ideological conflict and influence are still at play in more subtle ways that are not well-captured by existing methods. As the ideological differences between groups advancing different goals, priorities, and policies become less pronounced (e.g., between climate change "believers" and "deniers"), the task of tracing or measuring "how and why ideological discourses have the influence they do" becomes more nuanced and difficult, but just as important. Using my framework, the chapter demonstrates a multi-directional approach to studying ideology: first outside-in (using Discourse Network Analysis), then inside-out (using Cognitive-Affective Mapping). The chapter identifies several emergent ideological "camps" and dives deeper into

“representative actors” from each camp and examines their ideologies from the inside-out, using CAM. Overall, the paper supports my claim that ideological heterogeneity—just as much as ideological polarization—matters for how ideology influences decision-making.

Article #3 examines a second case study, civil society advocacy efforts leading to the 2013 Arms Trade Treaty (ATT). The chapter operationalizes the trans-scalar ideological networks framework to study the ATT, making the case that multi-scale approaches are especially useful in studying these complex international advocacy spaces where ideology helps shape governance outcomes. In the more narrative-based section, the chapter describes the post-Cold War background of arms control advocacy, as well as the key actors and events that led to the ATT being proposed and eventually passed. It demonstrates and explores the ideologies of four key organizations using CAM and compares insights across the four CAMs generated. It also maps the broader issue network using social network analysis (the outside-in approach) and analyzes how the CAM insights inform/explain some aspects of the network structure. Compared to Article #2, this article offers another way to operationalize the trans-scalar ideological networks framework, showing that the framework is well-suited to more "established" cases in addition to more "active" ones (like the energy transition discourse case). Finally, the chapter argues that new developments in ideology studies—including my trans-scalar ideological networks framework—can help address many of the challenges that other ideationally-focused sub-disciplines face, especially around the supposed "belief vs. strategy" dichotomy.

## Acknowledgements

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For my father, Michael L. Piereder (Feb. 28, 1960 - Oct. 3, 2023)

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## List of Acronyms

ATT	Arms Trade Treaty
ACF	Advocacy Coalition Framework
ASD	Aerospace Security and Defence Industries Association of Europe
BASIC	British American Security Information Council
CAC	Control Arms Campaign/Coalition
CAAT	Campaign Against Arms Trade
CAN-Rac	Climate Action Network Canada
CAM	Cognitive-Affective Mapping/Map
CAPP	Canadian Association for Petroleum Producers
CAS	Complex Adaptive Systems
CCW	Convention on Certain Conventional Weapons
CLC	Canadian Labour Congress
CRS	Complex Reflexive Systems
CPP	Canadian Pension Plan
CPPIB	Canadian Pension Plan Investment Board
DNA	Discourse Network Analysis
DSAAC	Defense Small Arms Advisory Council
ENAAAT	European Network Against Arms Trade
ESG	Environmental Social Governance
GHG	Greenhouse Gas Emissions
IALANA	International Association of Lawyers against Nuclear Arms
IANSAs	International Action Network on Small Arms
ICBL	International Campaign to Ban Land Mines
INUS	“Insufficient but Necessary part of a condition which is itself Unnecessary but Sufficient for the result”
IPB	International Peace Bureau
IPPNW	International Physicians for the Prevention of Nuclear War
IR	International Relations
NGO	Non-Governmental Organization
NRA	National Rifle Association

NRA-ILA	National Rifle Association of America Institute for Legislative Action
PoA	Programme of Action
RDT	Resource Dependency Theory
RWA	Right-Wing Authoritarianism
SALW	Small Arms and Light Weapons
SAAMI	Sporting Arms and Ammunition Manufacturers Institute
SDO	Social Dominance Orientation
SNA	Social Network Analysis
STAF	Stop The Arms Fair
TNGO	Transnational Non-Governmental Organization
TAN	Transnational Advocacy Network
UN	United Nations
UN ECOSOC	United Nations Economic and Social Council
UNFCCC	United Nations Framework Convention on Climate Change
UNIDIR	United Nations
UNDP	United Nations Development Programme
UNODA	United Nations Office of Disarmament Affairs
UNODC	United Nations Office on Drugs and Crime
UK	United Kingdom
US	United States
WILPF	Women's International League for Peace and Freedom
WFSA	World Forum on the Future of Sport Shooting Activities

# Chapter 1: Introduction

Humanity's ability to deal with its vast array of challenges depends on its capacity to understand how worldviews and ideologies at the level of individuals interact with policymaking and governance processes at the level of groups. As a socio-psychological tool that helps us make sense of and act politically in the world, ideology can serve valuable purposes, for instance by conferring group identity and enabling coordinated action. But in our societies, entrenched ideological disagreements often worsen political polarization, contribute to political gridlock, impede informed debate, and ultimately make it harder to address critical problems. A superficial understanding of ideology's causal role leaves us in the dark as to how to deal with challenges, such as climate change, where ideological commitments are powerful.

However, existing scholarship tends to study ideology as primarily an individual-level *or* society-level phenomenon, setting aside questions about social context in the first instance, and questions about the inner workings of the mind in the second instance. But by ignoring the complex interactions *between* cognitive, psychological, social, and political systems, ideology researchers too often talk past each other, thereby missing out on potentially crucial interdisciplinary insights. I argue that a systems-based approach—one that reflects the coevolutionary dynamics between ideologies, individuals, discourse, and social networks—offers a way forward.

Drawing on a complex systems-based understanding of ideology, insights from network theory, and new multidisciplinary tools for ideological analysis, my dissertation builds a novel framework for studying ideology across scales and employs this framework in two case studies related to global governance challenges: climate change and the arms trade. My approach not only offers explanatory value in these two specific cases, but also opens pathways to resolving long-standing debates in the social sciences about 'belief' vs. 'strategy,' affinity vs. power-seeking, and ideas vs. interests. By nature, as my

framework demonstrates, ideology sits between and above these dichotomies, and we can better understand and explain their real impacts using the lens of cross-scalar ideological networks.

This dissertation contains an introduction, three articles, and a conclusion. In the remainder of the introduction, I establish the historical and analytical context for studying ideology in global politics, summarize the main contributions of each article, and provide a brief overview of the structure of this dissertation.

## **1.1 Ideology's rough road**

Ideology has had a bumpy history in the social and political sciences. The concept, Michael Freedman reminds us, “has been pronounced dead—twice!—and resurrected—twice!”<sup>1</sup> As political psychologist John Jost (2006) chronicles, the scholars who promoted an “end-of ideology” thesis following World War II were so successful that social science research on ideology virtually stopped for decades. These “end-of-ideologists,” as Jost refers to them, claimed that ideological distinctions were not really meaningful for ordinary citizens because: 1) people’s political attitudes are not coherent or consistent enough to “count” as an ideology, 2) ideological appeals do not move most people to action so are unimportant for studying political behaviour, 3) there are no major differences between liberal and conservative ideologies (in the United States) anyway, 4) nor are there substantive psychological differences between people on the political left versus right. All these arguments have since been refuted—particularly the psychological claims—in part because of advances in data collection and new methodologies, but also because the definitions and theories of ideology have broadened in useful ways. For example, in his latest book, Leader Maynard takes to task what he calls the “true believer model” of ideology, which is premised on the assumption that 1) ideologies are well-developed and tightly structured systems of belief that 2) prescribe specific political goals and articulate some vision for an “ideal society,” and that 3) the efficacy of ideologies is rooted in its’ adherents strong commitment to

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<sup>1</sup> Freedman 2021, 12.

those beliefs and goals. Leader Maynard demonstrates the inability of this “true believer model” to accurately capture anything that resembles real political life, since “ideas do not only matter when people deeply believe in them.”<sup>2</sup>

Still, between this “deadening impact” of the end-of-ideologists, along with the critical origins of the study of ideology in the first place, the pejorative and even weaponized use of the term throughout the social upheavals during the 1960s and 1970s, *and* the sudden and surprising collapse of the Soviet Union and implosion of communism in the 1990s—it is no wonder that the concept of ideology has a lot of baggage!

### *1.1.1 Rehabilitating Ideology*

Recently, leading political theorist, Michael Freeden, chronicled the challenges of establishing the *Journal of Political Ideologies* in the early days of the concept’s rehabilitation. The journal’s founders aimed to “insist on a space between *Ideologiekritik* and positivist, attitudinal political science.”<sup>3</sup> In his latest book, Freeden describes—in his always-eloquent style—how difficult it was

[...] to legitimate and breathe life into an area of studies still regarded with suspicion by academics, still squeezed in between the conventional approaches to political theory of political philosophy and the history of political thought, still tainted with the derogatory brushes of inauthenticity and manipulation, still dismissed as an obfuscating epiphenomenon that had to be cleared away before a proper understanding of society could emerge. But the battle recommenced.<sup>4</sup>

Freeden and his collaborators sought to “focus on analyzing and understanding ideologies irrespective of their moral and social values,” rather than have their journal serve as a soapbox for scholars to promote

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<sup>2</sup> Leader Maynard 2022, 23.

<sup>3</sup> Freeden 2021, 79.

<sup>4</sup> Ibid.

particular ideological positions.<sup>5</sup> For him, the “heart” of this emerging subfield had to be about the “continuous, fluctuating competition over voice and public policy.”<sup>6</sup>

Since the late 1990s, we have seen a gradual—though fragmented—rehabilitation of ideology as an analytical category worth our attention. At the same time as the constructivist turn in IR, scholars from several other disciplines<sup>7</sup> shifted beyond a narrow focus on the big “isms,” (e.g., liberalism, fascism, communism, etc.), beyond the pejorative baggage of the concept, and instead began to reengage with ideology as a factor that simultaneously shapes institutions, discourse, and power relations.<sup>8</sup>

The study of ideology—along with similar concepts such as belief systems and worldviews—has found its way into dozens of subfields across the social, psychological, and cognitive sciences, and in each case, taking on the ontological, epistemological, and methodological commitments of the scholars in those intellectual/academic traditions. The consequences of this spread meant that most approaches to studying ideology spoke past each other, by focusing on *either* phenomena within the individual<sup>9</sup> *or* social phenomena involving ideology as a means of contestation and/or legitimation of power relations.<sup>10</sup> In Paper #1, I systematically tease out these different commitments, constructing what I call an Ideology Research Matrix. The goal of the first half of the article is to surface these commitments and assumptions, which often remain implicit in most scholars’ writing about ideology, so that researchers who study this phenomenon can better communicate across disciplinary (and other) divides. This surfacing exercise, I

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<sup>5</sup> Ibid.

<sup>6</sup> Ibid., 80.

<sup>7</sup> Leader Maynard highlights the following disciplines and academic work: political theory (Freeden 1996.), intellectual history (Tully 1983; Skinner 2002, vol. 1.), political psychology (Rosenberg 1988; Jost and Major 2001; Jost, Kay, and Thorisdottir 2009; Haidt, Graham, and Joseph 2009.), discourse analysis (Howarth, Norval, and Stavrakakis 2000; Fairclough 2010.), political science (Knight 2006; Carmines and D’Amico 2015.), sociology (Boudon 1989.), and social and cultural studies (Eagleton 1991; Hall 1996; Shelby 2003.).

<sup>8</sup> Mock, S. and Homer-Dixon, T. (2015) The Ideological Conflict Project: Theoretical and Methodological Foundations. *CIGI Publications*, July 2015 (<http://ideologicalchange.org/theoretical-and-methodological-foundations/>).

<sup>9</sup> Such as those focusing on brain physiology (Amodio et al. 2007; Kanai et al. 2011; Chiao et al. 2009.) and socio-psychological factors (Jost, Kay, and Thorisdottir 2009; Haidt 2001; Haidt 2007; Haidt 2012; Greenberg et al. 1990.); see also Michael Freeden’s “morphological” approach regarding the internal structure of ideologies (Freeden 1996; Freeden 2003.).

<sup>10</sup> Such as critical discourse analysis (Fairclough 2001; Fairclough 2010; van Dijk 1995; van Dijk 2000a.) and poststructural approaches (Zizek 1994; Laclau 1997; Norval 2000.).

think, is a critical step if we are to bring any sort of coherence to this wide-ranging field. In the second half of Paper #1, I attempt to reconcile some of the strengths and weaknesses of existing approaches to studying ideology by developing a conceptual framework grounded in complex systems theory. In doing so, I aim to expand that “space between” that Freeden describes. The framework also brings a new level of empiricity/granularity to studying how ideologies interact with the societies and social networks in which they are embedded.

Overall, I consider this dissertation as part of what Leader Maynard calls a “neo-ideological” research agenda. The approach, he argues, rejects the traditional “ideology as hegemony” thesis, and instead emphasizes within-case ideological heterogeneity, change over time, and the “ordinary nature of ideological thinking.” In Paper #2, I engage deeply with ideological heterogeneity in a case study of energy transition discourse within Canadian Parliament. A key goal of the paper was to identify *emerging* clusters of ideological similarity based on actual discourse and arguments, rather than political party affiliation, self-identification scales, or even typical ideological families.

Further, this neo-ideological approach emphasizes the “multiple forms of internalized and structural influence” of ideology, and its relationship to and role within other concerns and types of thinking—strategic, interest-based, “rational”—that have historically been positioned as ideology’s opposite.<sup>11</sup> In all areas of political life—including at the scale of global governance—ideologies matter because they operate from both the “inside-out” and the “outside-in,” simultaneously. Or, as Leader Maynard puts it, “ideologies influence political behaviour both through sincere acceptance of their constituent ideas and through forms of social pressure *and* instrumental incentives that are created when ideologies become embedded in social norms and institutions.”<sup>12</sup> (emphasis in original) I demonstrate this interdependence and interrelatedness between ideology and strategy in Paper #3, tracing the dynamics among transnational advocacy networks campaigning for and against an international Arms Trade Treaty.

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<sup>11</sup> Leader Maynard 2022, 51–52.

<sup>12</sup> *Ibid.*, 23.



Among several insights, the case illustrates to co-evolving nature of ideologies and social networks over time, and the role of both internalized and structural ideological influence on political outcomes.

### *1.1.2 Ideology vs. Other Similar Concepts*

#### *Belief Systems*

As I emphasize repeatedly throughout this dissertation, ideology—in my view—goes beyond the “big isms,” beyond just political parties, and beyond a simple left-right spectrum. I define ideology as *a system of ideas, beliefs, and emotions, held in the minds of individuals but shared by or attributed to members of groups, that shapes political outlook and guides behaviour*. I sometimes use the term *belief system* interchangeably with ideology, particularly when I want to avoid invoking the left-right spectrum that is so prevalent. But when I use the term, I am also referring to more than just ‘beliefs’ because I also include ideas, concepts, norms, values, and emotions or affect in the notion of a “belief system.”

#### *Worldviews*

However, I also find great resonance with the concept of *worldview*. Johnson et al. (2011), for example, develop a psychological framework of worldview as a way to integrate the study of culture and religion. They define worldview as “the socially constructed realities which humans use to frame perception and experience” (drawing on Redfield, 1952), and propose six comprising aspects:

- *Ontology*: including existential beliefs and beliefs about who or what is in the world (they also include theology, cosmology, and the nature of the self in this category);
- *Epistemology*: “what can be known and how one should reason”;
- *Semiotics*: “language and symbols used to describe the world”; symbols, gestures, and language used to conceptualize and describe the world; time, space, and meaning;
- *Axiology*: “proximate goals, values, and morals” (they include beliefs about human action, about good and evil, and about change);

- *Teleology*: “ultimate goals and the afterlife consequences of action” (these are predicated on beliefs about origins, or cosmology);
- *Praxeology*: “proscriptions and prescriptions for behavior”; social norms and sanctions in a community, informed by the foregoing beliefs, values, and ultimate goals.

Much of this framework aligns with how I think about ideology, but because I lean on a more conceptual approach to map real-world ideologies, I focus more on semiotics, axiology, and praxeology than on the other three components.

### Religion

Of course, elements of ideology also overlap with elements of culture, and of religion. Regarding religion, Johnson et al. (2001) state: “Although not everyone has a ‘religion’, every individual (e.g. a humanist, a secularist, etc.) has some particular, systematic understanding of what is, what can be known, what is valued, what ought to be ultimate goals, and how to act.”<sup>13</sup> This distinction captures a key part of my own argument about the nature of ideology. Although not everyone proclaims an Ideology (with an upper-case ‘I’), every individual has an ideology (with a lower-case ‘i’) in that they have a system of ideas, beliefs, and emotions about “what is, what can be known, what is valued, what ought to be ultimate goals, and how to act.” However (and unfortunately), there is a long history in social science and social theory of equating ideology and religion. In the Marxist tradition, the pejorative labels of “false consciousness” or “oppression-legitimizing systems” are often equally applied to both concepts. Gramscian approaches tend to focus instead on the counter-hegemonic potential of religion, but still equate religion and ideology. In the functionalist tradition, following Durkeim, ideology and religion are “essentially analogous in their expression and manifestation.”<sup>14</sup> One benefit of the broader, non-pejorative definition of ideology that I use in this dissertation is that it more effectively *avoids* this kind of conflation with religion. Still, there cases where it may be important to analyze the two phenomena together. Bettiza (2023), for instance, argues that “while religion should not be understood *as ideology* it can and does

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<sup>13</sup> Johnson, Hill, and Cohen 2011, 140.

<sup>14</sup> Bettiza 2022, 198.

*become ideological*” to varying degrees, depending on strength and depth of their connections to religious structures and theologies.<sup>15</sup>

### Power

While I use a non-pejorative approach in defining and studying ideology, the term/concept nonetheless emerged from work on class struggle, power, and domination (by Marx, then Gramsci, and later, Lukes). Gramsci’s work on hegemony led to a kind of coupling of the concept of ideology with domination and power, where the ruling elite’s (or bourgeoisie’s) control over the “ideological apparatuses” of society ensured the compliance/consent of the masses. As mentioned above, neo-ideological approaches reject this “ideology as hegemony” thesis, in part because they think there are much more interesting things to say and study about ideology. From another direction, this “ruling elite model” came under fire during the “pluralist turn” in American political science during the 1960s, in part because scholars believed there were much more interesting things to say and study about power.<sup>16</sup>

For IR scholars, the source text on relational power comes from Dahl, who argued that “A has power over B to the extent that s/he can get B to do something that B would not otherwise do.”<sup>17</sup> His concept focuses on *decision-making processes*, and hinges on (1) the intentionality of A’s action and B’s response, (2) a conflict of preferences/interests between A and B, and (3) A’s use of material and ideational resources to compel/coerce B.<sup>18</sup> Dahl’s pluralist theory was also grounded in the behaviourist turn, and more or less rejected the Marxian and Gramscian notions of a “ruling elite class” holding virtually all the power in a society. Dahl’s book sparked the “faces of power” debates<sup>19</sup>, including

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<sup>15</sup> Ibid., 197.

<sup>16</sup> One of the earliest key considerations regarding a definition or approach to power was whether we should understand it primarily as *capacity* (i.e., the possession of resources that can potentially be used to influence others), or as *relation* (i.e., power exists only when it is exercised within a specific interaction). Originally defined by Max Weber, this distinction between “power to” versus “power over” spurred multiple generations of power theorists across the social sciences but especially in International Relations (IR).

<sup>17</sup> Robert Dahl (1957), “The Concept of Power,” *Behavioral Science*, Vol. 2(3), 202-203.

<sup>18</sup> Michael Barnett and Raymond Duvall (2005), “Power in International Politics,” *International Organization*, Vol. 59(Winter), 49.

<sup>19</sup> Using the familiar metaphor of billiard balls, Pritchard and Sanderson (2001), describe these three dimensions or faces of power this way: the first face (Dahl’s) is the standard billiard ball model, the second face (Bachrach and Baratz) is about “adding or moving bumpers and pockets” on the billiard ball table, and the third face (Lukes) is about “tilting and warping the table.” (p. 154) Pritchard and Sanderson 2002, 154.

Bachrach and Baratz's (1962) "second face"—A's power in *non-decision-making*, or more directly, agenda-setting (and vetting) to steer or limit the scope of consideration to issues that are in or not harmful to A's interests; and Lukes' "third face"—A's power in preventing conflict of interest by *shaping B's preferences/interests* themselves. By proposing his "third face" of power, Lukes argued that students of power also "need to attend to those aspects of power that are least accessible to observation: that, indeed, power is at its most effective when least observable." For Lukes, the core question for students of power was "how is willing compliance to domination secured?" The answer, he argued, must include recognition of the

[...] power to prevent people, to whatever degree, from having grievances by shaping their perceptions, cognitions, and preferences in such a way that they accept their role in the existing order of things, either because they can see or imagine no alternative to it, or because they see it as natural or unchangeable, or because they value it as divinely ordained and beneficial.<sup>20</sup>

Critics of Lukes' expansion of the concept of power to include preference-shaping argue that, in doing so, Lukes opens the Pandora's box of having to distinguish between perceived and "real" interests *and* that he "resurrects the spectre of false consciousness which many had thought exorcised from contemporary social and political theory."<sup>21</sup> For example, Hay's (1997) response usefully illustrates just how tainted the concept of ideology had become at the time:

The problem with such a formulation is the deeply condescending conception of the social subject as an ideological dupe that it conjures up. Not only is this wretched individual incapable of perceiving her/his true interests, pacified as s/he is by the hallucinogenic effects of bourgeois indoctrination. But rising above the ideological mists

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<sup>20</sup> Lukes 2004, 24.

<sup>21</sup> Hay 1997, 48.

which tame the masses is the enlightened academic who from his/her high perch in the ivory tower may look down to discern the genuine interests of those not similarly blessed.<sup>22</sup>

The sarcasm is almost audible and the eyerolls nearly visible.

Lukes admits that this third dimension of power *does* raise serious difficulties for analyzing power relations but insists that they “do not require us to consign the three-dimensional view of power to the realm of the merely metaphysical or the merely ideological. [...] a deeper analysis of power relations is possible.”<sup>23</sup> In a second (and greatly expanded) publishing of his book in 2004, Lukes responds directly to Hays’ critique this way: “‘False consciousness’ is an expression that carries a heavy weight of unwelcome historical baggage. But that weight can be removed if one understands it to refer, not to the arrogant assertion of a privileged access to *truths* presumed unavailable to others, but rather to a cognitive power of considerable significance and scope: namely, *the power to mislead*.”<sup>24</sup>

Power is intimately linked to ideology because it is in ideology that we know (or come to know) what we value and how we want to organize social life. And it is only what we value that can be transformed—if we allow it to be, or build institutions, technologies, or relations that facilitate it to be—into a basis or source of power. Furthermore, Leader Maynard explains that in both Critical Discourse Analysis and post-structural approaches to ideology, “Discourse is entangled with power-relations, both in that it is shaped by power...and is a medium of exercising power. On both counts, discourse is entangled with ideology. Such socially shared systems of ideas communicated through language affect, and are produced by, discourse.”<sup>25</sup> So, for many ideology scholars, the concept is still tightly coupled with power dynamics; but it would be a disservice to both concepts to conflate them in either our analysis or our critique.

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<sup>22</sup> Ibid.

<sup>23</sup> Lukes 2004, 59.

<sup>24</sup> Ibid., 149.

<sup>25</sup> Leader Maynard 2013, 305.

### Strategy

Related to some of the discussions about ideology and power and/or religion, traditional arguments about ideology as distortion or ideology as only a tool of the elite also rest on a dichotomy with a faulty premise: that ideology is silent on strategy and that strategy is deaf to ideology. As Leader Maynard points out,

Even famously doctrinaire ideologues such as Vladimir Lenin, Mao Zedong or Osama bin Laden devoted tremendous intellectual attention to practical strategy in their writings. Such strategic consideration was not a ‘sacrifice’ of their ideological precepts, but *a core part of their ideological thought*.<sup>26</sup>

A further false dichotomy is that political actors are motivated by *either* ideology *or* supposedly unideological reasons like external pressures, opportunism, or self-interest.<sup>27</sup> As the following section shows, ideological and strategic or interest-based motives are nearly always intertwined. The next section considers the advancements made in ideology studies alongside the broader “ideational turn” in political science.

## **1.2 Parallel travellers**

Epistemologically, the post-Cold War period marked an important evolution from positivist political science—which emphasized behaviouralism, general laws, and the objective existence of threats—to more “reflectivist,” social constructivist, interpretivist and critical approaches. The “ideational turn,” in particular, led to an explosion of new methodological approaches for studying when/how/why norms, ideas, and beliefs matter in global politics for non-state or sub-state actors—from Peter Hall’s

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<sup>26</sup> Leader Maynard 2022, 33.

<sup>27</sup> *Ibid.*, 30.

“policy paradigms”<sup>28</sup> and Sabatier and Jenkins-Smith’s Advocacy Coalition Framework (ACF)<sup>29</sup>, to Keck and Sikkink’s “boomerang model” of Transnational Advocacy Networks (TAN)<sup>30</sup>, Critical Discourse Analysis (CDA), Social Movement studies, and many others. But ideology, with all its conceptual baggage still in hand, was largely absent from this ideational turn. The *ideational* phenomena that were deemed relevant included things like identity, culture, frames<sup>31</sup>, regimes<sup>32</sup>, and norms<sup>33</sup> and “norm entrepreneurs,”<sup>34</sup> —*not* ideology.<sup>35</sup>

Curiously, students of ideology, of advocacy coalitions, social movements, and policy networks appear to have marched in near-parallel for close to three decades, often struggling with the same (or similar) key challenges but not benefitting from each other’s advances. In many ways, we share a common sphere of interest: “the ways in which ideas influence politics and political action.”<sup>36</sup> Yet, insights from these different fields have typically remained siloed.

Compare the “true believer vs. strategist” dichotomy within ideology studies to similar ones in other fields. For example, following the massive rise in the activity and visibility of NGOs since the 1990s, scholars sought to understand the motives and behaviour of these actors on the global stage. Two competing accounts emerged. The first explanation emphasizes the role of “principled activism” in NGOs’ efforts to push states to adopt new international norms, often around human rights. Through persuasion and socialization, “NGOs exert a form of normative or ideational power...[that] is not easily captured by interest-based models of behavioural change.”<sup>37</sup> The second explanation, in contrast, argues that an organizational survival motive is at least as important an explanatory factor, especially in the context of a financially competitive and media saturated environment. This second interest-based account

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<sup>28</sup> Hall 1993.

<sup>29</sup> Sabatier and Jenkins-Smith 1993.

<sup>30</sup> Keck and Sikkink 1998.

<sup>31</sup> Oliver and Johnston 2000.

<sup>32</sup> Garcia 2011.

<sup>33</sup> Krause 2001; Bolton and James 2014; Erickson 2013; Laurance 2002; Price 1998.

<sup>34</sup> Goddard 2009.

<sup>35</sup> Leader Maynard 2019.

<sup>36</sup> Oliver and Johnston 2000, 52.

<sup>37</sup> Mitchell and Schmitz 2014, 490.

has often been accompanied by criticism that “resource dependence, financial incentives, government contracting practices, and competition for resources undermine the principled character of TNGOs and cause them to sacrifice their social missions in the pursuit of financial security.”<sup>38</sup>

To overcome this dichotomy and reconcile these two approaches—one constructivist and the other rationalist—Mitchell and Schmitz (2014) offer a third perspective, which they call “principled instrumentalism.” In this view, “organisations instrumentally pursue their principled objectives within the economic constraints and political opportunity structures imposed by their external environments.”<sup>39</sup> Whereas the “principled” view sees *shared values* as the foundation of collaboration, and the “instrumental” view points to collaboration being undercut by *resource competition*, the “principled instrumentalist” perspective argues that NGOs *strategically* form partnerships to improve and broaden their (*principled*) program effectiveness.<sup>40</sup> The argument that NGOs behave in ways that are both self-interested *and* in alignment with their stated principles and goals gets at an important tension that many other research fields have wrestled with for decades. In other words, they are “believers” *and* “strategists.”

We find a second example in the field of policy studies, where the debate has been about whether policy networks<sup>41</sup> form primarily based on shared policy beliefs—as in Advocacy Coalition Framework (ACF)—or access to influence and resources—as in Resource Dependency Theory. In ACF, which aims to explain significant policy change related to highly technical *and* ideologically divisive issues, scholars identify shared *policy core beliefs*—“basic beliefs and preferred policy strategies concerning a specialized policy area”<sup>42</sup>—as the main driver of policy network structure. For them, belief systems are

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<sup>38</sup> Ibid., 489.

<sup>39</sup> Ibid.

<sup>40</sup> Ibid., 492.

<sup>41</sup> Additionally, while there are some emerging systems-like approaches to understanding beliefs in policy networks, beliefs themselves are still treated independently from each other, rather than interdependent and interacting. Furthermore, most of the policy network literature studies policymakers at the domestic level, rather than the transnational advocacy networks that may be trying to influence them.

<sup>42</sup> Henry 2011, 365.



essentially the “glue” that holds policy networks together.<sup>43</sup> But while the ACF identifies “deep core beliefs,” and so-called “secondary aspects,” most studies have set these aside in their evaluations of ideological similarity between policy actors in a policy network. Alternatively, RDT emphasizes the more materialist and strategic nature of actors in a policy network and claims that “collaborative ties are formed primarily around perceived influence” and access to/control over important resources.<sup>44</sup>

In a move similar to that of Mitchell and Schmitz (2014) (and their “principled instrumentalism”), Henry (2011) effectively explains the relationship between “power-seeking relationships” and “ideological similarity” in the formation and structure of agent-based networks by combining insights from ACF and RDT. He finds that,

[...] networks are held together by power-seeking relationships that better enable individual network actors to affect policy change. However, ideological similarity appears to be a necessary condition for power-seeking mechanisms to drive the cohesion of policy networks.<sup>45</sup>

In other words, ideology and strategy both matter. The study brilliantly demonstrates the compatibility of the ACF and RDT—which were previously seen as competing explanations that pit the “ideas” against more “strategic” concerns—finding that “although networking is driven in part by an aversion to ideological rivals (as suggested by the ACF), policy actors tend to form network ties within their ideological groups in a way that maximizes their access to political resources (as suggested by RDT).”<sup>46</sup>

Despite studying rather different areas of political life, each dichotomy or debate in these fields is trying to get at essentially the same question: does belief or power-seeking better explain political action? Or, in more words, to what extent do beliefs override power-seeking—or vice versa—in certain contexts?

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<sup>43</sup> Sabatier 1988; Sabatier and Jenkins-Smith 1993.

<sup>44</sup> Henry 2011, 367; Weible 2005.

<sup>45</sup> Henry 2011, 379.

<sup>46</sup> *Ibid.*, 363.

And for those scholars interested more specifically in advocacy and changemaking, what combination of these things is most likely to be “effective” in pursuing a goal?

Only occasionally have these broad areas of research intersected, offering helpful concepts to borrow—but they have much more to learn/gain from one another. Both case study chapters in this dissertation start to bring these literatures together, first to study energy transition discourse networks in Canada (Paper #2), and then to study the advocacy landscape around the 2012 Arms Trade Treaty (Paper #3).

The next section shifts to laying the groundwork for the framework that I develop in Paper #1.

### **1.3 Complex Adaptive Systems approaches, and three mistakes**

Complexity, or complex systems theory, remains ‘new’ or marginal in most political science research, despite a steady interest in its tools and contributions for nearly thirty years. For some, complexity is an empty ‘buzzword’—which is certainly sometimes the case. But for others, complex systems research represents a fundamental ontological shift away from the mechanistic, Newtonian paradigm that has governed social science for so long. This was certainly true for early advocates of a “complexity turn” in International Relations, who believed that this mechanistic ontology misrepresents the real nature of international politics. Critically, complexity challenges the concepts of “international” and “order,” centres the historical contingency of systems, and offers innovative ways to study politics across “levels” of analysis. While a complexity-oriented research agenda has not yet achieved the paradigmatic breakthroughs that its early advocates imagined, there has been a significant recent increase in complex systems approaches to study global political dynamics and outcomes.

#### *1.3.1 A brief history of complexity*

Drawing insights from a range of scientific traditions as well as older political science work in the cybernetics tradition, early advocates for the conceptualization of the international system as a complex

system saw their work as a conceptual revolution equal in importance to the constructivist and postmodern turns. Complex systems theory fit comfortably into a discipline already sensitive to systems thinking, introducing powerful new conceptions of causality. Proponents of a complexity approach to international relations theory, for instance, suggest that international life, "... is not a cluster of unrelated activities but an interconnected system; (ii) that this is not a simple system, but a complex one; (iii) the interconnectedness between the parts of the system is not unchanging, but constantly self-organizing – that is, it is their capacity to cope with new challenges that makes the system adaptive."<sup>47</sup>

While not a single cohesive theory, complexity science refers to a collection of concepts, principles and tools for studying systems composed of recursive causal connections, that exhibit non-linear and emergent behavior.<sup>48</sup> Based on its root, *complexus*, meaning "braided together," "complexity suggests the 'intricate intertwining or interconnectivity of elements within a system, and between a system and its environment.'"<sup>49</sup> Recognizing a system as complex rather than just complicated or mechanistic allows us to identify behavior and patterns that might otherwise be invisible to us. For living systems, complexity goes even further because of the ability of organisms to adapt to changing environments directed by their internal "rules" or "schemas." A complexity lens emphasizes the relational and interactional nature of systems, highlighting feedback loops and dense causal connections, while paying attention to dynamics of change, adaptation, and emergence.<sup>50</sup>

### *1.3.2 Common problems in applying complexity*

Scholars continue to be drawn to complexity science out of frustration with the analytical limits of their fields. However, there seems to be three major stumbling blocks for social scientists when they apply (or attempt or claim to apply) complexity thinking to their work. I call these the 1) "bundle of concepts problem" (related to cause, constitution, and (in)determinism), 2) the "misplaced normative

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<sup>47</sup> Kavalski 2007., 444.

<sup>48</sup> Homer-Dixon et al. 2013; Homer-Dixon et al. 2014.

<sup>49</sup> Bousquet and Curtis 2011.

<sup>50</sup> Jervis 1997; Bertuglia and Vaio 2005; Scheffer 2009.

judgements problem” (related to is’s and ought’s), and 3) the “inappropriate model selection problem” (related to agency and structure). These matter for lots of reasons but are particularly salient when we engage with critiques about the nature and role of politics and power in complex social systems. Further, these stumbling blocks often hamper critique as well.

The first mistake involves confusing the aspects of complex systems that we can *see* with the internal characteristics and dynamics that generate them. Because there is no overall coherent “complexity theory,” this area of thinking is generally seen as a bundle of related concepts, such as nonlinearity, emergence, and feedback loops. However, within this bundle, properties of complexity that we can *observe* are jumbled together with the underlying *constitutive or causal* properties that lead to those observable effects. This is a problem for many reasons, including the fact that constitutive and causal *explanation* requires attention to different *explanans*.<sup>51</sup> Homer-Dixon calls for teasing out this bundle of concepts. Starting with the observable, or behavioural, properties of complexity, he includes emergence, nonlinearity, multiple equilibriums, sensitivity to initial conditions, unpredictability, path dependency, contingency, and power-law frequency distributions. But the *causes* of those behaviours include connectivity, interactive causation, feedbacks, diversity, decentralization, thermodynamic openness, large energy gradients, competition, evolution, and adaptation.<sup>52</sup> Without at least attempting to understand the constitutive or causal relationships between these concepts/phenomena, applications of complexity thinking to social systems will necessarily fragment this sub-field further rather than contribute to broader, shared understanding.

The second mistake is assigning normative judgements to analytical concepts. In complex systems science, there is nothing inherently “good” about resilience, adaptation, or self-organization, for example. Nor is there anything inherently “bad” about “cascading failures” or “disequilibrium.”

Normative judgements about these concepts depend entirely on the system and components under study

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<sup>51</sup> For instance, since Pierson’s (2004) application of the concept of “path dependence” to policy studies, its use proliferated in political science and IR—though sometimes merely as a way to “black box” challenging causal relations. See: Pierson 2004. See also: Ylikoski 2013.

<sup>52</sup> Homer-Dixon, personal correspondence.

and whatever values we ascribe to them. A peaceful democracy can be resilient; so too can a brutal dictatorship. The identification and analysis of that resilience exists separately from what we believe we ought to *do* about that resilience. Yet, in so much social science scholarship, these underlying normative judgements exist, usually unstated—and we end up in very muddled places when we confuse *is*'s with *ought*'s.

The third mistake social scientists make—and this one is the most important for my purposes in this dissertation—is translating complexity concepts from complex *adaptive* systems models/thinking, forgetting that their subjects—human beings in societies—are more than just adaptive. They are *reflexive*. In *human* systems, whose agents are self-aware and capable of recursive thinking (i.e., I can think about my own thoughts, I can think about what other people might be thinking, and I can think about what others might be thinking about what I am thinking), there is yet another layer of complexity. Human agents are *reflexive* in that they can “observe” their internal schemas while also being “participants” in them—they are not entirely separate from their mental representations, but they are also not the same thing as their mental representations.<sup>53</sup> Common phrases such as, “being introspective,” “examining one’s beliefs,” or “questioning one’s assumptions” are all examples of this reflexivity. A system with reflexive agents is known as a *complex reflexive system*—one that is “directed back on itself” through a feedback loop between an agent’s perceptions of the world and their internal schemas.<sup>54</sup> As we will see, this distinction—between complex adaptive and complex reflexive systems—is crucial for thinking about ideology.

### 1.3.3 Complex Reflexive Systems

There have been several attempts to theorize whether and how exactly human social systems are different from ecological systems.

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<sup>53</sup> In Elias’ words, humans and their internal schemas “can be considered separately, but not as being separate.” Elias 1978, 85.

<sup>54</sup> Beinhocker 2013. For the purposes of this paper, I equate complex reflexive systems to what Mock and Homer-Dixon (2015) call *complex representational adaptive systems*.

In one approach, Westley et al. (2002) argue that while all complex systems are characterized by dimensions of *space* and *time*, human social systems include a third: a symbolic dimension. They identify four implications of this symbolic dimension for social systems, as compared to ecosystems. First, a symbolic dimension enables *abstraction*, interpretive schemes, and meaning-making, and includes things such as myths, paradigms, and ideologies. Second, social systems are “characterized by *reflexivity*”. Third, both abstraction and reflexivity make *forward-looking behaviour* possible (implying some degree of purposefulness and consequences). Finally, humans have an ability “to expand their capacity to externalize their logic in *technology*” which has implications for how resources are/can be used. Drawing on Giddens, they write,

[...] in contrast to ecological systems, social systems are structured by the human ability to construct and manipulate symbols, the most obvious of these being words. These ‘structures of signification’ along with ‘structures of domination’ (the flow of power and resources and patterns of authority in a particular systems) and ‘structures of legitimation’ (norms, rules, routines, and procedures) provide the building blocks of social systems.<sup>55</sup>

As sense-making animals, human beings “collectively invent and reinvent a meaningful order around them”—“through communication, language, and symbols”—“and then act in accordance with that invented world, as if it were real.”<sup>56</sup> Westley et al. argue that this symbolic dimension amounts to “a third hierarchy, equal to time and space, for structuring social system dynamics.” This meaning-making “permits a higher level of self-organization than that found in ecosystems.”

Years later, in developing another approach, Ford (2015) reflects on what makes human society a unique kind of complex adaptive system. He writes:

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<sup>55</sup> Westley et al. 2002, 107.

<sup>56</sup> Gunderson and Holling 2002, 108.

The human unit-level components of a social system are capable of purposive action motivated not merely by biological needs and raw emotions but also by ideas and ideals. They care about, and change their behavior in response to, the thought structures that shape their interpretation of their environment. Participants in a complex adaptive *social* system, in other words, exhibit a tendency to *act* upon ideas they have come to possess.<sup>57</sup>

He later links his notion of complex adaptive social systems to the field of memetics in order to better integrate the role of ideational influence in these systems.

Another framework—complex reflexive systems—comes from Beinhocker (2013) who argues that for a system to be considered reflexive, it must have the following elements:

- an *environment* (whether physical, social, or “artificial”);
- at least one *agent* that interacts with, and pursues *goals* in, their environment;
- agents must have a *cognitive function*, which enables them to perceive and evaluate information about their environment, and a *manipulative function*, which enables them to interact with their environment in a causal way such that they change or alter the environment in the direction of their goal(s);
- connecting both the cognitive and manipulative functions, each agent holds an (inevitably flawed) *internal model* of their environment “that enables them to move from perception... to action...in pursuit of their goal.”<sup>58</sup>
- Additionally, the capacity for an agent to *update their internal model* (consciously or unconsciously), in response to interactions with their environment<sup>59</sup>; and
- environment/system complexity as a result of many *interactions* between different agents and nonlinear feedback *dynamics* in the system over time.

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<sup>57</sup> Ford 2015, 96.

<sup>58</sup> Beinhocker 2013, 332.

<sup>59</sup> Note, that “updating” an internal model does not necessarily mean “improving” in some sort of objective sense.

While there is still room for development here—for instance, specifying that agents interact with and change each other as well as their environment, indicating that agents may update their goals as well as their models—the complex reflexive systems model is one of the most operationalizable. The three papers in this dissertation all develop upon this framework, while also drawing on aspects of the others presented above.

#### **1.4 Complexity, Relationalism, and Network science**

Complex systems approaches to the political and social world share some things in common with the broader “relational turn” in political science, sociology, and social theory, more broadly—what Jackson and Nexon (2019) call “relationalism.” Relationalism is not itself a “new systems theory,” according to Nexon (2010), but it emerged from criticisms similar to those held by early advocates of a complexity turn in IR, including frustration with both “reductionism” or “individualism” and “holism”—the former emphasizing structures and forces and the later focusing on attributes of agents and entities—in social science.<sup>60</sup> Against the substantialist view, relational approaches emphasize the primacy of relations over substances. Relationalism aims to “specify processes and mechanisms, that...give rise to both actors and the environments in which they find themselves.”<sup>61</sup> There is particular resonance between relationalism and social complex systems on the subject of *causation*. According to Nexon (2010), “relationalists adopt a *configurational* approach to social causation: historically specific outcomes are the product of the concatenations of mechanisms and adjacent processes.”<sup>62</sup>

Major strands of relationalism in Anglo IR include social network analysis, practice-theoretic scholarship (which often draws heavily on Bourdieu), American pragmatism, along with some variants of discourse analysis, Actor-Network Theory (following Latour), and “assemblage” approaches (following DeLanda). But within these approaches, there are further divisions about whether we should treat those

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<sup>60</sup> Nexon 2010.

<sup>61</sup> Jackson and Nexon 2019.

<sup>62</sup> Nexon 2010, 102.



intersubjective relations as more or less stable “positions” versus dynamic “processes.” As Jackson and Nexon (2019) describe, “Despite broadly agreeing that relations matter, relationalists disagree on whether those relations *themselves* are, broadly speaking, actively fluctuating processes made up of the active doing of entities, or relatively fixed patterns that position entities in ways that produce the appearance of entities with stable attributes.”<sup>63</sup> This “position vs. process” debate seems unavoidably central to any and all “flavours” of relationalism, and the critiques of positional approaches frequently offer “solutions” that emphasize process, and vice versa.

This dissertation in no way settles this debate. While my use of social network analysis may situate me more in the “position camp,” I hope to convey a more nuanced relational argument: that within every position there are processes, and every process requires positions.<sup>64</sup> Which component we focus on in any given analysis is simply a matter of scale.

#### *1.4.1 Complex Systems as Networks*

For the purposes of this dissertation, network theory provides a way to get more specific about a complex system’s parts and their relations. Networks enable a sort of “topographical description” of various kinds of systems, and while not all networks are complex systems, most complex systems can be represented as networks. As with many system mapping methods, it is unlikely that a network representation of a complex system will capture everything. But even an incomplete network model can offer rich insights about the structure, relationships, and dynamics—including power dynamics—of a complex system. Perhaps most importantly, network science provides a common set of underlying concepts that can be applied across a wide range of disciplines to solve real-world complex problems.

Most of us know intuitively that somehow “everything is connected”—the idea of “six degrees of separation” made its way into popular culture in the 1960s. But looking deeper at the nature, structure,

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<sup>63</sup> Jackson and Nexon 2019, 12.

<sup>64</sup> Here, there is some resonance with Emanuel Adler’s latest book and his “becoming” (vs. “being”) ontology, which emphasizes ongoing processes and practices. Adler draws significantly on relational philosophy as well as some traditions in the field of complexity. See: Adler 2019.

and dynamics of these connections can help us see emerging crises—and their potential solutions—in a wholly new light. The study of networks began in the mid- to late-20<sup>th</sup> century. “Pioneer” biologists<sup>65</sup>, mathematicians<sup>66</sup>, economists<sup>67</sup>, sociologists<sup>68</sup>, and psychologists<sup>69</sup> each explored different aspects of networks relevant to their fields and research questions. Most were unaware of each other’s work and discoveries.<sup>70</sup>

But in the late 1990s, two seminal papers—the first, “Collective Dynamics of ‘Small World Networks’”, by Duncan Watts and Steven Strogatz (1998), and the second, “Emergence of Scaling in Random Networks,” by Albert-Laszlo Barabasi and Reka Albert (1999)—ignited a firestorm of research on the *common* mathematical properties of networks and began to synthesize a “new network science.”<sup>71</sup> With the explosion of computing power, Big Data, and Internet use in the 21<sup>st</sup> century, this new network science became an important way to study all sorts of complex systems. Barabasi, one of the fathers of this new thinking and the founder of “network medicine,” even boldly claimed that “network thinking is poised to invade all domains of human activity and most fields of human inquiry.”<sup>72</sup> Insights from network science can help us understand many kinds of natural and social systems, from individual viruses to whole climate systems, from the brain to global social movements. I argue that they can also be used to examine ideational and ideological systems.

#### 1.4.2 *The basics of networks*

A network is a mathematical object composed of nodes and the links between them.<sup>73</sup> The nodes can represent anything from individual people to airports or neurons. And the links represent the “flow” between these nodes of matter, energy, or information—the movement, for example, of virus particles,

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<sup>65</sup> Jacob and Monod 1961; Jacob, Brenner, and Cuzin 1963; Kauffman 1969.

<sup>66</sup> Erdos and Renyi 1960; Mandelbrot and Van Ness 1968.

<sup>67</sup> Schelling 1960; Leontief 1936.

<sup>68</sup> Lorrain and White 1971; Granovetter 1973; Granovetter 1985.

<sup>69</sup> Travers and Milgram 1969.

<sup>70</sup> Hidalgo 2016.

<sup>71</sup> Watts and Strogatz 1998; Barabasi and Albert 1999.

<sup>72</sup> Barabasi and Frangos 2002, 222.

<sup>73</sup> In graph-theory terminology, nodes are called *vertices* and links are called *edges*.

electrical signals, or rumors. Some networks are instantiated in physical space, in transportation systems or the brain's neural networks. Other networks, like those between like-minded people on the internet or representing interactions over time (for instance, the flow of ideas on Twitter) are more abstract.

Networks can be made up of “agents”—entities with some sort of decision capability or power to act—or “non-agents.” But agents are not necessarily human; animals and even viruses are agents. But regardless of the nature of their nodes and links, networks have similar properties and exhibit similar behavior in terms of their growth, structure, resilience, and vulnerability.<sup>74</sup>

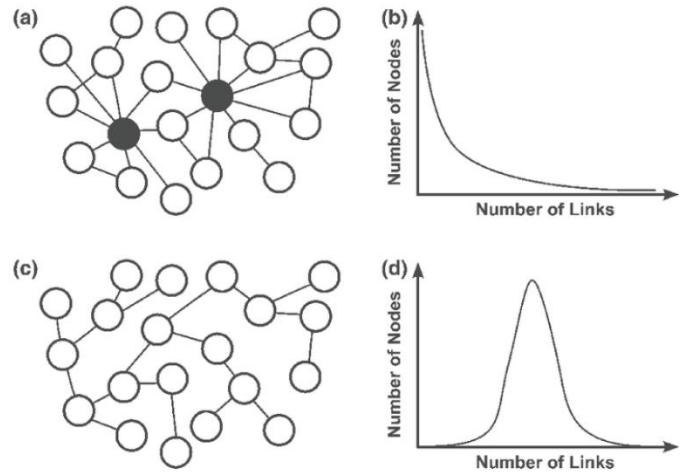
Network scientists use several measures and concepts to describe a network's attributes and structure. The degree of a single node refers to the number of connections (in or out) it has with others. Nodes with a high degree are called hubs, and much of the matter, energy, or information flowing through the network passes through these hubs. In most networks in natural and social systems, the frequency distribution of nodes (sorted according to their degree) follows a power law distribution, as opposed to a “normal” or bell-curve distribution (Figure 1).<sup>75</sup> Such networks are called scale-free networks (Figure 2); they have many nodes of a low degree, some nodes of an average or medium degree, and just a few nodes of a high degree. For example, the frequency distribution of the world's airports (sorted according to their connectivity with other airports) follows a power law; there are relatively few major airport hubs, but hundreds of thousands of medium and small airports.<sup>76</sup>

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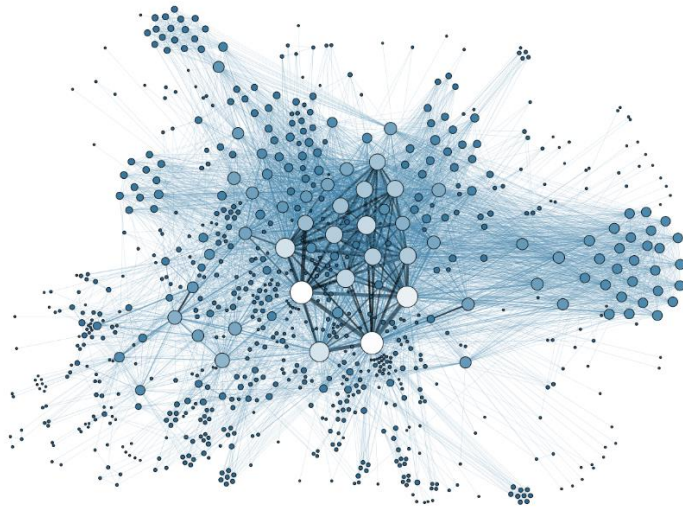
<sup>74</sup> We can also understand networks as actors themselves—that is, as forms of organization with members working toward collective goals. In contrast to a hierarchical institutional form, *network actors* are distributed, but they pursue coordinated action through repeated and enduring relations (Kahler 2009.). Examples include intergovernmental networks, terrorist networks, and activist networks; they can range from formal and tight (for instance, the International Campaign to Abolish Nuclear Weapons) to informal and loose (for instance, Extinction Rebellion).

<sup>75</sup> A power law is characterized by the functional relationship  $f(x) = x^{-\alpha}$ .

<sup>76</sup> Mitchell 2011.



**Figure 1. Scale-free networks (a) have a power-law distribution of node frequency against degree (b); random networks (c) have a normal distribution (d).**



**Figure 2. A representation of a scale-free network. Source: Wikimedia Commons.**

A node may be relatively more “important,” “influential,” or central in a network than others.<sup>77</sup> Many other nodes may depend on it for resources or information, or it might function as a crucial bridge from one area of the network to another. Often, some areas of a network are more densely connected than others; COVID-19 “super-spreader” events arise in part from such dense connectivity. These areas are called clusters or communities, and they typically form around separate hubs.

All these characteristics affect how a network will grow and change, how matter, energy, or information will spread across a network, and how vulnerable or resilient the network is to potential threats or attacks. For example, the connectivity structure of brains evolved in such a way that makes them resilient to losing a few neurons now and then. But significant damage to specific parts of the brain—the hubs of the neural network—such as a stroke or severe concussion can be disastrous.<sup>78</sup> In a very different example, terrorist networks have also developed connectivity structures that are resilient to occasional attacks. The strategy of “cutting the head off the snake” to destroy a network rarely works because the network’s ability to continue to function does not depend on a single leader, but is distributed across interconnected clusters and “cells.”<sup>79</sup>

Networks self-organize as they grow, and this growth usually follows consistent patterns or behavioral “rules” of preferential attachment. By the rule of popularity, a new node connects first to other nodes that have the most links (“connectivity begets connectivity”); by the rule of affinity, a new node connects first to nodes that are most similar (“like attracts like”). In real-world networks, node attachment usually involves some combination of both rules. These attachment processes explain how network hubs emerge and grow. As Melanie Mitchell describes, “Preferential attachment is one mechanism for getting

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<sup>77</sup> There are at least half a dozen types of centrality, each of which measures a slightly different kind of importance. For example, *Eigenvector centrality* is a measure of how “influential” a node is in a network, and *betweenness centrality* indicates how often a node serves as a “bridge” along the shortest path between two other nodes (i.e., a stop along the way from one part of the network to another). For virus transmission, when an individual is found to be a “superspreader,” they would have a high betweenness centrality measure—due to their behaviour (not washing their hands, touching lots of common surfaces, not wearing a mask or maintaining physical distance) they have served as a “bridge” for the virus many times, transmitting it to other people, from one community or setting to another.

<sup>78</sup> Mitchell 2011.

<sup>79</sup> Kahler 2009.

to what the author Malcolm Gladwell called tipping points—points at which some process, such as citation, spread of fads, and so on, starts increasing dramatically in a positive-feedback cycle.”<sup>80</sup> Also called “cumulative advantage” in other disciplines, preferential attachment mechanisms offer a way to study the emergence of hubs and how a network’s structure changes over time.<sup>81</sup>

In sociology, research on networks differentiates between three types of affinity attachment that exploit different node characteristics: homophily (similarity of social characteristics), “shared foci” (similarity of interest or purpose), and “triadic closure” (shared “friends”).<sup>82</sup> The tendency of nodes to connect to other nodes with similar characteristics contributes to clustering and even fragmentation of the larger network. Attention to both *types* of nodes and *types* of links matters in social network research, but social scientists still need to effectively integrate quantitative and qualitative approaches to understanding the processes governing network growth.<sup>83</sup>

Network hubs shape more than just network growth patterns. Hubs are central to network operation as gatekeepers, brokers, and conduits of whatever flows through the network. Gatekeepers have disproportionate influence over other nodes and can sometimes even change the rules of network membership. With this influence—which is rule/agenda setting and vetting power—gatekeepers enable some nodes and constrain others, in turn shaping the structure of the network itself by setting up conditions for future network relations.<sup>84</sup>

But this centrality comes with risks. For example, hubs typically represent the network’s most vulnerable spots; a failure, attack, or disruption at these points can threaten the survival of the entire network. Also, in a social network, centrality comes with reputational costs and potential challenges to legitimacy, so hubs may have more to lose.<sup>85</sup>

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<sup>80</sup> Mitchell 2011, 253.

<sup>81</sup> Barabási 2009; Papadopoulos et al. 2012. See this interactive lesson on preferential attachment: <https://www.complexity-explorables.org/explorables/knitworks/>.

<sup>82</sup> Hidalgo 2016.

<sup>83</sup> Pareschi and Arcelli Fontana 2016. See these interactive lessons on network clustering models: <https://www.complexity-explorables.org/explorables/jujajaki-networks/> and <https://www.complexity-explorables.org/explorables/clustershuck/>.

<sup>84</sup> Wasserman and Faust 1994; Carpenter 2011; Stern, Livan, and Smith 2020.

<sup>85</sup> Carpenter 2011.

The structure (or *topology*) of a network—its distribution of hubs, overall density, and clustering patterns—also shapes how things like energy, viruses, information, or behavioral norms can spread or “diffuse” through it (somewhat analogous to *choreography*). Economic goods, “viral” videos, infectious disease, and even conspiracy theories all spread more quickly through more densely connected networks. But we also know that this diffusion—or, more generically, patterns of effects or impact—is not usually “even” across the network in question. The location of hubs, the prevalence of clusters, and the characteristics of nodes all matter, whether we want to *increase* or *limit* the spread of some particular phenomenon (e.g., human rights norms versus COVID-19).

As a tool to describe real systems, networks help us “keep track of the identity of the elements involved in a system and their patterns of interactions.”<sup>86</sup> In this way, networks are especially useful for making sense of and visualizing (and to a more limited extent, predicting) complex social and natural systems that would otherwise be highly opaque.

#### *1.4.3 Networks and ideational phenomena*

This dissertation makes the case that network-based tools are useful in studying ideologies, too. In fact, it contributes to a growing number of network approaches to modelling and understanding ideational phenomena. For example, one group of scholars applies network analysis to Cognitive-Affective Maps (CAMs). Investigating Canadians’ political attitudes towards the carbon tax, Mansell et al. (2021) treats participant-generated CAMs as undirected networks and analyzes their structural and emotional properties.<sup>87</sup> Another approach, called the BENDING model (which stands for Beliefs, Evidence, Norms Dynamic Information Networked Graphs), treats belief systems as “multidimensional cognitive structures” and uses multilayer networks to map within-layer and cross-layer interactions and/or interdependencies between nodes.<sup>88</sup> Most recently, scholars based at The Santa Fe Institute published

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<sup>86</sup> Hidalgo 2016, 2.

<sup>87</sup> Mansell, Mock, et al. 2021. See also: Mansell, Reuter, et al. 2021; Reuter et al. 2022; Reuter et al. 2021.

<sup>88</sup> Vlasceanu, Dyckovsky, and Coman 2023.

their Networks of Belief Theory, which aims to integrate belief dynamics across individual and social levels. Their approach develops a statistical physics model to study the role of both personal and social beliefs in an individuals' belief system, as well as the impact of various forms of cognitive dissonance on belief change.<sup>89</sup> Short of generating a formal mathematical model, my dissertation demonstrates and adds to the value of network theory approaches to ideology.

There are several other influential attempts to use networks to model the structure and dynamics of collective belief systems, most of which have their roots in Converse's research on belief systems in mass publics in the 1960s.<sup>90</sup> However, this work is almost entirely focused on recovering belief networks from survey data and is more concerned with how to identify central beliefs, measure polarization, and identify latent cultural groups in heterogeneous populations. While this work is important, it differs from this dissertation's goal of elaborating a complex systems perspective on trans-scalar networks of belief.

## **1.5 Research Contributions and Outline of the Dissertation**

This dissertation speaks to and brings together several important research programs. First and foremost, it contributes to the emerging “neo-ideology studies” literature and works to better integrate existing conceptual, discursive, and quantitative approaches to studying ideology. By developing a complex systems-based approach to ideology—and a framework I call *trans-scalar ideological network analysis*—the dissertation brings the latest ideology research back into the fields of global governance and international relations, without the pejorative and rigid baggage that so often accompanied the concept throughout most of the 20<sup>th</sup> century. Using this framework in two case studies, the dissertation demonstrates how ideologies both shape and are shaped by the discursive and social network structures in which they are embedded. It further demonstrates in both case studies how/that ideology matters in

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<sup>89</sup> Dalege, Galesic, and Olsson 2024.

<sup>90</sup> Converse 1964; Boutyline 2017; DellaPosta 2020; Goldberg and Stein 2018; Boutyline and Vaisey 2017.



policymaking at the national and transnational level, beyond just simple bipolarity, and points to the important causal role of ideological heterogeneity.

Second, by using network theory as both a rigorous metaphor and analytical tool, the dissertation challenges many of the (false) dichotomies found in ideational research across several sub-disciplines and topics including ideology, civil society advocacy, policy networks, social movements, and more. Specifically, the case studies highlight the interdependence of ideology and strategy or power-seeking in the context of political advocacy at both national and international levels. Furthermore, the project demonstrates at least two practical and useful ways to connect multiple network-based methods and tools in innovative ways. It also illustrates an effective approach to expand the relatively new, but incredibly powerful, Discourse Network Analysis methodology to study ideology and belief systems more granularly.

Third, this dissertation contributes to the ongoing (but nascent) “complexity turn” in social and political science, which shares some overlap with the broader relational turn in social theory. Importantly, it highlights three key problems that social scientists have faced when applying a complex systems lens to their work, the most significant of which is the need to (and challenge of) incorporate human agents—with their internal schemas—into complex adaptive systems models and analysis. The dissertation surveys several existing approaches to bringing the human back into systems thinking, and then develops a trans-scalar ideological networks framework to capture these nested elements. Furthermore, addressing some of the critiques of complex systems research in the social sciences, the dissertation begins to develop an approach to complex reflexive systems and ideational power, and also discusses the implications of a complex systems ontology for both causal and constitutive explanation in terms of philosophy of science.

### *1.5.1 Outline of the Dissertation*

In addition to this introductory chapter, this dissertation contains three articles and a conclusion. In Chapter 2, Paper #1 dives deeply into the literature on ideology across several disciplines and many

sub-fields. It synthesizes this fragmented field—and strengthens over a decade’s worth of existing mapping efforts—using an Ideology Research Matrix comprised of three dimensions: the methodological approaches scholars use to study ideology, the underlying ontological commitments of those scholars and approaches, and the typical research goals and designs that accompany those methods and commitments. Following a discussion of each of these Matrix elements and the various strengths and weaknesses associated with them—including those related to studying “ideological change”—the paper makes the case for a more integrated approach to studying ideology, grounded in a complex systems ontology. It develops a conceptual framework of ideology as a complex reflexive system, and outlines a way to operationalize the framework, which I call Trans-Scalar Ideological Network Analysis.

Paper #2 (Chapter 3) applies this framework—from the outside-in—to a case study of energy transition discourse in Canadian Parliament. While outright climate denial has become extremely rare in Parliamentary discussions, there is still significant ideological heterogeneity and conflict. This paper makes the case that tracing the influence of particular ideological discourses is both more difficult *and* more important in non/less polarized political contexts; ideological conflict and influence is still at play, but in more subtle ways that are not well-captured by existing methods. Following a full engagement with existing literature(s) related to ideology and climate change, the paper combines Discourse Network Analysis (DNA) and Cognitive-Affective Mapping (CAM) to identify emergent ideological “camps”—clusters of actors as well as clusters of concepts/arguments—in the Parliamentary discourse network. A version of this paper has been published in the *Routledge Handbook of Ideology and International Relations*.<sup>91</sup>

Paper #3 (Chapter 4) applies the framework to study transnational advocacy around the arms trade, specifically leading up to the ATT. This paper demonstrates that, despite arms trade and control being a long-standing arena for ideological conflict, most ideational scholarship on the subject has either neglected or avoided using the concept of ideology as an analytical lens. I show that a neo-ideological

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<sup>91</sup> Leader Maynard and Haas 2023.

approach to arms control—using my framework of trans-scalar ideological networks—brings much more to the table. Furthermore, the chapter offers one of the most comprehensive stakeholder network maps of the transnational advocacy space surrounding the Arms Trade Treaty, going beyond—but also linking/tracing the connections between—the two coalitions/groups typically studied. Crucially, the chapter underscores the mediating role of social networks on ideology’s influence in transnational advocacy arenas.

The concluding chapter summarizes my key findings, discusses some of the limitations of the project, and outlines several fascinating future research directions.

## Chapter 2

### Article #1: A complex reflexive systems approach to ideology in global governance

#### 2.1 Preface

What is ideology? What role does ideology and ideological conflict play in political decision-making? And, how best should we go about identifying and analyzing its influence? The main goal of this article is to provide a comprehensive look at the many different ways that ideology is conceptualized, understood, and studied. In the context of this dissertation, this article provides the conceptual foundation for the two case studies presented in Chapters 3 and 4. This paper shows how existing approaches to ideology miss a lot of the important dimensions, interactions, and mechanisms of ideology as it relates to politics in practice. Building on several major mapping efforts, this chapter synthesizes the field of ideology studies using an Ideology Research Matrix comprised of three dimensions: the methodological approaches used, the underlying ontological commitments of scholars, and the typical research goals and designs that accompany those methods and commitments. After engaging systematically with the literature via the Matrix, the paper discusses the problems with current approaches to ideology, especially around the particularly difficult challenge of studying ideological change.

The paper then calls for a more integrated approach and makes the case for a complex reflexive systems approach to conceptualizing and studying ideology. It fleshes out the details and benefits of a complexity ontology in this context, particularly around linking causation and social context—or agency and structure—through identifying feedback loops across social and discursive scales. Based on the above, the chapter outlines a new conceptual framework, which I call *trans-scalar ideological network analysis*. It traces out each component of the framework suggests one way to operationalize the

framework using a combination of Cognitive-Affective Mapping (CAM), Discourse Network Analysis (DNA), and Social Network Analysis (SNA).

This paper builds on and clarifies my thinking about the interactions between ideologies and social networks, which I first began to explore while completing my Master's degree in global governance at the Balsillie School of International Affairs. Having been introduced to CAM and scale-free networks (along with complexity science/thinking more broadly) in a course on "Complexity and global Governance," I became drawn to the idea that what we believe is shaped by who we are connected to and regularly interact with; but also, that changes we make to (or happen to) our social networks can start to re-shape what we believe, how we behave, and even ripple out into wider social effects. This is, of course, a bit of a truism. But rather than just accept this dynamic as epiphenomenal and simply given, I thought that network-based tools—like CAM and social network analysis—might help me more empirically and directly pin-point those moments and instances of "re-shaping." Those pin-points might then reveal patterns, and those patterns could inform actual interventions for changing people's minds, making social change more possible. This article grounds my earlier thinking more strongly in a complexity ontology, engaging with core questions about causation and context, feedbacks between agency/behaviour and structure, and the nature of ideological change.

I plan to submit a version of this article to *International Theory* or the *Journal of Political Ideologies*.

## **2.2 Overview**

Humanity's ability to deal with its vast array of challenges depends on its capacity to understand how ideologies and worldviews inform and interact with decision-making processes. However, existing scholarship tends to study ideology as primarily an individual-level *or* society-level phenomenon, setting aside questions about social context in the first instance, and questions about the inner workings of the mind in the second instance. But by ignoring the complex interactions *between* cognitive, psychological,

social, and political systems, ideology researchers too often talk past each other (which I demonstrate in an Ideology Research Matrix), thereby missing out on potentially crucial interdisciplinary insights. I argue that a systems-based approach—one that reflects the coevolutionary dynamics between ideologies, individuals, discourse, and social networks—offers a way forward. To pursue this approach, I treat ideologies as *complex reflexive systems*—networked sets of emotionally charged concepts in an individual’s mind—but also shared across minds—that are constructed, shared, and changed through interaction and communication in an (social and material) environment. Grounded in a much-needed complex systems shift, this article presents a new conceptual framework of *trans-scalar ideological networks*—and a proposed methodology that uses networks as both metaphor and modelling tool—that integrates the perspectives of existing ideology scholarship and moves forward our understanding of ideological change.

## 2.3 Introduction

Humanity’s ability to deal with its vast array of challenges depends on its capacity to understand how ideologies, policymaking processes, and individual-to-group behaviours intersect. However, existing scholarship tends to study ideology<sup>92</sup> as primarily an individual-level or social-level phenomenon, setting aside questions about context, structural constraints, and social embeddedness in the first instance, and questions about the inner workings of the mind and individual behaviour in the second instance. Speaking to this issue of fragmentation, the leading theorists in this field have recently emphasized the importance of developing ways to work across these levels in much more integrated ways. By ignoring the complex interactions between cognitive, psychological, social, and political systems, existing approaches too often talk past each other, and miss out on the insights that could be gained from a more interdisciplinary

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<sup>92</sup> Note that I include literature that uses terms such as “worldviews” and “belief systems” in place of ideology, since I take a broader approach to the concept. For example, Beddoe et al. (2009) define worldviews as “perceptions of how the world works and what is possible, encompassing the relationships between society and the rest of nature, as well as what is desirable.”<sup>92</sup> For these purposes, a broader, complex systems-based definition of ideology captures much of what scholars intend to communicate using these other terms. Beddoe et al. 2009.

approach. Overgeneralized or rigid characterizations of ideologies often fail to uncover compelling causal stories linking ideological dynamics to changes in discourse or policy. Further, when ideological positions are presented in oppositional or black-and-white ways, it not only reifies those categories, but it also weakens people's capacity for nuance (including cognitive and emotional complexity) in how they think, feel, and behave politically.

A new systems-based approach that reflects the coevolutionary dynamics between ideologies, individuals, discourse, and social networks is necessary to address the shortcomings of conventional approaches. Here, I define ideology as:

*A complex reflexive system of ideas, beliefs, values, and emotions, held in the minds of individuals but shared by or attributed to members of groups, that shapes political understanding and outlook and guides behaviour.*

Because of its ability to cope with multi-level, disproportionate, and nonlinear causality, a complex systems perspective can provide more insight into the underlying mechanisms of ideological influence and change. More specifically, an ideology can be understood as a complex *reflexive* system because it is “directed back on itself” through feedbacks that involve the ideology holder’s perception, introspection, learning and “updating.”<sup>93</sup> Ideologies are also embedded in social and discourse networks, and as with other complex systems, the structure and dynamics of those networks enable and/or constrain particular paths of co-construction. To study them effectively, researchers need a framework that connects the psychological/cognitive and social sciences. Such a framework needs to be able to account for determinants of ideological attachment at the individual level, as well as the social contexts and forces that operate *on* those determinants. Critically, this framework must also integrate the dynamics of ideological change not only at the level of the individual (i.e., someone changing their mind), but also in terms of (more-or-less) specific ideologies’ content, and the broader ideological “landscapes” of various

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<sup>93</sup> Beinhocker 2013.

societies. Grounded in this much-needed complex systems shift, this article presents a new conceptual framework—and a proposed methodology—that integrates the perspectives of existing ideology scholarship and moves forward our understanding of ideological change.

This paper proceeds as follows. First, I review the vast, cross-disciplinary field of the study of ideology by presenting an “ideological research matrix” that synthesizes many of the insights of recent major mapping efforts. I examine, in detail, the range of methodological approaches to defining and studying ideology, the ontological understandings and assumptions that underlie those methodologies, and the types of research goals and designs that typically accompany them. Next, I discuss some of the problems with current approaches, including several “specificity problems” accompanying the study of ideological change, in particular. In Section 2.6, I outline a complex reflexive systems approach to ideology and ideological change, highlighting the important role of networks as both a metaphor and modelling tool. I present a more formalized conceptual framework based on this complex reflexive systems approach in Section 2.7 and describe one way to effectively operationalize the framework using an integrated set of network-based methods. Finally, I outline several future research trajectories, before concluding.

## **2.4 Making sense of the field of ideology studies**

Dissatisfied with the view of ideology as just a variable measured on a simplistic left-right spectrum, or as only the purview of political parties and elites, scholars from several disciplines<sup>94</sup> have begun to reengage with ideology as a factor that simultaneously shapes institutions, discourse, and power relations.<sup>95</sup> While this is a positive step beyond focusing on just the big ideological “isms” (liberalism, fascism, communism, socialism, etc.), most of the existing approaches to studying ideology talk past each

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<sup>94</sup> For example: political theory (Freeden 1996.), intellectual history (Tully 1983; Skinner 2002, vol. 1.), political psychology (Rosenberg 1988; Jost and Major 2001; Jost, Kay, and Thorisdottir 2009; Haidt, Graham, and Joseph 2009.), discourse analysis (Howarth, Norval, and Stavrakakis 2000; Fairclough 2010.), political science (Knight 2006; Carmines and D’Amico 2015.), sociology (Boudon 1989.), and social and cultural studies (Eagleton 1991; Hall 1996; Shelby 2003.).

<sup>95</sup> Mock and Homer-Dixon 2015a.



other in several ways. First, while there has been some convergence around the value of broad definitions of ideology, both in European and American scholarship, there is still a wide range of what we might call “ontological understandings” of ideology, particularly around “what counts” as ideology and what “shape” it takes. Across methodological approaches to studying ideology, there is also a dearth of multi-method, multi-level, interdisciplinary work and instead, the literature is full of studies focusing on *either* phenomena within (or between) individuals<sup>96</sup> *or* within social structures.<sup>97</sup> Finally, partly due to disciplinary constraints related to research goals, there tends to be dividing lines between more descriptive versus causal work, and at various analytical scales. There remains a need for an integrative approach that can bring together diverse disciplines and bridge all levels of analysis and interaction.

In this section, I present an “ideology research matrix” based on the three dimensions outlined above, synthesizing nearly a decade of mapping and research efforts by Jonathan Leader Maynard, Matto Mildenerger, Thomas Homer-Dixon, Manjana Milkoreit, Mike Lawrence, Steve Mock, and other scholars connected to the Ideological Conflict Project, based at the Balsillie School of International Affairs. I should note here that my emphasis is on literature that takes ideology as its *core focus*. While the concept of ideology does surface in work on social movements, belief dynamics, conflict resolution, radicalization, terrorism studies, and other topics, ideology is not front and centre in these fields, and so does not feature prominently in my mapping efforts. In Table 1, I compare three *Methodological Approaches* across five elements of *Ontological Understanding*, and four types of *Research Goals & Design*. Below, I discuss each dimension in the order presented here.<sup>98</sup>

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<sup>96</sup> Such as those focusing on brain physiology (Amodio et al. 2007; Kanai et al. 2011; Chiao et al. 2009.) and socio-psychological factors (Jost, Kay, and Thorisdottir 2009; Haidt 2001; Haidt 2007; Haidt 2012; Greenberg et al. 1990.); see also Michael Freeden’s (Freeden 1996; Freeden 2003.) “morphological” approach regarding the internal structure of ideologies.

<sup>97</sup> Such as critical discourse analysis (Fairclough 2001; Fairclough 2010; van Dijk 1995; van Dijk 2000b.) and poststructural approaches (Zizek 1994; Laclau 1997; Norval 2000.).

<sup>98</sup> While Table 1 provides a useful heuristic, future iterations may need to include more or modified dimensions to sufficiently capture the ideology literature as it evolves.

**Table 1. Ideology Research Matrix**

		<b>Methodological Approaches</b>		
		Conceptual	Discursive	Quantitative
<b>Ontological Understanding</b>	Connotation pejorative or non-pejorative	Mostly non-pejorative	Either pejorative or non-pejorative	Non-pejorative
	Content fixed bundles or dynamic collections	Dynamic	Dynamic	Fixed
	Structure tight or loose	Either tight or loose	Loose	Tight
	Representation spatial or non-spatial	Either spatial or non-spatial	Typically non-spatial	Either spatial or non-spatial
	Attachment individual-to-group ("inside-out") vs. group-to-individual ("outside-in")	Typically social/group-oriented; but individual-orientation in cognitive-conceptual approaches (e.g., CAM)	Social/group-oriented, emphasis on context	Typically, individual (genetics, personality, psychological traits)
<b>Research Goals &amp; Design</b>	Analytical level or scale	Individual(s) or group(s) (at any scale)  Content-centric	Macro, meso, or micro scales of ideological "flows"  Content-centric or content-neutral	Population of individuals (at any scale)  Typically content-centric
	Constitutive relationships & deep case understanding	Deep case understanding	Thick description of constitutive relations in a case	n/a
	Average causal effects & population-level explanation	n/a	n/a	Tend towards causal, predictive
	Causal mechanisms & set-theoretic explanation	Causal mechanism(s) identification using process-tracing  Often combined with discursive methods	Causal mechanism(s) identification using process-tracing  Often combined with conceptual methods	n/a

### 2.4.1 Methodological approaches

In one of the most comprehensive surveys of the field, Leader Maynard (2013) identifies three general categories of methodological approaches to studying ideology.<sup>99</sup> First, conceptual approaches<sup>100</sup> tend to emphasize not just the concepts that make up ideologies (i.e., their content and how it is defined), but the structural arrangements of those concepts (i.e., the relationships between concepts). For example, MacKenzie (2003) describes ideologies as interlocking sets of ideas or “constellations of belief,”<sup>101</sup> while Buckler and Dolowitz (2009) treat them as “conceptual assemblages.”<sup>102</sup> Speaking about his “morphological approach,” leading political theorist, Michael Freeden, argues that concepts gain meaning “not only through accumulative traditions of discourse [and] diverse cultural contexts, but also by means of their particular structural position within a configuration of other political concepts.”<sup>103</sup> Depending on the scholar, the focus on structure may be tight or loose (as seen along the *ontological understanding* dimension in Table 1), but the ideological content is considered relational (i.e., the meaning of concepts is contested and co-constructed) and dynamic (i.e., those relations and meanings change over time).<sup>104</sup>

Second, discursive approaches to ideology focus on “communicative practices through which ideology is constituted, transmitted and made visible,”<sup>105</sup> and address the dynamics of domination, depoliticization, and legitimation.<sup>106</sup> While ideology is also understood dynamically here, the emphasis is less on content and structure and more on formal linguistic analysis and language use (in Critical Discourse Analysis)<sup>107</sup>, or on the relational constitution of “myths” and “imaginaries” and the “decontestation” (or made more concrete) of concepts in specific discourses (in the post-structural

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<sup>99</sup> Leader Maynard 2013.

<sup>100</sup> See, for example, Freeden’s “morphological approach,” Skinner’s focus on “conventions,” or MacKenzie’s “constellations of belief.” Freeden 1996; Skinner 1974; MacKenzie 2003.

<sup>101</sup> MacKenzie 2003, 7.

<sup>102</sup> Buckler and Dolowitz 2009.

<sup>103</sup> Freeden 1996, 4.

<sup>104</sup> MacKenzie 2003; Finlayson 2012.

<sup>105</sup> Leader Maynard 2013, 304.

<sup>106</sup> *Ibid.*, 305.

<sup>107</sup> Fairclough 2010; Wodak and Meyer 2009; Fairclough 2013; Van Dijk 2015; Dijk 2001.

tradition<sup>108</sup>). Some critical scholars focus on the direct use of ideological discourse to “conceal contradictions,” typically by political or corporate elites, while others emphasize the more diffuse and varied forms of power across sets of ideological discourses. Broadly, discursive approaches tend to represent ideology non-spatially and rely largely on thick description of deep case studies.

Lastly, quantitative approaches to ideology—which include traditional political science attitudinal studies and several political psychology theories<sup>109</sup>—aim to identify correlational and causal relationships between ideology and political behaviour. Like the conceptual approach, quantitative studies focus on ideological content, but typically only a few concepts or attitudes at a time—such as the relationship between authoritarian or hierarchical beliefs and environmental attitudes, for example.<sup>110</sup> They also tend to prioritize tight or coherent ideological structures and fixed concepts (the majority of quantitative work adopts a conservative/liberal binary), partly due to the methodological requirements and constraints of surveys and controlled experiments.

#### 2.4.2 *Ontological understandings*

The first element, connotation, refers somewhat self-explanatorily to whether a particular approach treats ideology in a pejorative or non-pejorative way. Pejorative or semi-pejorative uses still occasionally occur but tend to be limited to Marxist or Marx-adjacent scholarship. For example, Gunderson et al. (2018)<sup>111</sup> draw on Marx’s theory of ideology to explore the power relations at work in climate change discourse. In this critical view, the term *ideology* refers to sets of ideas that conceal contradictions and *legitimate* and/or *reify* the dominant social order; and in the case of climate change, ideology leads to ineffective climate policy. Similarly, Petersen et al. (2019) introduce the term

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<sup>108</sup> Howarth, Norval, and Stavrakakis 2000; Stavrakakis 2000; Norval 2000; Zizek 1994; Norval 2000; Laclau 1997; Laclau 2006; Zizek 1996.

<sup>109</sup> For example, systems justification theory (Jost, Kay, and Thorisdottir 2009; Jost, Federico, and Napier 2006.); social identity theory (Tajfel and Turner 1979; Tajfel and Turner 1986.); social dominance orientation (Stanley, Wilson, and Milfont 2021.); and terror management theory (Greenberg et al. 1990).

<sup>110</sup> Stanley, Wilson, and Milfont 2021.

<sup>111</sup> Gunderson, Stuart, and Petersen 2018; Petersen, Stuart, and Gunderson 2019; Stuart, Gunderson, and Petersen 2020.

“ideological denialism,” where an individual “recogniz[es] climate change as a problem, yet fails to diagnose the root causes and prescribes solutions that maintain the current system.”<sup>112</sup> However, many leading ideology scholars argue for the broadening of the concept in a non-pejorative direction, to mean “some manner of patterned and politically oriented belief system.”<sup>113</sup> Importantly, however, taking a non-pejorative view of ideology does not necessarily imply the dismissal critical questions around power, legitimization, and oppression.<sup>114</sup>

Second, regarding ideological content or substance, some approaches treat ideologies as mostly “bundles of attitudes or values”—the dominant view in quantitative and political science studies—while others treat them as collections and (co)evolutions/co-constructions of concepts, meanings, and language—the view taken in discourse analysis and political theory, for example.<sup>115</sup> The key question here is, “what are ideologies made of?”; or in physics terms, “are ideologies composed of particles or waves?”

Third, a review of the literature shows what we might call a *structural* contrast between an emphasis on ideological “coherence,” “consonance,” or internal “consistency” on the one hand, and a looser, broader approach, on the other hand—one that embraces the “contradictions and dilemmas [which] are central to the trajectory of ideological development.”<sup>116</sup> The former is more common in post-war American scholarship<sup>117</sup>, while the latter is more common among European scholars.<sup>118</sup> Here, the larger question is essentially, “what counts as ideology” or, “how solid does it need to be to be considered an ideology?”, with a distinction between ideology as more concentrated or distilled versus more diffuse and active. This element is particularly important when it comes to thinking about ideological change.

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<sup>112</sup> Petersen, Stuart, and Gunderson 2019, 117.

<sup>113</sup> Leader Maynard and Mildenerger 2018, 5.

<sup>114</sup> For example, Skinner 2002, vol. 1.

<sup>115</sup> Leader Maynard and Mildenerger 2018, 4.

<sup>116</sup> Ibid.; Billig et al. 1988; Freedden 1996.

<sup>117</sup> Luskin 1987; Converse 1964; Carmines and D’Amico 2015; Jennings 1992; Knight 2006.

<sup>118</sup> See for example: Leader Maynard 2022; MacKenzie 2003; Freedden 1996.

Fourth, there is a distinction between spatial or non-spatial *representations* of ideologies and their content, regardless of whether there is an actual visual mapping or modelling component of the approach. The former includes the traditional one-dimensional left/right spectrum,<sup>119</sup> as well as the handful of two-dimensional graphs<sup>120</sup> and higher-dimensional approaches that cannot be visualized spatially.<sup>121</sup> Typically, multi-dimensional approaches are intended to be able to *compare* ideologies more precisely along specific features. Non-spatial approaches generally focus on symbols or concepts and their interconnections, such as Freedden’s morphological analysis<sup>122</sup>, and/or thick description of ideological content. For example, Cognitive-Affective Mapping (CAM)<sup>123</sup> is a method for visualizing belief systems, composed of concepts and their linkages, as well as the emotional valences of those concepts. While primarily a conceptual approach to ideology, some recent studies use network analysis to measure (and compare across individuals and populations) the structural features of participant-drawn CAMs.<sup>124</sup>

Finally, there are, broadly, two “directions” of scholarship on ideological attachment. The first, which focuses on individual determinants and attributes at the psychological<sup>125</sup>, physiological<sup>126</sup>, and even genetic<sup>127</sup> level, I refer to as “inside-out” approaches. These include most of the quantitative approaches discussed previously, as well as some of the cognitive-oriented conceptual approaches, such as CAM. In contrast, “outside-in” approaches emphasize the social, discursive, and structural factors and dynamics

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<sup>119</sup> See for example, Jost, Kay, and Thorisdottir 2009; Noël, Thérien, and Boucher 2021.

<sup>120</sup> Rokeach combines “support for equality” and “support for freedom”; Inglehart’s model has a secular-rational axis and a survival versus self-expression axis; Braithwaite’s two dimensions are preference-for-security and preference for harmony; Carmines and D’Amico use an economic issues dimension and a social issues dimension; in cultural theory, the “grid/group” model includes “salience of group membership to personal identity” and “acceptance of rules or regulations in everyday life”; and dual-process theory uses authoritarianism and social dominance orientation dimensions. Rokeach 1973; Inglehart and Welzel 2010; Braithwaite 1997; Braithwaite 1998; Carmines and D’Amico 2015.

<sup>121</sup> Hofstede uses five dimensions to classify national cultures, including power distance or the degree of societal inequality, uncertainty avoidance, individualism vs. collectivism, masculinity vs. femininity, and long-term vs. short-term orientation. But we could also include here work such as Haidt’s six moral foundations (harm/care, fairness/reciprocity, ingroup/loyalty, authority/respect, purity/sanctity, and liberty/oppression). Homer-Dixon 2020; Hofstede 2011; Haidt 2007.

<sup>122</sup> Freedden 1996.

<sup>123</sup> Homer-Dixon et al. 2014; Milkoreit and Mock 2014.

<sup>124</sup> Mansell, Reuter, et al. 2021; Mansell, Mock, et al. 2021; Mansell, Harell, et al. 2021.

<sup>125</sup> Jost, Federico, and Napier 2013; Jost, Kay, and Thorisdottir 2009.

<sup>126</sup> Kanai et al. 2011; Oxley et al. 2008.

<sup>127</sup> Bouchard 2004; Alford, Funk, and Hibbing 2005; Smith et al. 2011.

that shape individuals' attachment to particular ideologies.<sup>128</sup> Similar to the oceanic divide regarding ideology's structure or form, Leader Maynard and Mildemberger (2018) find that the focus on individual determinants is more common in American scholarship, while European scholars (or scholars trained in Europe) tend to focus more on social determinants.<sup>129</sup>

### 2.4.3 Research goals and designs

Given the vast number of disciplines now studying ideology, it is no surprise that the range of research goals and design is equally vast. Here, I highlight just two areas of differing goals and design: first, how researchers define their "level" of analysis, and second, whether the research aims to provide some kind of causal explanation versus constitutive explanations and/or descriptive "understanding."<sup>130</sup>

As outlined in the introduction, one of the deficiencies of current ideology research is a relative lack of cross-scale or multi-level analysis. That said, it is important to note how different scholars delineate those scales or "levels" in the first place. For example, Humphrey et al. (2019) parse *macro*, *meso*, and *micro* analytical levels based on where "politically consequential action [and influence] occurs," and how ideological discourse "flows" and is translated across society.<sup>131</sup> The macro level, they suggest, is the "canonically defined"—the manifestos, the "Great Thinkers"—while the meso level consists of "competitive political appeals, politically relevant public discourse and cultural criticism." Finally, the micro level is "the everyday...conceptual use [of ideology] by ordinary people." The general commitment to more process-oriented and discursive research is evident here, as is the emphasis on how ideology is *used* or *practiced* rather than simply *held*.

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<sup>128</sup> Leader Maynard and Mildemberger refer to these two "directions" as individual-to-group and group-to-individual attachment.

<sup>129</sup> Leader Maynard and Mildemberger 2018, 13–15.

<sup>130</sup> Here, I agree with Wendt (1998) who argues that "description" and "understanding" are, indeed, part of explanation in social science. But I include these terms as well, because much of the interpretive and critical work on ideology foregrounds thick description and eschews "explanation" because of its historically positivist connotations. Wendt 1998.

<sup>131</sup> Humphrey, Laycock, and Umbach 2019.

Alternatively, Leader Maynard and Haas (2022) distinguish between researchers who focus on ideology at the level of the state and/or suprastate organizations, and those who focus on sub-state level groups and/or political parties. This differentiation has the advantage of being less abstract than the previous example, but it also emphasizes political actors (of varying types) in a way might obscure some of the more dynamic ways that ideologies are constructed and contested *across* levels and types of actors.<sup>132</sup> They also note a variation in what they call “content-centric” and “content-neutral” explanation; while the former emphasizes the explanatory power of ideas within a specific ideology in a specific context, the latter emphasizes “generic patterns of ideological mobilization, contestation or conflict” that might have explanatory power across different contexts and different sets of ideological content.<sup>133</sup>

Regarding causal versus constitutive or descriptive work on ideology, there is a very general divide between these two research goals, but it is useful to tease out the differences a bit further. First, most descriptive work seeks to identify constitutive relationships within a particular ideology or case, in an effort to identify “difference-makers,” and so discursive approaches and thick descriptions of ideology are best suited to these goals. Conceptual work is also typically descriptive, though some studies that employ process tracing methods aim to identify causal mechanisms at the level of individual cases.<sup>134</sup>

Within causal work, most ideology research takes a quantitative approach to identify average causal effects and come to a semi-generalizable (within zones of regularity) population-level explanation. Depending on the study, ideology may be treated as the dependent or independent variable—researchers may be interested in the determinants of ideological attachment (as discussed in the previous sub-section) but also the consequences or effects of attachment. Because of the constraints of medium to large-N analyses, these studies typically use the traditional left-right political spectrum (sometimes with a 7-likert scale) or party self-identification via surveys. A lot of the research on Right-Wing Authoritarianism (RWA) and Social Dominance Orientation (SDO) fits here, as well.<sup>135</sup>

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<sup>132</sup> See for instance, Farney 2019; Bridgman et al. 2021.

<sup>133</sup> Leader Maynard and Haas 2022.

<sup>134</sup> Farney 2019.

<sup>135</sup> Stanley and Wilson 2019; Mirels and Dean 2006.



More recently, there has been an increase in qualitative work that seeks to identify the causal mechanisms underlying ideological influence and development, usually using process-tracing or a combination of methods. For example, Farney (2019) adds a causal dimension to Freedman's morphological framework using new process-tracing methods to examine how social conservatism in Canada has been influenced—along “multiple streams” or types of actors, and at key historical moments or “critical junctures”—by the United States.<sup>136</sup> Additionally, in some causal work on political party ideologies, scholars trace the pathways of specific ideas as catalysts of change.<sup>137</sup> There is also a growing interest in tracing pathways through which individuals are “radicalized” or come to adopt extreme ideologies in online environments, such as YouTube and Reddit.<sup>138</sup> So far, most of this emerging literature stops short of offering explanations using set-theoretic notation or set diagrams,<sup>139</sup> but that may be a useful direction for future studies aiming to clarify the causal role of ideology.

The next section considers some of the strengths and weaknesses of each of these approaches, especially with regard to studying ideological change.

## **2.5 The problems with current approaches**

Of course, there are benefits and drawbacks to each different ontological understanding of ideology—as structurally loose *or* tight, with dynamic *or* mostly fixed content, represented spatially *or* non-spatially, and as a primarily inside-out *or* outside-in attachment process. The problem is not so much the diversity of methodologies, ontological understandings, and research goals—in fact, it is precisely that diversity that has enabled such a vast resurgence of ideology studies! Rather, the problem lies in academic's tendencies to “preach to their own choirs,” knowing that they speak the same “ideology language.” It is the lack of articulating one's assumptions—of laying our cards on the table, so to speak—that hinders a lot of cross-disciplinary understanding.

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<sup>136</sup> Farney 2019.

<sup>137</sup> Goes 2021.

<sup>138</sup> Ribeiro et al. 2020; Perry and DeDeo 2021.

<sup>139</sup> Mahoney and Vanderpoel 2015.

Methodologically, each approach to studying ideology is strong where the others are weak. Quantitative studies tend towards a simplistic unidimensional understanding of ideology and often end up reifying existing categories and binaries (e.g., “liberals” vs. “conservatives”). However, quantitative approaches in political psychology pay attention to psychological processes, personality traits, and cognitive tendencies, which are viewed as key sources of ideological attachment, or ideology’s power.<sup>140</sup> For the most part, neither discursive nor conceptual approaches consider the role of emotion and affect, and instead identify language and meaning as the source of ideology’s influence. On the other hand, the emphasis on contested concepts in discursive and conceptual approaches is especially relevant to challenges such as climate change, a dynamic that is mostly missed in quantitative studies that measure attitudes on things like “sustainable development” or “green behaviour.” Furthermore, many conceptual approaches prioritize the development of simple typologies, but in doing so, fail to see the forest through the trees. Power dynamics often get a back seat in their analyses, in contrast with discursive approaches. And other than the recent work using process-tracing, there seems to be a gap in our ability to effectively study ideological change. Finally, none of the three main approaches effectively captures (1) the relationships and interactions *between* ideologies or parts of their content, or (2) engages with how those interactions contribute to dynamics of ideological change at various scales over time.

### *2.5.1 The particularly difficult challenge of “ideological change”*

Ideological change often gets lumped together with, or even eclipsed by, discussions of ideological attachment. And while I echo Leader Maynard and Mildemberger when they say that “explanations of ideological attachment and change will always reflect the expertise and foci of the analyst,”<sup>141</sup> I find that—across the study of ideology—*change* tends to be poorly defined or articulated, leaving significant gaps in how we study ideology, especially over time.<sup>142</sup> Various authors and research

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<sup>140</sup> Leader Maynard 2022.

<sup>141</sup> Leader Maynard and Mildemberger 2018, 19.

<sup>142</sup> The identification of this gap was one of the key conclusions in Leader Maynard 2013.

strands that use the term “ideological change” are often discussing very different things. The concept is used to mean anything from an individual voter changing their political party affiliation from one election to another, to a society-wide years-long shift in what is considered ideologically “mainstream,” “radical,” or “extreme.” While both of these phenomena may, indeed, be understood as ideological change, the differences in scale obviously require different research questions and tools. But vague conceptualizations of ideological change make it harder to link important insights across disciplines, even as efforts expand to integrate different approaches to ideology, more generally.

As with ideology research unconcerned with change, scholars may focus on change in the *contents* of ideologies (including both conceptual and affective components), on the *individual* and changes in their own ideology, on *groups* (including political parties), on broader *society* (whether at some appropriate regional or country-level), or on some combination of scales. But what kind or amount of change actually matters? Where does it come from and how does it happen? And how much change is necessary for an ideology to be considered *changed enough* to be deemed different from before?

Across scales, there is significant diversity in how scholars conceptualize ideological change in terms of (1) the sources or causes of change (e.g., cognitive-affective ones such as the experience of cognitive dissonance, threat perception, or feelings of insecurity and/or loss; socio-environmental ones such as wars, economic crises, pandemics, or environmental disasters; and more agent-driven ones such as strategic activity by political actors<sup>143</sup>, the mobilization of specific ideas, or timely interventions during critical junctures), (2) the mechanisms or pathways of change (e.g., Leader Maynard’s four mechanisms of ideological commitment, adoption, conformity, and instrumentalization,<sup>144</sup> as well as the traditional “learning model,”<sup>145</sup> “explanation adoption,”<sup>146</sup> social network rewiring,<sup>147</sup> “edging,”<sup>148</sup> innovation and

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<sup>143</sup> For example, Russia’s “active measures” and “ideological subversion” tactics.

<sup>144</sup> Leader Maynard 2022; Leader Maynard 2019.

<sup>145</sup> Aoki 2001; Williamson 2000; Festinger 1957.

<sup>146</sup> Perry and DeDeo 2021; Douglas et al. 2019.

<sup>147</sup> Perry and DeDeo 2021.

<sup>148</sup> Higgs 2008.

adaptation of ideas,<sup>149</sup> polarization processes,<sup>150</sup> and “activation” of authoritarianism in individuals/groups/societies<sup>151</sup>), (3) the pace (e.g., steady or irregular,<sup>152</sup> linear and slow or non-linear and rapid<sup>153</sup>) and (4) degree of that change (e.g., simple changes in position on an issue, ideological intensification,<sup>154</sup> political affiliation change, radicalization, or extreme change that may<sup>155</sup> or may not<sup>156</sup> lead to violence).<sup>157</sup> But as with the field of ideology studies in its entirety, there is also a lack of multi-scale, multi-method, and multi-disciplinary work on ideological change, in particular. Without getting specific about each of these characteristics in our theorizing and research designs, understanding “ideological change” will always be relinquished to the “future research tasks” paragraph at the end of our journal articles.

In the following section, I turn to complex systems science to develop an approach to ideology that not only addresses many of the shortcomings of current approaches, but also moves the field forward by better accounting for the dynamics of ideological conflict and change.

## **2.6 A complex reflexive systems approach to ideology**

Ideologies—or worldviews—contain sets of beliefs about the nature of reality (*ontology*) or “explanations for the way things are,”<sup>158</sup> plus value-based normative and prescriptive beliefs about how people *should* act in the world or what *ought* to happen. As interconnected sets or networks of meaning, they are “a crucial bridge between individual minds and collective behavior”<sup>159</sup> since they hold content *about* social groups but are also composed of content drawn *from* social groups. As explored in the

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<sup>149</sup> Humphrey, Laycock, and Umbach 2019.

<sup>150</sup> Tokita, Guess, and Tarnita 2021; Farrell 2016.

<sup>151</sup> Marasco, Gerhardt, and Wetters 2022.

<sup>152</sup> Higgs 2008.

<sup>153</sup> Mock and Homer-Dixon 2015a; Gell-Mann 1995.

<sup>154</sup> Kumlin 2006.

<sup>155</sup> Leader Maynard 2019.

<sup>156</sup> Perry and DeDeo 2021.

<sup>157</sup> While this section provides just a summary, I go into further detail on all the literatures referenced here in Paper #3.

<sup>158</sup> Perry and DeDeo 2021.

<sup>159</sup> Homer-Dixon et al. 2013.

previous section, ideological attachment occurs as a result of both “inside-out” determinants (i.e., cognitive-affective processes such as underlying value dispositions and motivated reasoning) and “outside-in” forces that constrain and/or enable particular development trajectories (i.e., social and material forces such as exposure to specific media discourses or dependence on particular economic sectors or industries).<sup>160</sup> It is precisely this multi-scale, multi-causal interaction that makes a complex systems approach uniquely apt for ideology research.<sup>161</sup>

While not a single cohesive theory, complexity science refers to a collection of concepts, principles, and tools for studying systems composed of recursive causal connections, that exhibit non-linear and emergent behavior.<sup>162</sup> Complexity science has many more time-sensitive concepts, including adaptation, preferential attachment in networks, and path dependence in systems over time, concepts which are especially useful for theorizing about ideological change. Recognizing a system as complex rather than just complicated or mechanistic allows us to identify behavior and patterns that might otherwise be invisible to us. A complexity lens emphasizes the relational and interactional nature of systems, highlighting feedback loops and dense causal connections, while paying attention to dynamics of change, adaptation, and emergence.<sup>163</sup> For living systems, complexity goes even further because of the ability of organisms to adapt to changing environments directed by their internal “rules” or “schemas”—“representations of their external environments that guide action in that environment in response to selection pressures”<sup>164</sup> (e.g., an organism’s DNA, or “autonomic” or instinctive behaviours in neural networks). These are called *complex adaptive systems* and they can be found nearly everywhere in nature.

In *human* systems, whose agents are self-aware and capable of recursive thinking (i.e., I can think about my own thoughts, I can think about what other people might be thinking, and I can think about

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<sup>160</sup> I use the terms “inside-out” and “outside-in”—rather than “bottom-up” and “top-down,” for example—deliberately. Following Ylikoski (2014), my framework moves away from the metaphor of “levels” and towards the metaphor of “scales” and “zooming in and out.”

<sup>161</sup> Homer-Dixon et al. 2013; Homer-Dixon et al. 2014.

<sup>162</sup> Homer-Dixon et al. 2013; Homer-Dixon et al. 2014.

<sup>163</sup> Scheffer et al. 2009; Jervis 1997; Bertuglia and Vaio 2005; Scheffer et al. 2012.

<sup>164</sup> Mock and Homer-Dixon 2015a.

what others might be thinking about what I am thinking), there is yet another layer of complexity. Human agents are *reflexive* in that they can “observe” their internal schemas while also being “participants” in them—they are not entirely separate from their mental representations, but they are also not the same thing as their mental representations.<sup>165</sup> Common phrases such as, “being introspective,” “examining one’s beliefs,” or “questioning one’s assumptions” are all examples of this reflexivity. When present in a complex adaptive system, the system is known as a *complex reflexive system*—one that is “directed back on itself” through a feedback loop between an agent’s perceptions of the world and their internal schemas.<sup>166</sup>

Ideologies, I argue, should be understood as complex reflexive systems—networked sets of emotionally charged concepts in an individual’s mind—but also shared across minds—that are constructed, shared, and changed through interaction and communication in an (social and material) environment. They are also densely—but not evenly—connected and are composed of many causal interactions that create feedback loops (i.e., interactive complexity). Over time, ideologies and those who hold them become patterned and clustered across a society. This structure contributes to system behaviour that is highly contingent and path dependent, and that demonstrates nonlinearity—where a small change could lead to a big impact, but on other occasions a big change could, in contrast, lead to only minimal impact (i.e., dynamic complexity).

While research on ideology varies across so-called “levels” of analysis—for instance, scholarship that focuses on (1) the content of a specific ideology, (2) the individual (or a population of individuals) and their held ideology, (3) a social group (or groups) that ascribes to a particular ideology, (4) a broader society or social system, or some combination of any of the above—I do not treat these different analytical foci as “different layers of reality,” but rather as several ways of describing essentially the same thing at different degrees of abstraction. To illustrate, consider these two descriptions from Ylikoski

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<sup>165</sup> In Elias’ words, humans and their internal schemas “can be considered separately, but not as being separate.” Elias 1978, 85.

<sup>166</sup> Beinhocker 2013. For the purposes of this paper, I equate complex reflexive systems to what Mock and Homer-Dixon (2015) call *complex representational adaptive systems*.

(2014): first, “certain social norms are in force in a group,” and second, “members of the group have certain beliefs, expectations, and dispositions to sanction certain behaviors.” While both statements are describing norms, the first is more abstract and gives up some detail that is communicated by the second; but, in Ylikoski’s words, they do not “occupy different layers of reality.”<sup>167</sup> We can study ideology at and across various scales (the individual, group, or society) because, as with other types of complex systems, complex reflexive systems are “open,” in that the boundaries around them are fuzzy and porous; they interact with elements or pull in information that is outside the system. So rather than defining, a priori, separate levels of analysis, a complex reflexive systems lens enables a more continuous scale of analysis (i.e., zooming in and out to different degrees of abstraction)—from ideological content to an individual’s subjective understanding of ideology, to the ideological intersubjectivity within and between individuals, groups, and societies.

### *2.6.1 Linking causation and context*

Accounting for the relationship(s) between causal interaction and structural context across various scales is part of what gives complex systems approaches a unique capacity to deal with perennial dichotomous problems and debates in social science, such as agency/structure, stability/change, continuity/rupture, or causes/background conditions. Fisher et al. (2014) go so far as to argue that complexity theory “mediates in the perpetual tug-of-war between structure and agency by honing in upon the emergent properties of their dynamic action when agents steer structures and structures circumscribe agents’ maneuvers.”<sup>168</sup> Consider, for example, two recent innovations in philosophy of science and theories of explanation—Ylikoski’s (2013) “developmental explanation” and Norman’s (2021) “interpretive process tracing”—that explore the need for, and the possibility of, some sort of combination of constitutive and causal explanations (in international relations, and in political theory, more broadly). As an interpretivist, Norman emphasizes constitutive explanations that provide a causal field, in which he

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<sup>167</sup> Ylikoski 2014.

<sup>168</sup> Fisher Onar, Liu, and Woodward 2014, 3.

“nests” causal explanation, while Ylikoski—a structural individualist<sup>169</sup>—foregrounds “chains of causations” that reorganize a system’s causal capacities, which then shape later chains and characterize subsequent system phases.<sup>170</sup> In essence, both Ylikoski’s and Norman’s approaches try to get at a notion of *causal feedback* where causal processes (or chains) that take place *in/on* a causal field (be it a fertilized egg, a human infant’s language system, or the international sphere) also *change* that causal field (to varying degrees), such that the causal capacities of that field are *different* and will lead to different outcomes (had the field not changed).

It is precisely this goal—of identifying and tracing causal feedbacks between processes that happen *in/on* a system *and* the system itself—that makes a complex reflexive systems approach uniquely fit for purpose when studying ideology. After all, as with language, ideology’s “initial source is an act of perception. Through their senses, people learn about their environment and accumulate knowledge [...gradually] organizing it all into a coherent representation system.”<sup>171</sup> The initial conditions of any complex system, including belief systems, are important because they shape—via processes of path dependence<sup>172</sup>, preferential attachment, and attractor dynamics—the possible-set of system evolutionary 0 trajectories, relations and the mechanisms that reproduce them. These relations shape the context in which future action or processes can occur. In other words, history—and the sequence of history—matters. My trans-scalar ideological framework aims to capture the ways in which these relations and processes are connected across ideational, discursive, and social scales.

### 2.6.2 *Complex reflexive systems and networks*

Given these characteristics, networks are a key conceptual tool for understanding the structure and dynamics of many kinds of complex systems, including ideologies, and can also inform power

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<sup>169</sup> Hedström and Ylikoski 2010.

<sup>170</sup> I consider this similarity an excellent example of how "complexity theory can bridge or at least broker conversations between positivists and interpretivists." Liu, Fisher Onar, and Woodward 2014, 3.

<sup>171</sup> Facchini 2016, 592.

<sup>172</sup> Pierson defines path dependence as “dynamic processes involving positive feedback, which generate multiple possible outcomes depending on the particular sequence in which events unfold.” Pierson 2004, 20.



analysis. Over the last two decades, scholars across many fields have increasingly turned to network theory for tools and methods to analyze relations and interdependence in more systematic ways. Networks enable a sort of “topographical description” of various kinds of systems, illustrating important flows of information and energy, power dynamics, socio-political relationships.<sup>173</sup> The approach also makes more visible the agents that function as gatekeepers of flows through the network<sup>174</sup>, and those with network-shaping capacity.<sup>175</sup> Network analysis—using measures of density, centrality, degree, and others—allows for more empirical investigation of these structures and their relationships at specific moments and over time to better understand behaviour, influence, and power.<sup>176</sup>

Of course, networks do not *necessarily* represent or model complex systems (for example, electrical grid networks or basic computer networks), but most complex systems can be represented as networks. Network theory provides a way to get more specific about a complex system’s parts and their relations. As with many system mapping methods, it is unlikely that a network representation of a complex system will capture everything, especially because deciding how to bound a system is an inherent challenge in this field. But even an incomplete network model can offer rich insights about the structure, relationships, and dynamics of a complex system.

In my approach to studying ideologies as complex reflexive systems, I predominantly use a “networks-as-structures” as opposed to a “networks-as-actors” approach, following Miles Kahler’s (2009) differentiation. While the latter treats networks as a specific intentional and enduring organizational or relational form with the goal of collaborative action (e.g. many different human rights advocacy networks, intergovernmental networks, even terror networks), the former treats networks themselves as structures that are (1) determined and sustained by interaction over time, (2) not consciously or intentionally designed by agents, (3) and taken by an individual node as given.<sup>177</sup> Note that, actor

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<sup>173</sup> Barabasi and Albert 1999; Hafner-Burton, Kahler, and Montgomery 2009; Barabási 2009; Papadopoulos et al. 2012; Wasserman and Faust 1994; Pareschi and Arcelli Fontana 2016.

<sup>174</sup> Carpenter 2011; Carpenter et al. 2014.

<sup>175</sup> Kinsella 2003a.

<sup>176</sup> Ibid., 4.

<sup>177</sup> Kahler 2009.

networks can nearly always be analyzed as a component of some larger network structure. Crucially, both types of networks are themselves behavioural outcomes; the first, through intentional organizing and resource mobilization by a group of agents, and the second, by sustained and repeated (inter)actions of individual agents.

In either approach, agents may have some awareness of network structure and their position in it, and they make strategic (norm-based and/or self-interested) choices within its constraints to pursue their own or shared interests. Agents can even leverage their positions using different strategies. Central nodes can threaten to “sever links or promise network expansion,”<sup>178</sup> whereas less-embedded nodes might seek power by acting as a bridge to amass social capital, or can threaten to leave the network altogether.<sup>179</sup> The outcomes of those actions determine the nature of the network’s attraction for new members, thereby establishing a landscape of possible future evolutions of network structure. In this way, network structure is both the *product* of action/interaction and the *context* in which action/interaction is enabled and constrained.<sup>180</sup> Put another way, network theory can account for both the purposive action of agents (enabled and constrained by network structure) and the social structures and forces (constituted and reproduced by action over time) that shape the possible fields of action, thereby offering a way to study how a complex reflexive system’s structure, its parts and their relations change over time.<sup>181</sup>

Grounded in a complex reflexive systems lens, this use of networks to focus on context *and* process, structure *and* agency, can help researchers reconcile over- and under-socialized approaches to

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<sup>178</sup> Ibid., 12.

<sup>179</sup> Kahler’s (2009) typology of network power includes *bargaining power*, *the power of exit*, and *social power*. I see the first two forms as essentially the same thing: self-aware nodes, who are at least partially aware of the network structure in which they are embedded, leveraging their structural position (which would/could include different network analysis measures like in-degree, out-degree, centrality, betweenness, etc.) to get the outcome they want using different strategies. Network hubs can bargain because they have high *degree* and so many smaller nodes may depend on it for 2 or 3-stepwise connections to others; and they have high *centrality* so information and resources flow in greater amounts through the hub, giving it agenda-setting capacity through the structural control of information flows. But “the power of exit” is simply another flavour of bargaining, but what smaller/marginal nodes have to bargain *with* is very different from that of hubs. In threatening to exit the network, the smaller node bets that the hub “needs” its connection—for legitimacy, for access to a particularly insular part of the network, or for important information that flows from the smaller node to the hub.

<sup>180</sup> Kahler 2009, 5.

<sup>181</sup> Papadopoulos et al. 2012; Kahler 2009.

human behaviour and offers a more empirical way to study the coevolution of ideology and the social context in which it is embedded.<sup>182</sup>

### 2.6.3 Complex reflexive systems and Ideational power

Despite the constructivist and ideational turns being well under way in IR at the time, Barnett and Duvall's (2005) now classic taxonomy relegates nearly all ideational phenomena to the category of *productive power*, which they define as "the constitution of all social subjects with various social powers through systems of knowledge and discursive practices of broad and general social scope."<sup>183</sup> It concerns discourses and how discourses produce social identities and capacities. But while productive power captures the importance of *diffuse* social processes in the production of meaning and identity, it does not capture those instances where meaning is more *directly* produced and shaped by agents. These instances are not captured largely because Barnett and Duvall exclude *persuasion* from their understanding of power. The closest they come to accounting for persuasion is in the statement, "socially contested efforts to set and fix meanings can be expressive of productive power,"<sup>184</sup> but they do not consider what those efforts may be nor who can/does engage in them.

Yet, in many policymaking contexts, specific actors promote particular meanings of concepts or issues over others. They do this through official reports, position papers, speeches, and other discursive practices. These dominant meanings then constitute the identities and capacities of actors involved in or concerned with the governance of said issue. As a result, alternative meanings may be made completely inaccessible and unthinkable, or at minimum, considered to be on the fringes of the discourse, along with other actors that may be promoting them. For example, the World Bank and the G20 promote a certain interpretation and understanding of "food security" that is different from what the Food and Agriculture Organization or the Committee on World Food Security promotes. Since this is observable by studying

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<sup>182</sup> Polanyi 1968; Granovetter 1985.

<sup>183</sup> Barnett and Duvall 2005, 55.

<sup>184</sup> *Ibid.*, 57.

the texts and discourses of these organizations, and since these different conceptions of food security lead to conclusions about *who* works on food security issues and *what* they should do, promotion of particular meanings can be considered a type of productive power. However, rather than being located in broad systems of knowledge and social (re)production, this productive power is more socially locatable and traceable through power-laden interactions between agents.

A decade after B&D, policy studies scholars started to call for more explicit attention to ideational power as its own analytical subcategory rather than treating ideas simply as resources for exercising other kinds of power. In what came to be known as a discursive institutionalist approach, Carstensen and Schmidt (2016) define ideational power as “the capacity of actors (whether individual or collective) to influence actors’ normative and cognitive beliefs through the use of ideational elements,”<sup>185</sup> either “directly through persuasion or imposition or indirectly by influencing the ideational context that defines the range of possibilities of others.”<sup>186</sup> Carstensen and Schmidt identify three types of ideational power. First, *power through ideas* is “the capacity of actors to persuade other actors to accept and adopt their views of what to think and do through the use of ideational elements.” This is the most common understanding of ideational power. Second, *power over ideas* is “most strongly connected to compulsory power, since power here is related less to persuasion and more to agents’ imposition of ideas and the power of actors to resist the inclusion of alternative ideas into the policy-making arena.”<sup>187</sup> This manifestation relates to the control or dominance of the meaning of particular ideas. Third, *power in ideas* “plays into processes of structural and institutional power...this takes place through agents having established hegemony over the production of subject positions; in the latter, by institutions imposing constraints on what ideas agents may take into consideration.”<sup>188</sup> Here, certain ideas might enjoy more authority due to structural arrangements.<sup>189</sup> In sum, *power through ideas* manifests as persuasion, *power*

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<sup>185</sup> Carstensen and Schmidt 2016, 320.

<sup>186</sup> Ibid., 321.

<sup>187</sup> Ibid.

<sup>188</sup> Ibid.

<sup>189</sup> Ibid., 320–321.

*over ideas* as imposition or meaning dominance, and *power in ideas* is evidenced by the authoritative status of a particular ideational element.

Again, a networked perspective helps clarify these ideational power dynamics even further. Nodes with many connections are considered to have a high level of “network centrality” and are called hubs.<sup>190</sup> As gatekeepers, hubs have disproportionate influence in the network; they determine issue salience (e.g. food price volatility over agricultural speculation), and have more power to promote certain meanings of concepts (such as food security). As highly connected and materially powerful hubs, the World Bank and G20 have disproportionate influence—power over ideas—on the global food security agenda. In this way, a networked perspective and a more nuanced treatment of ideational power better accounts for the structural, institutional, *and* agential aspects of productive power; it highlights the constitution of meaning and identities through emergent discourse, through crystallization in meaning structures and institutions, as well as through more direct relations of ideational power. This richer analytical approach is critical for understanding the role of power in my network-based framework of ideologies, and important for identifying causal mechanisms between ideological conflict and policymaking.

The following section develops a conceptual framework of how ideologies come to influence policymaking, mediated by socio-political networks and their emergent discourse networks.

## **2.7 A new conceptual framework**

To restate my definition, ideologies (A) are *complex reflexive systems of ideas, beliefs, and emotions, held in the minds of individuals but typically shared by or attributed to members of groups, that shape political outlook and guide behaviour*.<sup>191</sup> I emphasize the importance of the relationships between ideas, beliefs, and emotions using a network metaphor—the elements of ideology have meaning, in part,

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<sup>190</sup> See footnote 77 for a description of several types of centrality.

<sup>191</sup> Adapted from Homer-Dixon et al. 2013.

because of how they exist in relation to each other, not just as separate components. They are (co)constructed discursively *and* psychologically, i.e., through communication and exchange of language, meanings, and symbols across social networks—processes that are subject to in-group/out-group dynamics and social categorization, construction of (mis)perceptions, identity construction, and material and nonmaterial interests.<sup>192</sup>

I emphasize the conceptual content and arrangement of ideologies but recognize that ideologies form in and across existing societies, languages, cultures, and structures, all of which, enable and constrain the “direction” of ideological formation. Ideologies inform actor’s political behaviour and policy choices and, over time, (re)shape social structures, institutions, and systems in which ideologies (re)form and evolve. This feedback loop suggests that “the way in which individuals are positioned in certain social networks and movements thus becomes crucial,” since actors may strategically “manipulate discourses and disseminate particular claims in ways that...encourage the internalization of certain ideological notions.”<sup>193</sup> In simple terms, ideologies are complex reflexive systems that can be studied as (1) networks of meaning embedded in and across (2) networks of people embedded in (3) larger social systems and structures, which can at least partly be understood as networks. I refer to this combination of networks and processes as *trans-scalar ideological networks*.

I use the term *trans-scalar ideological network* to capture three key elements. First, I deliberately use “trans” instead of “multi” to suggest the existence of links between nodes at different scales of the overall network. Following Ylikoski (2014), I use “scalar” instead of “level” to indicate that the different analytical foci of the framework are not “different layers of reality,” but rather multiple ways of describing essentially the same thing at different degrees of abstraction.<sup>194</sup> Finally, I use the term “network” instead of “system” as a shortcut to state my core complex systems modelling/mapping approach to all scales of ideology.

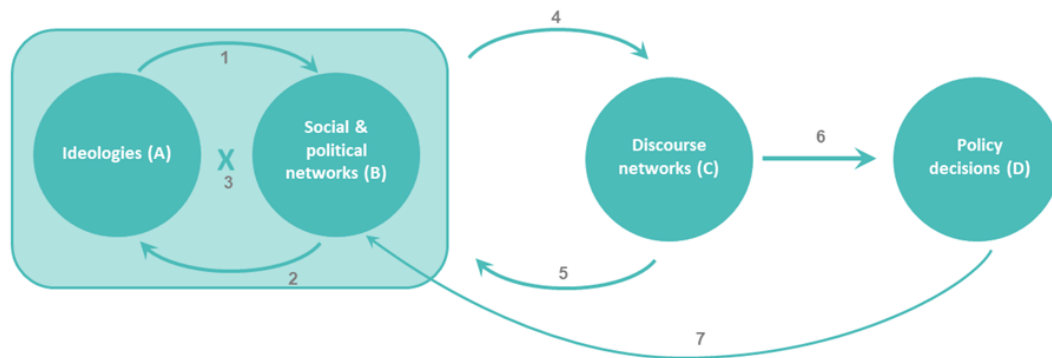
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<sup>192</sup> Leader Maynard and Mildenerger 2018, 19.

<sup>193</sup> Ibid., 20.

<sup>194</sup> Ylikoski 2014.

Using lettered variables (the circles) and numbered processes (the arrows), Figure 3 illustrates the framework as a Boolean causal loop diagram<sup>195</sup> to explain the complex causal path through which ideologies influence policy decisions. The two key intervening variables that are needed to make sense of this journey are social/political networks and discourse networks.



**Figure 3. A trans-scalar framework of how ideologies influence policy decisions.**

Sociopolitical networks (B) are, simply, the dynamic structures that emerge from relationships and connections between people and organizations as they act politically within the enabling/constraining material (and digital/virtual) systems in which they are embedded. Depending on the specific case, those connections could represent anything from financial support to endorsements or formal memberships, or even a combination of relationship types. Studying these structures *as networks* rather than communities or coalitions can give us more nuanced insights about structural power, alliance-building, agenda-setting and -vetting, and the trade-offs between centrality and legitimacy.<sup>196</sup>

Discourse networks (C), then, are the structures that emerge from the *communications* between people as they act politically. People may or may not be *directly* connected to each other (like in a sociopolitical network), but they are linked by way of their contributions—via public testimony, op-eds, media appearances, and even social media posts—to political discourse. In a simple example, two

<sup>195</sup> Cascade Institute n.d.; Bureš 2017.

<sup>196</sup> Carpenter 2011; Lake, Wendy H. Wong, and Wong 2007; Kahler 2009.

strangers who both publish tweets with the same hashtag would be considered linked in a discourse network. The boundaries of a discourse network—i.e., the “spaces” where political content is communicated, co-constructed and contested—could be defined by geographic space (e.g., a town hall meeting), digital space<sup>197</sup> (e.g., a specific Facebook group or Subreddit community), an event (e.g., live tweeting during a political debate), a policymaking community (e.g., Parliamentary or Congressional hearings), or a specific issue under discussion in news media (e.g., all op-eds in a country’s most-read newspapers). Within those “spaces,” actors may compete over meanings of concepts, compete for legitimacy, express common ground to extend an olive branch or build a bridge, articulate who is considered in/out of the group, or make any number of discursive contributions. Over time, the emergent “structure” of relationships between contributors and contributions—the discourse network—can be described and analyzed as a network phenomenon.<sup>198</sup>

My framework bears some similarity to Leader Maynard’s “infrastructural model of ideology’s influence.” But while he focuses on how ideology shapes individual political behaviour (specifically, armed violence in the context of mass killings), I am interested in how changes in ideology (as meaning networks) shapes changes in sociopolitical networks—and vice versa—and how those changes shape discourse networks and (collective) political decision making. Individual political behaviour is part of my framework, but implicitly, in that people choose (to varying degrees) what social and political networks they are part of, and they choose how/what to contribute to political discourse. In that sense, I see Leader Maynard’s infrastructural framework as being located on the left-most side of my diagram, where his mechanisms of ideological commitment, adoption, conformity, and instrumentalization inform individual’s behaviour within sociopolitical and discourse networks.<sup>199</sup>

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<sup>197</sup> For studying digital or online discourse spaces, computational tools such as Probabilistic Topic Modeling and Structural Topic Modeling have recently emerged as powerful network analysis methods (See Pareschi and Arcelli Fontana 2016; Perry and DeDeo 2021.)

<sup>198</sup> Leifeld 2018; Leifeld 2020.

<sup>199</sup> Leader Maynard 2022, 42.



I now turn to explaining the interactions and relationships in the framework, starting on the left-hand side of the diagram, and explaining them in numerical order. First, there is a reinforcing feedback loop between ideologies (A) and sociopolitical networks (B). Sociopolitical networks directly shape people's earliest ideologies by virtue of the family/culture/religion into which a person is born as well as various individual-level determinants of ideological attachment.<sup>200</sup> And as a person's environment and social networks change through their life, those ideologies may shift (#1). As discussed in Section 4, Beinhocker (2013) refers to this feedback process in complex reflexive systems as *internal model updating*.<sup>201</sup> But ideologies also shape sociopolitical networks (#2), since "People may be attracted to (or repelled from) other people when they realize the similarities (or differences) in their individual belief systems."<sup>202</sup> So, when someone is exposed to new ideas/beliefs or new people with new ideas/beliefs that conflict with their "meaning network," the person must—in order to maintain cognitive and emotional coherence—reject the new idea entirely or adjust or restructure their meaning network to partially or fully accept the new idea. If they partially or fully accept it, they may no longer identify or agree as strongly with people in their sociopolitical network and may seek out relationships with people who also accept the new idea.<sup>203</sup> In other words, ideological dissonance and repulsion also contribute to shaping sociopolitical network structure.

Essentially, ideologies are "network[s] of concepts embedded in networks of people."<sup>204</sup> This embeddedness means that ideologies also interact with sociopolitical networks in an INUS relationship (#3). An INUS relationship means that a cause can be "an *insufficient* but *necessary* part of a condition which is itself *unnecessary* but *sufficient* for the result."<sup>205</sup> In this case, ideologies and sociopolitical networks are *insufficient on their own* to shape discourse networks, but as a set, are a *sufficient*

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<sup>200</sup> Settle et al. (2010) even "provide the first evidence for a possible gene-environment interaction for political ideology." Settle et al. 2010, 1196.

<sup>201</sup> Beinhocker 2013, 332.

<sup>202</sup> Homer-Dixon et al. 2013, 344.

<sup>203</sup> Milkoreit and Mock 2014.

<sup>204</sup> Homer-Dixon et al. 2013, 346.

<sup>205</sup> Mackie 1965, 245; Kim 1971.

condition—in any number of different sets or combinations—for discourse networks to emerge. However, discourse networks can also emerge from other *sufficient* conditions, such as political actors employing strategic narratives in mass media<sup>206</sup>, and so ideologies and sociopolitical networks are not *necessary* for discourse networks to exist. The INUS set of causes (i.e., ideologies and sociopolitical networks) shapes the boundaries and contours of discourse networks, both in terms of the *content*—what is and is not available to discuss and what the contested meanings are<sup>207</sup>—and the structural *context*—the actors engaging in discourse and their relationships to each other (#4).

Discourse networks then (re)shape the sociopolitical networks (#5), and impact ideological change via network dynamics like preferential attachment, path dependence, etc. and through mechanisms of social learning. Individual perceptions, anticipations, and assumptions create reflexivity across sociopolitical networks, which leads to changes in behaviour, beliefs, and relationships. Over time, reflexivity means that ideologies themselves co-evolve. This dynamic is reminiscent of Ian Hacking’s “looping effect” where classifying individuals—as “conservatives” or “liberals,” for example—leads them to start taking on additional traits of the group classification. The individuals end up not quite the same ‘kind’ as before the investigation and/or interaction, and the classifications themselves become entrenched or reified as people identify more strongly with their group.<sup>208</sup>

Agents make policy decisions (D), informed by the structure and dynamics of discourse networks (#6). But importantly, those agents both hold their own ideologies, and are themselves embedded in sociopolitical networks that constrain and enable their behaviour in structural, social, and material ways. Depending on the nature of those policy decisions, the political landscape may change, and the structures of sociopolitical networks will continue to evolve in response to the outcomes of those policies (#7).

Of course, the dynamics captured by this framework are *not* power-free. As previously discussed, networks are not flat, and ideas and ideologies do not spread by simple osmosis. My trans-scalar

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<sup>206</sup> Černý and Ocelík 2020; Howe, Stoddart, and Tindall 2020.

<sup>207</sup> Lukes 2005, 28.

<sup>208</sup> See Hacking 1996.

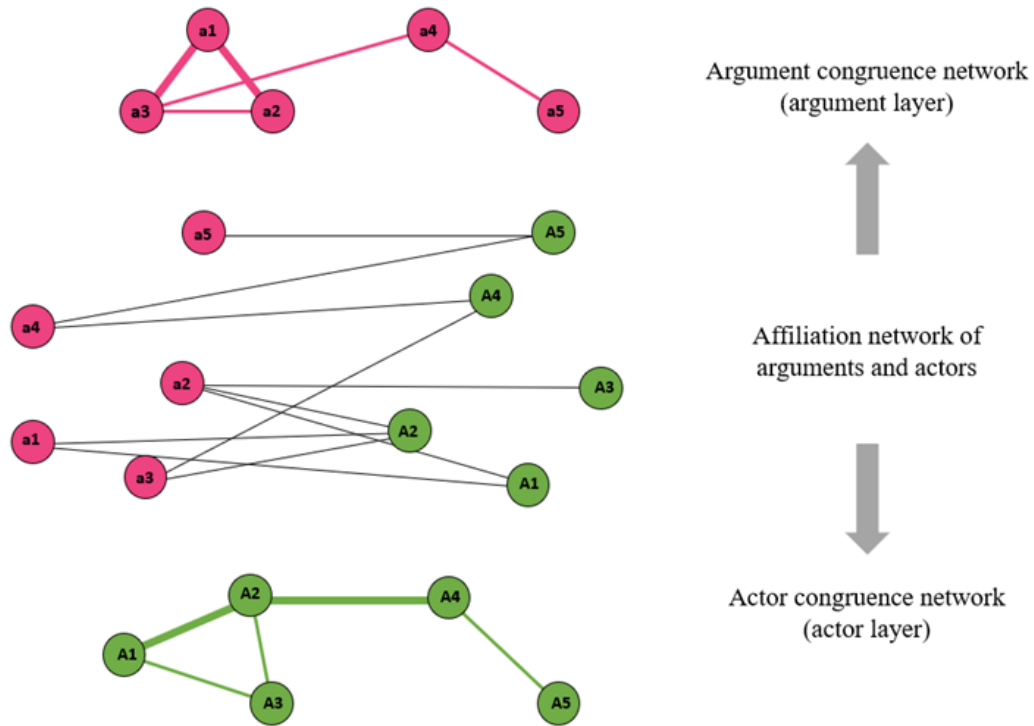
ideological networks framework points to myriad points of tension, resistance, and contingency, and each chapter in this dissertation explores various forms of power as it relates to ideology and ideological conflict.

### *2.7.1 Operationalizing the framework*

But how can we meaningfully operationalize this framework? I propose a research methodology that combines two relatively new methods for analyzing ideological and discursive content, with existing social network analysis (SNA) and influence mapping. First, Discourse Network Analysis (DNA) describes and analyzes the network structures of political discourse, rather than single actors, issues, or coalitions. Second, Cognitive-Affective Mapping (CAM) is a method for visually depicting belief systems as networks of interacting concepts and emotional valences. DNA and CAM complement each other because while CAMs depict networks of concepts *within* an actor (or organization), DNA illustrates networks of actors linked by what arguments or concepts they use. CAM helps us get at the subjective experience of holding a particular ideology (the inside-out), while SNA and DNA help us get at the intersubjective structures all ideologies are embedded in (the outside-in). When used together, SNA, DNA and CAM allow researchers to (1) work across scales, (2) jointly consider material, social, and ideational levels of analysis, (3) trace dense network interactions and clustering effects, (4) incorporate insights from cognitive, psychological, and social sciences, and (5) analyze power in more nuanced ways.

Developed in the field of policy studies, DNA combines qualitative text analysis with quantitative network analysis. After coding a dataset of statements and speakers (using manual and semi-automatic techniques), the researcher can generate a variety of “affiliation networks”—where both *actors* and *arguments* (or “concepts” in the DNA literature) are represented as nodes—and “congruence networks”—where *either* actors or arguments are presented as nodes and are linked when they share one or more “affiliations” with their counterparts in the affiliation network. Together, a congruence network of *arguments* and a second congruence network of *actors* help describe the social and conceptual

“topography” of discourse within a particular case. Figure 4 illustrates these relationships in a simple model of a discourse network.

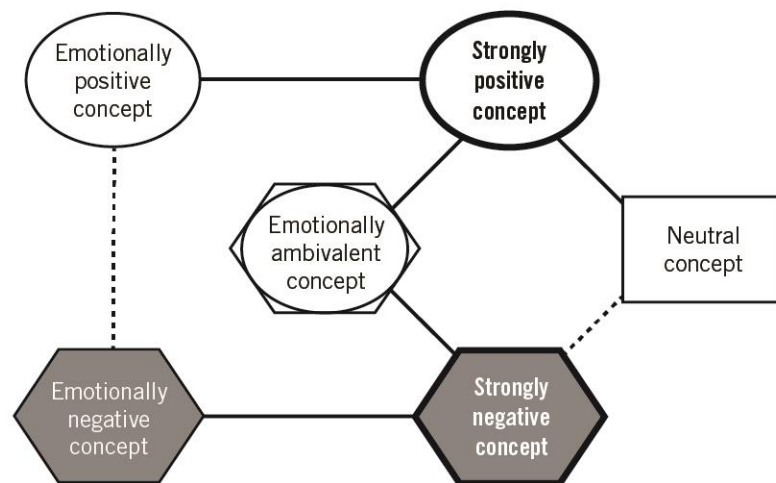


**Figure 4. Simple model of a discourse network.**

The network in the middle represents an affiliation network (also called a bipartite graph) between arguments (on the left) and the actors (on the right) that mention them. The top network includes only arguments as nodes, but they are linked if they are mentioned by the same actor in the affiliation network. The bottom network is the inverse, where actors are linked if they share one or more arguments in the affiliation network. Actor congruence is present when pairs of actors co-support or co-reject a particular argument. Argument congruence is present when pairs of arguments are both supported or rejected by a particular actor.

Analyzing discourse networks gives us an *outside-in* perspective on ideology’s causal role in politics and policy-making by looking at the whole, multi-layer discourse space. On the argument layer, it shows which arguments “hang together” based on how they are used in the discourse. Unlike the three main approaches to studying ideology outlined in Section 2—conceptual, discursive, and quantitative—DNA also captures some of the relationships *between* ideological clusters, including detecting which arguments sit at the margins of the cluster and act as “bridges” to the others.

CAM, on the other hand, provides an *inside-out* perspective and a way to “zoom in” on ideologies (see Figure 5). By focusing on the internal belief structures of specific actors and comparing them, we can identify subtle ideological differences based on how concepts are *linked* in the CAMs. Rather than just agreement or disagreement with a series of arguments (as in DNA), CAM illustrates the cognitive-affective associations *between* concepts that make up those arguments. The maps also show where concepts are “held” in the belief structure, and better captures the emotional commitments and motivations that underlie an individual’s or organization’s ideology. Further, CAM allows us to incorporate external data about individual actors in a specific discourse community and analyze the concepts that actors use or prefer without the constraints or norms imposed by that discourse community.



**Figure 5. Model of a Cognitive-Affective Map**

I demonstrate an outside-in version of this methodological approach in Paper #2 through a case study of energy transition discourse in Canadian Parliamentary proceedings from 2019-2021. Paper #3, on the other hand, uses an inside-out version of my framework to study transnational advocacy networks’ ideologies related to the 2012 Arms Trade Treaty. Both case studies demonstrate the potential of a novel

research design that integrates an outside-in and inside-out approach to describing or measuring ideologies as complex reflexive systems.

## 2.8 Conclusion

In this paper, I explored the existing approaches to studying ideology and ideological change, considering not only the dominant methodological approaches but also the underpinning ontological commitments of those approaches, and their accompanying research goals and designs. The diversity of this growing field is impressive, and each research project, of course, has its strengths and weaknesses—but none of the main approaches effectively capture the nature or dynamics of ideology across multiple scales or over time. Cross-disciplinary research remains hindered by a lack of what we might call “ontological transparency” (referring to the Ontological Understanding dimension of my Ideology Research Matrix in Section 2), plus a tendency by researchers to stay within their epistemological silos. Ideological change, specifically, tends to be poorly defined and articulated, in part, due to the range of ontological commitments and disciplinary training of researchers engaged in this field.

To overcome some of these challenges, the paper explored the value of a complex reflexive systems approach to ideology, which is better suited to dealing with cross-scale interactions, recursive causal connections, and adaptive feedbacks between agents’ internal models of the world and their environment. In this approach, and in the more formal conceptual framework I developed in Section 2.7, I draw heavily on network theory to represent and/or model the multiple scales of ideology as a complex reflexive system. As networks of meaning, ideologies are embedded in and across networks of people—they are held in individual minds but are socially and discursively constructed across groups. These social networks are also embedded in larger social systems, structures, and institutions, which can at least partly be understood as networks. Network dynamics at each of these scales shape the ones they are embedded in (and vice versa), and the structure of the network is both the *product* of interaction (i.e. a behavioural outcome) and the *context* for future interaction (i.e. conditions of possibility). Agents hold, discuss, and

act on ideas to shape structures, and structures constrain/enable the ideas that agents come to hold and their capacity to discuss and act on them. Thus, the ideational component of complex reflexive systems does not solely belong to either the realm of “agency” or “structure.”

In an effort to reconcile over- and under-socialized approaches to studying ideology and its role in political discourse and policymaking, I developed a conceptual framework—grounded in a complex reflexive systems approach—of how ideological influence is mediated by socio-political networks and their emergent discourse networks. I proposed one possible methodology for operationalizing this conceptual framework using SNA, CAM and DNA.

Finally, while this paper only outlined the beginnings of a theory of ideological change by specifying four key characteristics—(1) the sources or causes of change, (2) the mechanisms or pathways of change, and (3) the pace and (4) degree of change—the complex reflexive systems approach developed in this paper (and the methodological expansions suggested above) is especially well suited to support future theoretical and empirical research on ideological change.

## Chapter 3

# Article #2: Ideology and Climate Change in Canada and Beyond: A Complex Reflexive Systems Approach to Energy Transition Discourse Networks

### 3.1 Preface

As far as ideological conflict is concerned, most people would agree that climate change ranks at least in the top five of the most ideologically magnetized political issues of the last two decades. But while most countries have moved beyond a narrow debate about climate change belief versus denial, ideology still very much matters for how we debate and decide how to tackle very real—but still highly political—climate change problems and solutions. Many different groups—with very different worldviews—are now actively competing and negotiating over more specific climate-related problem-definitions, the meanings and normative substance of proposed solutions, and the “equitable” distribution of harms and gains from those solutions. In this paper, I explore what Michael Freeden calls the “space between *Ideologiekritik* and positivist, attitudinal political science,”<sup>209</sup> focusing on the “heart” of ideology studies as the “continuous, fluctuating competition over voice and public policy”<sup>210</sup> in the context of climate change discourse.

This chapter provides the first operationalization of my trans-scalar ideological networks framework using a case study of energy transition discourse. It examines existing literature related to ideology and climate change and identifies several gaps where my framework can contribute. It makes the case that tracing “how and why ideological discourses have the influence they do” is both more difficult

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<sup>209</sup> Freeden 2021, 79.

<sup>210</sup> *Ibid.*, 80.



and more important in non-polarized contexts (i.e., outside of a simple climate change “believers” vs. “deniers” scenario); ideological conflict and influence is still at play, but in more subtle ways that are not well-captured by existing methods. Using my framework, the chapter demonstrates a multi-directional approach to studying ideology: first outside-in (using DNA), then inside-out (using CAM). The chapter identifies several emergent ideological “camps” and dives deeper into “representative actors” from each camp and examines their ideologies from the inside-out, using CAM. Overall, the paper supports my claim that ideological heterogeneity—just as much as ideological polarization—matters for how ideology influences decision-making.

One more recent development is worth including here. While the case study in this article covers the proceedings of the 43<sup>rd</sup> Parliament (from December 5, 2019, to August 15, 2021), the debates about creating “just transition” legislation continued through the 44<sup>th</sup> Parliament, culminating in the introduction of *Bill C-50, The Canadian Sustainable Jobs Act*.<sup>211</sup> The change in terminology from “just transition” to “sustainable jobs” is notable, and was—according to Natural Resources Canada minister, Jonathan Wilkinson—deliberate.<sup>212</sup> Reaction to the Bill has varied, but much of it reflects similarities to the emergent ideological “camps” identified in this chapter, including support from labour unions, accusations of “delayism” from some environmental groups<sup>213</sup>, excitement from the critical minerals and renewable energy industries, and a mixture of outrage and cautious optimism from the oil and gas sector.<sup>214</sup>

An earlier version of this paper was published in the recent *Routledge Handbook of Ideology and International Relations*, edited by Jonathan Leader Maynard and Mark L. Haas. I am indebted to my co-authors, Scott Janzwood and Thomas Homer-Dixon, for keeping my feet to the fire in completing this article.

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<sup>211</sup> Canada 2023.

<sup>212</sup> After all the just-transition controversy, Ottawa hopes its sustainable jobs law will bring a fresh start 2023.

<sup>213</sup> Rougeot 2023.

<sup>214</sup> Williams and Scherer 2023.

## 3.2 Overview

Across many countries, there is growing agreement on the existence of a “climate emergency” and the need to act urgently to avoid the worst of its consequences. But within that common ground, there is significant heterogeneity of worldviews influencing, or trying to influence, climate action, especially around energy transition pathways. As the ideological differences between groups advancing different goals, priorities, and policies become less pronounced (e.g., between climate change “believers” and “deniers”), the task of tracing or measuring “how and why ideological discourses have the influence they do” becomes more nuanced and difficult. In this chapter, we consider the relationship(s) between ideology, institutions, and discourse in the context of recent climate change politics in Canada. Skepticism about Canada’s ability to meet its Paris Agreement targets, anxieties over economic and energy security, and major concerns about the impact of an energy transition on key vulnerable or marginalized communities have all led to a wide range of ideologically charged priorities that have emerged for addressing the climate crisis and distributing the costs/benefits of energy transition. Using a novel framework, we treat ideologies as “complex reflexive systems”—networked sets of ideas, beliefs, values, and emotions that are held in individual minds but are socially and discursively co-constructed. We argue that ideology *matters* in policy making around climate change, and not only along the lines of belief versus denial. Drawing on network theory and new network analysis methods, we suggest that how and why ideology matters in climate change politics, depends on the social and communication network structures in which ideologies are embedded.

## 3.3 Introduction

Most discussions of the role of ideology in climate change politics have focused on deniers and denialism. Dramatic demonstrations and quotes from politicians—such as United States Senator Jim Inhofe holding up a snowball during a Congressional hearing as ‘proof’ that global warming is a

hoax<sup>215</sup>—capture the attention of both the public and the academy. But a simple binary of believers versus deniers misses out on the more nuanced ways that ideology shapes climate politics. Even without vociferous denialism, ideological conflict and change are still an enormous part of the story. For example, there is growing agreement across many countries on the existence of the “climate emergency” and the need to act urgently to avoid the worst of its consequences.<sup>216</sup> But within this “pro-climate” majority, there is significant heterogeneity of worldviews informing that action. Policy choices about how and when we should face the threat of climate change, the extent and nature of costs we are willing to incur, and whose wellbeing we hold above others are all values-related questions that are fundamentally grounded in worldviews and ideologies.

Existing scholarship tends to analyze ideology as primarily an individual-level *or* social-level phenomenon, setting aside questions about context and social embeddedness in the first instance, and questions about the inner workings of the mind in the second instance. By ignoring the complex interactions *between* cognitive, psychological, social, and political systems, existing approaches too often talk past each other, and miss out on the insights that could be gained from a more interdisciplinary approach. In ideology research on climate change, especially, overgeneralized characterizations of ideologies fail to uncover compelling causal stories linking ideological dynamics to changes in discourse or policy. A new systems-based approach that reflects the coevolutionary dynamics between ideologies and social networks is necessary to address the shortcomings of conventional approaches.

Here, we define ideology as:

*A complex reflexive system of ideas, beliefs, values, and emotions, held in the minds of individuals but shared by or attributed to members of groups, that shapes political understanding and outlook and guides behaviour.*<sup>217</sup>

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<sup>215</sup> Bump 2015.

<sup>216</sup> Flynn et al. 2021; Carrington and editor 2021.

<sup>217</sup> Leader Maynard and Mildenerger 2018; Homer-Dixon et al. 2014.

A complex systems perspective can provide more insight into the underlying mechanisms through which ideology influences policymaking outcomes. Ideologies are embedded in social and discourse networks, and as with other complex systems, the structure and dynamics of those networks enable and/or constrain particular paths of co-construction. Grounded in this much-needed complex systems shift, this chapter explores a new methodological approach that integrates both the “outside-in” and “inside-out” perspectives of existing ideology scholarship.

We demonstrate this methodological approach through a case study of Canadian Parliamentary proceedings from 2016-2021 (covering the 42<sup>nd</sup> and 43<sup>rd</sup> Parliaments), including testimonies and evidence given by Members of Parliament (across the five major political parties) and guest presenters (such as union representatives, environmental groups and scientists, and business associations). We identify three (“believer”) ideological factions: one advocating for the continued viability of the fossil fuel sector and concerned about the speed of the energy transition (the “Transition-hesitant Camp”), one focused on investment in renewables and green technology, phasing-out fossil fuels, and just labour solutions in the face of transition (the “Just Phase-out Camp”), and one calling for legislation on climate action accountability and a national carbon price while, at the same time, emphasizing the costs and moral consequences of government inaction (the “Code-red Camp”). We show that while actors participating in the Parliamentary discourse tend to be (mostly) ideologically aligned with other actors of the same type (e.g., businesses with businesses, NGOs with NGOs), actors use particular terms and arguments in different ways, reflecting subtle differences in their underlying goals and preferred mechanisms of change. For example, competing groups are actively trying to shape understandings of “energy transition,” with some actors calling for a swift decline of fossil fuels and others insisting the oil and gas sector should be part of climate solutions. We investigate some of these subtle differences, by focusing on four prominent organizations engaged in the Parliamentary discourse that are distributed across these three ideological camps.

This chapter proceeds as follows. The next section surveys the literature on the intersection of ideology and climate change and provides a state-of-the-field assessment. Section 3.5 makes the case for

a new approach to studying ideologies as complex reflexive systems embedded in social and discourse networks. We argue that ideologies and discourse networks co-evolve, thereby shaping decision making on climate change policy. Section 3.6 outlines the methods and tools we use to operationalize a complex reflexive systems approach. It then uses these tools to map out the current landscape of ideological heterogeneity around climate change in Canada—specifically around energy transition. Additionally, Section 3.7 reflects on the limitations of the study and considers how future research can build off our approach to answer bigger causal questions about the *extent* of ideology’s impact on particular policymaking outcomes. Section 3.8 concludes with four key findings—two highlighting the implications of treating ideologies as complex reflexive systems and two describing emerging ideological shifts—for the study of ideology and climate change in a rapidly changing political landscape.

### **3.4 Making sense of a fragmented field**

To effectively parse through and identify gaps in the literature on ideology<sup>218</sup> and climate change, it is useful to categorize existing scholarship by its methodological approach. Leader Maynard (2013) identifies three main approaches to studying ideology.<sup>219</sup> First, conceptual approaches<sup>220</sup> tend to emphasize not just the concepts that make up ideologies (i.e., their content and how it is defined), but the structural arrangements of those concepts. Typically, the ideological content is considered relational (i.e., the meaning of concepts is contested and co-constructed) and dynamic (i.e., those relations and meanings change over time).<sup>221</sup> Second, discursive approaches to ideology focus on “communicative practices through which ideology is constituted, transmitted and made visible,”<sup>222</sup> and address the dynamics of

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<sup>218</sup> Note that we include literature that uses terms such as “worldviews” and “belief systems” in place of ideology, since we take a broad approach to the concept. For example, Beddoe et al. (2009) define worldviews as “perceptions of how the world works and what is possible, encompassing the relationships between society and the rest of nature, as well as what is desirable” (Beddoe et al. 2009.) For our purposes, a broader, complex systems-based definition of ideology captures much of what scholars intend to communicate using these other terms.

<sup>219</sup> Leader Maynard 2013.

<sup>220</sup> See, for example, Freeden’s “morphological approach,” Skinner’s focus on “conventions,” or MacKenzie’s “constellations of belief.” Freeden 1996; Skinner 1974; MacKenzie 2003.

<sup>221</sup> MacKenzie 2003; Finlayson 2012.

<sup>222</sup> Leader Maynard 2013, 304.

domination, depoliticization, and legitimation.<sup>223</sup> Lastly, quantitative approaches to ideology—which include traditional political science attitudinal studies and several political psychology theories<sup>224</sup>—aim to identify correlational and causal relationships between ideology and political behaviour. Like the conceptual approach, quantitative studies focus on ideological content and structural features. But they also tend to prioritize tight or coherent ideological structures and fixed concepts, partly due to the methodological requirements and constraints of surveys.

In evaluating the scholarship related specifically to the environment and climate change, the most well-represented approach to ideology is quantitative, which typically seeks to identify and measure climate change views and their determinants. Early examples of these efforts include Dunlap and Van Liere's (1978)<sup>225</sup> New Environmental Paradigm Scale (and later revisions). While not framed explicitly as ideology research, Dunlap traced what he saw as a shift in the “dominant social paradigm”<sup>226</sup> in the United States in the 1970s and 1980s—one defined by “a commitment to individualism and laissez-faire government, . . . beliefs in progress, material abundance and the goodness of growth; faith in the efficacy of science and technology; and a view of nature as something to be subdued”<sup>227</sup>—towards a more ecological worldview. A more contemporary effort is Yale University's Program on Climate Change Communication, which maintains a public database with over a decade of survey data on climate beliefs and behaviour.<sup>228</sup>

While Dunlap's work focused on whole paradigm shift, more recent quantitative research on ideology and climate change focuses on specific individual traits and predictors. Most of this work comes from political or environmental psychology, political sociology, political science, and communications

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<sup>223</sup> Ibid., 305.

<sup>224</sup> For example, systems justification theory (Jost, Kay, and Thorisdottir 2009.); social identity theory (Tajfel and Turner 1979; Tajfel and Turner 1986.); social dominance orientation (Stanley, Wilson, and Milfont 2021.); and terror management theory (Greenberg et al. 1990.)

<sup>225</sup> Dunlap and Van Liere 1978.

<sup>226</sup> Dunlap drew on Pirages and Ehrlich's concept of the dominant social paradigm (DSP) defined as “the prominent world view, model, or frame of reference through which individuals or collectively, a society, interpret the meaning of the external world” (p. 43); Pirages and Ehrlich 1974, 43.

<sup>227</sup> Dunlap 2008, 5.

<sup>228</sup> Ballew et al. 2019; Leiserowitz, Anthony 2020.

studies, and the majority of these projects focus on the United States. Generally, there is an emphasis on self-declared (unidimensional left-right) ideology by study participants and political party affiliation. In a metareview of 87 survey-based studies of this type, McCright et al. (2016)<sup>229</sup> identify several key predictors of pro-climate views, including (unsurprisingly) “pro-environmentalism,” gender (women report stronger pro-climate views than men), and political orientation (left-identifying participants consistently express stronger pro-climate views than Right-identifying participants). Many of these studies take a bi-dimensional approach and look at the relationship between authoritarianism and Social Dominance Orientation (SDO). Generally, “the more that people endorse hierarchical or authoritarian attitudes, the less they hold pro-environmental attitudes.”<sup>230</sup> For example, Stanley et al. (2021) found that while individuals with high levels of SDO did have concerns about climate change causes and solutions, they were more opposed to top-down climate action and more supportive of technological solutions.<sup>231</sup>

Meanwhile, other scholars have taken a discursive approach (critical and non-critical) to studying environmental politics, beginning with work by Hajer, Dryzek, McManus, and others.<sup>232</sup> Typically, non-critical scholarship focuses on contested concepts such as sustainable development.<sup>233</sup> Meanwhile, critical scholarship emphasizes how ideology leads to ineffective climate policy. For example, Gunderson et al. (2018) argue that “the inability to reduce greenhouse gas (GHG) emissions through the most popular approaches to climate policy stems from ideological assumptions underlying climate policy.”<sup>234</sup> Drawing on Marx’s theory of ideology, they explore the power relations at work in climate change discourse. In this critical view, the term *ideology* refers to sets of ideas that conceal contradictions and *legitimate* and/or *reify* the dominant social order. Similarly, Petersen et al. (2019) introduce the term “ideological

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<sup>229</sup> McCright et al. 2016.

<sup>230</sup> Stanley and Wilson 2019, 54.

<sup>231</sup> Stanley, Wilson, and Milfont 2021.

<sup>232</sup> Hajer and Versteeg 2005; Hajer 1997; McManus 1996; Dryzek 1997; Dryzek 2005; Dryzek 2013.

<sup>233</sup> Stevenson 2019; Edge and Eyles 2014; Edge and Eyles 2015.

<sup>234</sup> Gunderson, Stuart, and Petersen 2018, 135.

denialism,” where an individual “recogniz[es] climate change as a problem, yet fails to diagnose the root causes and prescribes solutions that maintain the current system.”<sup>235</sup>

Finally, a conceptual approach to ideology and climate change comes from a longer history of research on *environmentalism* writ large as a potentially distinct ideology or a collection of ideologies. This tradition stretches back to O’Riordan’s work in the 1970s, which distinguished between “ecocentric” and “technocentric” environmental ideologies.<sup>236</sup> While some scholars focus on environmental political thought to identify the key ideological components of a single relatively coherent environmental ideology,<sup>237</sup> others consider environmentalism as more of a “family” of overlapping sub-ideologies that vary in their core commitments and may or may not be in competition.<sup>238</sup>

#### *3.4.1 The need for a new approach*

Unfortunately, most of the challenges that exist in the broader field of ideology studies also hamper the scholarship related specifically to climate change. Existing approaches to studying ideology talk past each other, by focusing on *either* phenomena within the individual (such as those focusing on brain physiology<sup>239</sup> and socio-psychological factors<sup>240</sup>) *or* social phenomena involving ideology as a means of contestation and/or legitimation of power relations (such as critical discourse analysis<sup>241</sup> and post-structural approaches<sup>242</sup>). As Leader Maynard asks, “...surely no account of ideological power can really be adequate without analysing *both* the substance of what ideologies communicate and the techniques through which such communication occurs?”<sup>243</sup>

But each approach to ideology is strong where the others are weak. Quantitative studies tend towards a simplistic unidimensional understanding of ideology and often end up reifying existing

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<sup>235</sup> Petersen, Stuart, and Gunderson 2019.

<sup>236</sup> O’Riordan 1977.

<sup>237</sup> Humphrey 2013; Wissenburg 1997.

<sup>238</sup> Williams 2017; Clapp and Dauvergne 2011; Davies 2009; Talshir 1998.

<sup>239</sup> Amodio et al. 2007; Kanai et al. 2011; Chiao et al. 2009.

<sup>240</sup> Jost, Kay, and Thorisdottir 2009; Haidt 2001; Haidt 2007; Haidt 2012; Greenberg et al. 1990.

<sup>241</sup> Fairclough 2001; Fairclough 2010.

<sup>242</sup> Zizek 1994; Norval 2000.

<sup>243</sup> Leader Maynard 2013, 317., emphasis added.



categories and binaries (e.g., “liberals” vs. “conservatives”). However, quantitative approaches in political psychology pay attention to psychological processes, personality traits, and cognitive tendencies, which are viewed as key sources of ideological attachment, or ideology’s power.<sup>244</sup> For the most part, neither discursive nor conceptual approaches consider the role of emotion and affect, and instead identify language and meaning as the source of ideology’s influence. On the other hand, the emphasis on contested concepts in discursive and conceptual approaches is especially relevant to climate change, a dynamic that is mostly missed in quantitative studies that measure attitudes on things like “sustainable development” or “green behaviour.” Furthermore, many conceptual approaches prioritize the development of simple typologies, but in doing so, fail to see the forest through the trees. Power dynamics often get a back seat in their analyses, in contrast with discursive approaches. Finally, none of the three main approaches effectively captures the relationships and interactions *between* ideologies or parts of their content.

To effectively study how ideology matters to problems like climate change, we need an integrative approach that connects the *inside-out* (psychological and cognitive dimensions) and the *outside-in* (social and discursive dimensions) perspectives on ideology. Such a framework needs to:

1. account for determinants of ideological attachment and change at the individual level, as well as the social context and forces that operate *on* those determinants;
2. examine ideological content but not isolated from discursive context;
3. account for the role of emotion and values in ideological formation, attachment, and change; and
4. incorporate temporality.

### **3.5 A complex reflexive systems approach to ideology**

Ideologies—or worldviews—contain sets of beliefs about the nature of reality (*ontology*) plus value-based normative and prescriptive beliefs about what people *should* do or what *ought* to happen. As

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<sup>244</sup> Leader Maynard 2022.

networks of meaning, they are “a crucial bridge between individual minds and collective behavior”<sup>245</sup> since they hold content *about* social groups but are also composed of content drawn *from* social groups. So, we can understand ideologies as being both *ideational* and highly *relational* in nature. Further, ideological attachment occurs both as a result of “inside-out” determinants (i.e., cognitive-affective processes such as underlying value dispositions and motivated reasoning) and “outside-in” forces that constrain and/or enable particular development trajectories (i.e., social and material forces such as exposure to specific media discourses or dependence on particular economic sectors or industries). It is this multi-level, multi-causal interaction that makes a complex systems approach uniquely apt for ideology research.<sup>246</sup>

Recognizing a system as complex rather than just complicated or mechanistic allows us to identify behavior and patterns that might otherwise be invisible to us. A complexity lens emphasizes the relational and interactional nature of systems, highlighting feedback loops and dense causal connections, while paying attention to dynamics of change, adaptation, and emergence.<sup>247</sup> For living systems, complexity goes even further because of the ability of organisms to adapt to changing environments directed by their internal “rules” or “schemas.” These are called *complex adaptive systems*. For *human* systems, whose agents are self-aware and capable of recursive thinking (i.e., I can think about my own thoughts, I can think about what other people might be thinking, and I can think about what others might be thinking about what I am thinking), we can also consider agents’ internal “rules” or “schemas” as complex adaptive systems that are represented in the mind. We refer to these as *complex reflexive systems*—a system that is “directed back on itself” through introspection, learning, or examining one’s own assumptions and beliefs.<sup>248</sup>

Ideologies, we argue, should be understood as complex reflexive systems—networked sets of emotionally charged concepts in an individual’s mind that are constructed, shared, and changed through

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<sup>245</sup> Homer-Dixon et al. 2013.

<sup>246</sup> Ibid.; Homer-Dixon et al. 2014.

<sup>247</sup> Scheffer et al. 2009; Scheffer et al. 2012; Jervis 1997; Bertuglia and Vaio 2005.

<sup>248</sup> Beinhocker 2013.

social interaction and communication. This structure contributes to system behaviour that is highly contingent and path dependent, and that demonstrates nonlinearity—where a small change could lead to a big impact, but on other occasions a big change could, in contrast, lead to only minimal impact.

Given the characteristics described above, *networks* are a key conceptual tool for understanding the structure and dynamics of complex reflexive systems like ideologies. Over the last two decades, scholars across many fields have increasingly turned to network theory for tools and methods to analyze relations and interdependence in more systematic ways. Networks enable a sort of “topographical description” of various kinds of systems, illustrating important flows of information and energy, power dynamics, socio-political relationships, and identifying agents with network-shaping capacity.<sup>249</sup> In our view, this “relational turn” can help researchers reconcile over- and under-socialized approaches to human behaviour, and offers a more empirical way to study the coevolution of ideology and the social context in which it is embedded.<sup>250</sup> Because of its emphasis on relationships, interaction, and socially constituted structure, network theory can account for both the purposive action of agents (enabled and constrained by network structure) and the social structures and forces (constituted and reproduced by action over time) that shape the possible fields of action.

By bringing together strengths of both the ideational and relational turns, and by using network theory and analysis to study complex reflexive systems, we can more fully investigate ideology’s role in climate change politics.

### **3.6 Case study: Ideological conflict in Canada’s energy transition discourse**

The Canadian political context is an ideal case for examining the influence of ideology on climate-related policy decisions for several reasons. First, Canada is a resource-based economy and one of the top 10 GHG emitters globally. It is a major producer and exporter of oil and gas, and the sector is

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<sup>249</sup> Barabasi and Albert 1999; Hafner-Burton, Kahler, and Montgomery 2009; Barabási 2009; Papadopoulos et al. 2012; Wasserman and Faust 1994.

<sup>250</sup> Polanyi 1968; Granovetter 1985.

Canada's largest emitter.<sup>251</sup> Second, while Canada has signed on to the Paris Agreement—committing to net-zero emissions by 2050 and a 40 to 45 percent reduction in emissions by 2030<sup>252</sup>—there is skepticism about whether it will be able to meet these targets. There are also major concerns about the impact of an energy transition on resource-based communities, Indigenous peoples, poor and marginalized populations, and the overall health and competitiveness of the Canadian economy. These concerns have translated into a wide range of ideologically charged priorities and policy preferences for addressing the climate crisis *and* distributing the costs and benefits of the energy transition. It is also worth noting that Canada does *not* have a two-party political system—in contrast to the United States—which helps us avoid a more binary perspective on ideology's role in policy making and the common emphasis on climate change believers versus deniers. Instead, we are interested in identifying emerging ideological shifts and fault lines related to energy and climate, which are also occurring in the green finance community<sup>253</sup> and the youth-led climate justice movement.<sup>254</sup>

### 3.6.1 Data and methods

To operationalize a complex reflexive systems approach to ideology, we combine two relatively new methods for analyzing ideological content: Discourse Network Analysis (DNA) and Cognitive-Affective Mapping (CAM). DNA describes and analyzes the network structures of political discourse (rather than single actors, issues, or coalitions) and has been used to study a variety of policy arenas, including climate change politics in Canada,<sup>255</sup> Italy, Germany, Finland, Ireland, the Czech Republic, and the United States.<sup>256</sup> In our application, we extend the methodology to take an *outside-in* approach to mapping ideology—that is, one that can help trace influence from social groups' ideological

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<sup>251</sup> Meadowcroft 2021.

<sup>252</sup> Taylor 2021.

<sup>253</sup> Hawley and Williams 2007.

<sup>254</sup> Thew, Middlemiss, and Paavola 2020.

<sup>255</sup> One group of scholars (see Stoddart and Tindall 2015. and Howe, Stoddart, and Tindall 2020.) analyzes Canadian news media—specifically, Canada's two main national news outlets, the *Globe and Mail* and the *National Post*—rather than Parliamentary data.

<sup>256</sup> Ghinoi and Steiner 2020; Fisher, Leifeld, and Iwaki 2013; Fisher and Leifeld 2019; Lockhart and van Laerhoven n.d.; Stoddart and Tindall 2015; Howe, Stoddart, and Tindall 2020.

commitments *inwards* to these commitments' effects on actor-level cognitive-affective processes.

Furthermore, our study adds to the nascent subfield of discourse network analysis by coding not just for policy positions (i.e., our prescriptive belief concepts), but also ontological and moral claims.

Most existing DNA studies, including those on climate, draw on the literatures of “epistemic communities,” “discourse coalitions,”<sup>257</sup> and “advocacy coalitions.”<sup>258</sup> However, beyond the “like-mindedness” of group members,<sup>259</sup> these frameworks lack a cognitive, psychological, or emotional dimension. We aim to better integrate this *inside-out*, cognitive-affective dimension of ideology using CAM, which has also been used to study climate change politics.<sup>260</sup> CAM is a method for visually depicting belief systems as networks of interacting concepts and emotional valences. A “cognitive-affective map” represents “an individual’s or a group’s concepts and beliefs about a particular subject, such as another individual or group or an issue in dispute.”<sup>261</sup>

DNA and CAM complement each other because while CAMs depict networks of concepts *within* an actor (or organization), DNA illustrates networks of actors linked by what arguments they use. When used together, DNA and CAM allow researchers to (1) work across scales, (2) jointly consider social and ideational levels of analysis, (3) trace dense network interactions and clustering effects, (4) incorporate insights from cognitive, psychological, and social sciences, and (5) analyze power in more nuanced ways.

For this case study, we focus on Parliamentary hearings because discourse in such settings directly interacts with and influences political decision-making. Our goal was to identify relatively distinct pro-climate ideologies that are prominent in this specific discourse,<sup>262</sup> while also ensuring that we meaningfully consider the conceptual structures of those ideologies. In other words, we sought to assess the overall structure of the discourse network, map emergent ideological “boundaries” plus the structure

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<sup>257</sup> Defined as “groups of actors who share a social construct” (Hajer 1993, 43.).

<sup>258</sup> Sabatier 1988.

<sup>259</sup> Henry, Lubell, and McCoy 2011.

<sup>260</sup> Williams 2017; Homer-Dixon et al. 2014; Milkoreit 2017.

<sup>261</sup> Homer-Dixon et al. 2013, 347.

<sup>262</sup> Outright climate denial is uncommon in Parliament, and while still complicated, climate change politics in Canada is not nearly as polarized as it is in the United States. More frequently, MPs and other actors are more subtle in their disagreement, using language related to *gradual* (i.e., slow and delayed) energy transition or the insistence that the oil and gas sector is part of the solution to reducing greenhouse gas emissions.

of concepts within those boundaries, and identify clusters of ideologically similar actors. Further, rather than starting with pre-defined ideological categories or “typical” ideological concepts such as liberty, free markets, and inequality, we identified key arguments and concepts inductively. Because of our interest in the variety and range of actors involved in discourse about climate action and energy transition, as well as their relative structural positions to each other, we analyze Canadian Parliamentary hearings and Committee Evidence proceedings, which include participation from a broad range of actors including scientists, business leaders, union representatives, and environmental advocates.

The final dataset comprised 307 testimonies, questions, and responses from Members of Parliament and invited guests from the 43<sup>rd</sup> Parliament—December 5, 2019, to August 15, 2021. We classified the speakers and organizations into nine types and tallied the number of testimonies given by each type, broken down by year (Table 2).

**Table 2. Types of speakers and their representation in the dataset**

Type	(Dec.) 2019	2020	2021	Total	%
<i>New Democrat Party MPs (NDP)</i>	4	35	26	65	12.7
<i>Bloc Quebecois MPs (BQ)</i>	2	24	30	56	7.8
<i>Businesses, Business Associations, Trade Groups, and Pension Boards (BUSINESS)</i>		14	35	49	21.2
<i>Liberal Party Members of Parliament (LIBERAL)</i>	2	20	17	39	5.5
<i>Conservative Party of Canada MPs (CPC)</i>	1	6	17	24	18.2
<i>Green Party MPs (GP)</i>		7	10	17	4.2
<i>Non-governmental Organizations, including think tanks (NGO)</i>		5	8	13	16.6
<i>Environmental groups (ENVIRONMENTAL)</i>		7	6	13	2.3
<i>Unions and Federations (UNION)</i>		2	7	9	4.2
<i>Federal and provincial government department representatives (GOVERNMENT)</i>		1	7	8	2.0
<i>Scientists (SCIENTIST)</i>		1	7	8	2.6
<i>Indigenous groups (INDIGENOUS)</i>			6	6	2.6
<b>TOTAL</b>	<b>9</b>	<b>122</b>	<b>176</b>	<b>307</b>	

Our secondary dataset was made up of public-facing documents from four key organizations that gave multiple testimonies to Parliament and play a significant role in the wider landscape of climate change politics in Canada: Climate Action Network Canada (CAN-Rac), the Canadian Labour Congress (CLC), the Canadian Association for Petroleum Producers (CAPP), and the Canadian Pension Plan Investment Board (CPPIB). Among guests invited to speak at Parliamentary proceedings, these four organizations were within the nine most active contributors.<sup>263</sup> From each of these organizations, we gathered annual reports, mission statements, and other public-facing documents, which informed our construction of CAMs.<sup>264</sup>

### 3.6.2 Ideological discourse networks in Canadian Parliamentary hearings

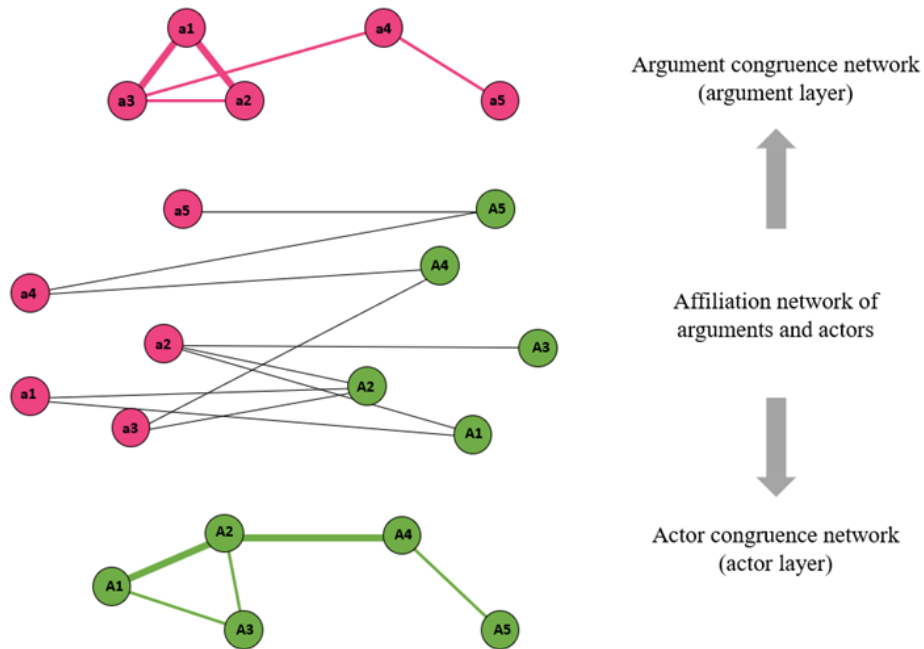
Discourse networks are the structures that emerge from the *communications* between people as they act politically. While a social network represents direct connections between people, discourse networks link people by way of their contributions to political discourse (e.g., via public testimony, op-eds, media appearances, or social media posts). Over time, the emergent “structure” of relationships between *contributors and their contributions*—the discourse network—can be described and analyzed as a network phenomenon.<sup>265</sup> In DNA, a discourse can be analyzed on three layers: the argument layer, the actor layer, and the joint argument-actor (or “affiliation”) layer. Using network theory tools—such as cluster analysis, congruence and conflict equations, and normalization methods—to describe and interpret each layer of analysis, researchers can more systematically study the co-construction of ideologies. Figure 6 shows the basic model of a discourse network.

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<sup>263</sup> The other five organizations were Environmental Defence Canada, Pembina Institute, Réseau Québécois sur l’intégration continentale, Explorers and Producers Association of Canada, and Equiterre.

<sup>264</sup> A word frequency analysis of each of the four document sets in NVIVO gave us an overview of the most common terms and themes for each organization, and also helped us notice important terms that were absent or rarely used.

<sup>265</sup> Leifeld 2018; Leifeld 2020.



**Figure 6. Simple model of a discourse network.**

The network in the middle represents an affiliation network (also called a bipartite graph) between arguments (on the left) and the actors (on the right) that mention them. The top network includes only arguments as nodes, but they are linked if they are mentioned by the same actor in the affiliation network. The bottom network is the inverse, where actors are linked if they share one or more arguments in the affiliation network. Actor congruence is present when pairs of actors co-support or co-reject a particular argument. Argument congruence is present when pairs of arguments are both supported or rejected by a particular actor.

### 3.6.2.1 Identifying arguments

To create our codes, or “arguments,” for DNA, we first analyzed a subsample of the 307 testimonies<sup>266</sup> for text segments that referred to climate change and energy and/or just transition topics (e.g., climate crisis, fossil fuel subsidies, or GHG reduction targets) and also included some sort of semantic, moral, or prescriptive content (e.g., “is wrong,” “should be,” etc.). From this subsample, we inductively identified 18 arguments (represented as short declarations) with which to code the rest of the dataset (Table 3). Eight of the arguments are related to “defining problems” and include ontological and moral beliefs, while the other ten arguments are about “defining solutions” and include prescriptive beliefs and proposals.

<sup>266</sup> The subsample comprised 5 percent of the total dataset, proportional by *type* of speaker.



**Table 3. List of arguments used in discourse network analysis coding**

<i>Arguments related to defining problems</i>	“We are facing a climate emergency that requires urgent action.”
	“Delaying climate action, or acting insufficiently, is immoral or wrong.”
	“Inaction on climate change will be expensive and/or costly.” (e.g., to human lives, communities, etc.)
	“The government is not taking the climate emergency seriously and/or is not doing enough to meet climate targets.”
	“A too-rapid energy transition will do more harm than good and/or have unintended consequences.”
	“The oil and gas industry is very important to ensuring a prosperous future for Canadians.”
	“The energy transition will create jobs and is an opportunity for clean growth.”
	“The energy transition to a low(er)-carbon economy will happen gradually.”
<i>Arguments related to defining solutions</i>	“We need an energy transition to a low-carbon economy.”
	“We need a just transition for fossil fuel and other workers.”
	“The government should stop subsidizing and/or manage the swift decline of the fossil fuel industry to get to net zero.”
	“The government should increase investment in renewable energies and local-level climate action.”
	“We need legislation that holds governments accountable for meeting climate targets.”
	“We need a national framework for pricing carbon.”
	“Technological innovation plays the biggest role in reducing GHG emissions.”
	“Other natural resource industries will/should play an important role in the energy transition.” (e.g., nuclear or biofuel, critical minerals mining, forestry)
	“Responsible investing (ESG) is necessary to decarbonize the economy.”
	“The oil and gas sector needs to be part of the solution to reduce GHG emissions through responsible development and high ESG performance.”

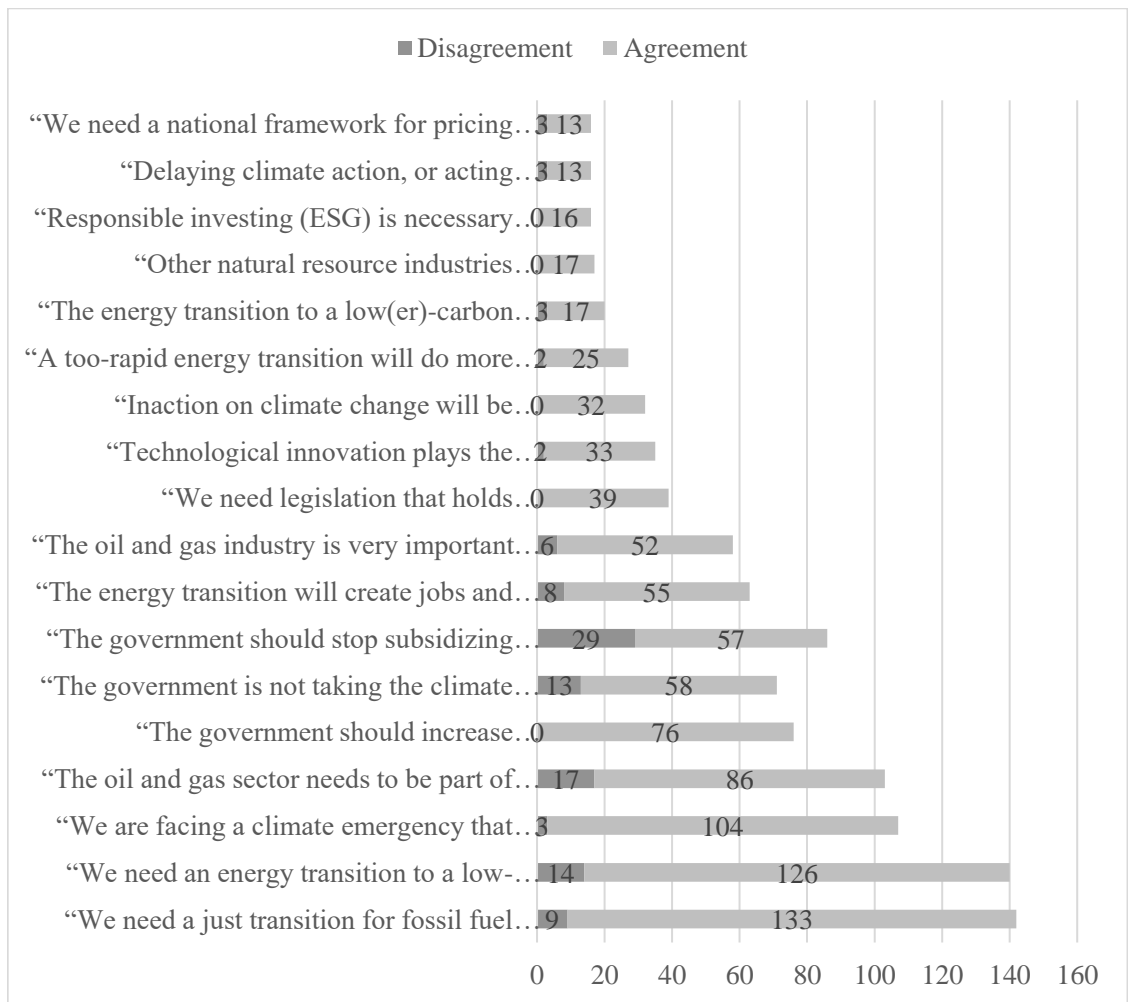
In total, we identified 1,072 statements<sup>267</sup> made by 150 people representing 77 organizations.<sup>268</sup>

MPs accounted for over two-thirds of total statements, with businesses and environmental organizations

<sup>267</sup> To enable network analysis, a coded DNA “statement” includes four variables: (1) the name of the speaker, (2) their organizational affiliation, (3) the argument to which they are referring in the text fragment, and (4) whether they agree or disagree with the argument.

<sup>268</sup> We used the Discourse Network Analyzer software for coding, R (specifically, the rDNA package) for statistical analysis, and Gephi 0.9.2 for network visualization and analysis (Leifeld 2016; Leifeld 2019b; Leifeld 2019a; Bastian, Heymann, and Jacomy 2009.)

accounting for 19 per cent and 5 per cent, respectively. Overall, we identified 200 statements made by business—significantly more than all the remaining speaker types combined (147 statements). Given the way we inductively determined the DNA arguments we used to code the Parliamentary dataset, positions of agreement were both more explicit and more common than positions of disagreement. Figure 7 shows the total number of statements coded that agreed or disagreed with a particular argument. Notably, the argument with the most “disagree” positions is related to the government ceasing fossil fuel subsidies and phasing out the industry.



**Figure 7. Bar graph showing the frequencies of agreement and disagreement with each DNA argument.**

Based on 1072 statements conveyed by 77 organizational actors.

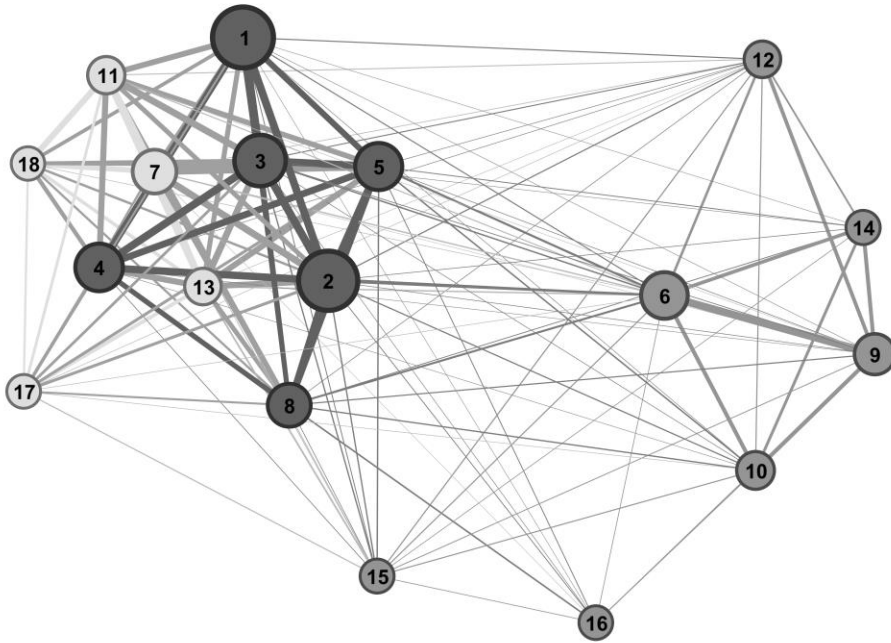
From this set of statements, we produced three types of networks: (1) an *argument congruence network*, (2) an *actor congruence network*, and (3) an *affiliation network* of actors and arguments.

### 3.6.2.2 Identifying ideologically aligned argument clusters

In an argument congruence network, the stronger the links between nodes, the more often those arguments are referred to in the same way. Figure 8 illustrates how “close” arguments are to each other when we consider the entire discourse network and is a useful way to start identifying clusters of beliefs that “hang together.” Arguments are assigned a number for the sake of visual clarity. Using a standard modularity algorithm to detect “clusters” in the network, we found three relatively distinct groupings of arguments.<sup>269</sup> The frequency of each argument is illustrated in Figure 9.

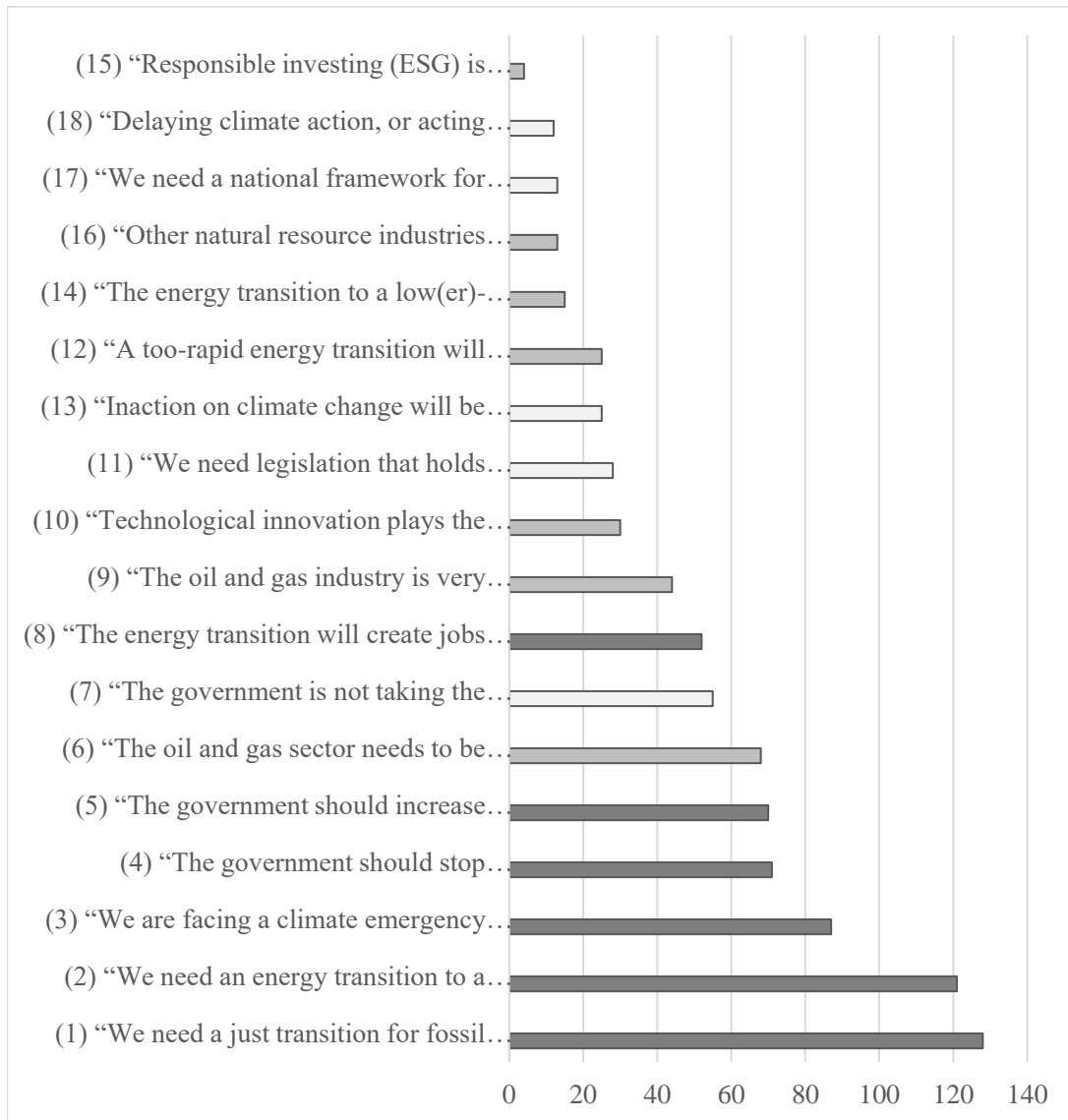
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<sup>269</sup> Gephi uses the Louvain method for community detection, a method that has come under some scrutiny recently (See Traag, Waltman, and van Eck 2019; Peixoto 2019; Peixoto 2023.). Specifically, the method may identify badly connected or disconnected communities in very large networks. Because the networks in this study are small, and because we generated the underlying network data ourselves using a highly qualitative coding process, we are satisfied with the community detection for this case study. However, future studies should consider using other or a combination of network cluster analysis methods such as the Leiden algorithm (Traag et al. 2019), agglomerative hierarchical cluster analysis, and distance matrices (e.g., Fisher and Leifeld 2019).



**Figure 8. Argument congruence network.**

Nodes are coloured by the “cluster” to which they belong (dark-gray = “Just Phase-out,” light-gray = “Code-red,” medium-gray = “Transition-hesitant”). The larger the node, the more frequently the argument was referenced in the DNA statements; the thicker the edge, the stronger the relationship between the two arguments.



**Figure 9. Bar chart illustrating argument frequency in DNA statements.** Concepts are numbered and coloured in the same way as Figure 7.

The dark-gray cluster—what we might call the “Just Phase-out Camp”—includes the following six arguments:

- “We need a just transition for fossil fuel and other workers” (1)
- “We need an energy transition to a low-carbon economy” (2)
- “We are facing a climate emergency that requires urgent action” (3)

- “The government should stop subsidizing and/or manage the swift decline of the oil and gas industry to get to net zero” (4)
- “The government should increase investment in renewable energies and local-level climate action” (5)
- “The energy transition will create jobs and is an opportunity for clean growth” (8)

Unsurprisingly, this cluster is the strongest of the three because two of its core arguments—“just transition” and “energy transition”—were terms we specifically searched for in the Parliamentary database. But these arguments are paired with the strong belief that the government should re-route funding away from fossil fuels and towards renewables, and that this is good economic policy.

The light-gray cluster—which we will call the “Code-red Camp”—comprises the following arguments:

- “The government is not taking the climate emergency seriously and/or is not doing enough to meet climate targets” (7)
- “We need legislation that holds governments accountable for meeting climate targets” (11)
- “Inaction on climate change will be expensive and/or costly” (13)
- “We need a national framework for pricing carbon” (17)
- “Delaying climate action, or acting insufficiently, is immoral/wrong” (18)

The content of this cluster concerns taking action and the costs of not doing enough now, plus the frustration with government hypocrisy and the need for accountability.

Lastly, the medium-gray cluster—let us call it the “Transition-hesitant Camp”—is made up of seven arguments:

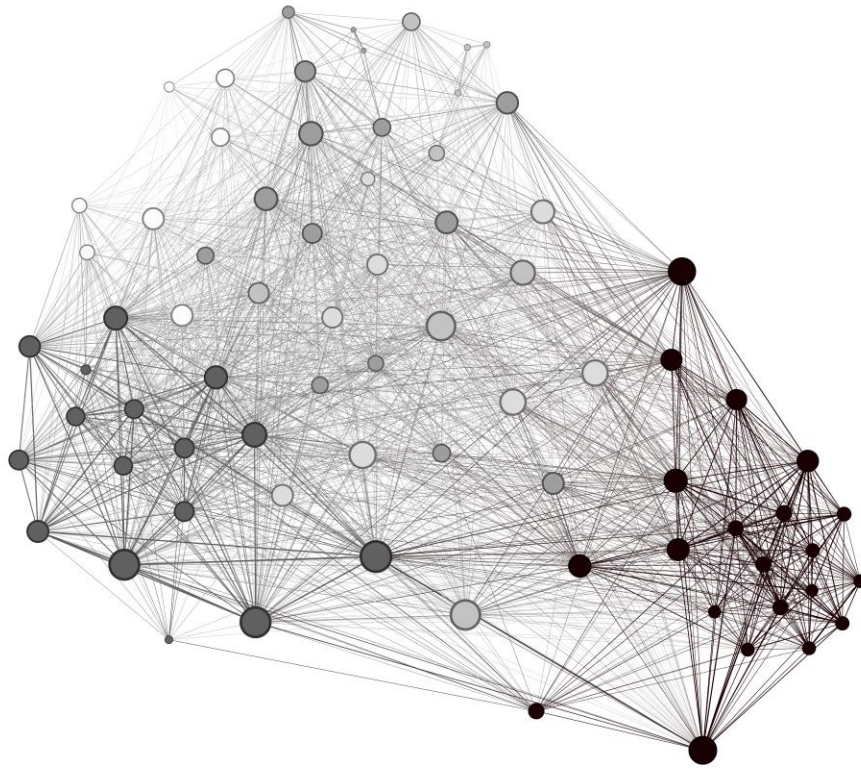
- “The oil and gas sector needs to be part of the solution to reduce GHG emissions through responsible development and high ESG performance” (6)

- “The oil and gas industry is very important to ensuring a prosperous future for Canadians” (9)
- “Technological innovation plays the biggest role in reducing GHG emissions” (10)
- “A too-rapid energy transition will do more harm than good and/or have unintended consequences” (12)
- “The energy transition to a low(er)-carbon economy will happen gradually” (14)
- “Responsible investing (and ESG) is necessary to decarbonize the economy” (15)
- “Other natural resource industries will/should play an important role in the energy transition” (16)

This cluster is made up of arguments related to protecting the oil and gas sector with emphasis on technological innovation, responsible development, plus high ESG performance in natural resource extraction (including critical minerals) and investment portfolios. It also encompasses a feeling of concern of hesitation about the speed of the energy transition.

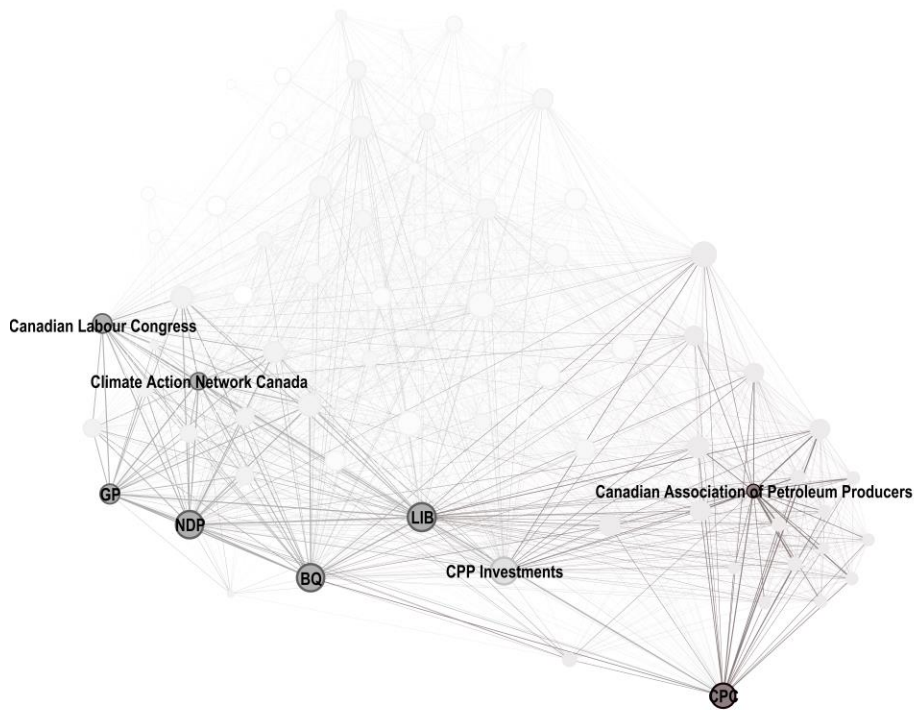
### 3.6.2.3 Identifying ideologically aligned organizations

At the actor layer of DNA, we get a clearer sense of the ideological closeness among all 77 organizational actors in the dataset by identifying clusters within an actor congruence network. This type of network (Fig. 10 and Fig. 11) illustrates how “close” organizations are to each other, based on the arguments they invoke. Actors with *similar* views are linked (i.e., both actors agree *or* disagree with the argument), and the link between two actors becomes stronger with each argument that they “share.” Using modularity analysis and the Force Atlas layout algorithm—which pulls strongly connected nodes closer to together and pushes weakly connected nodes further apart—we identified six clusters of actors that are ideologically similar. Figure 11 shows the same network as Figure 10, but with key nodes highlighted and labeled.



**Figure 10. Actor congruence network. Nodes are coloured by modularity class and are sized by degree (the number of links each node has with other nodes).**



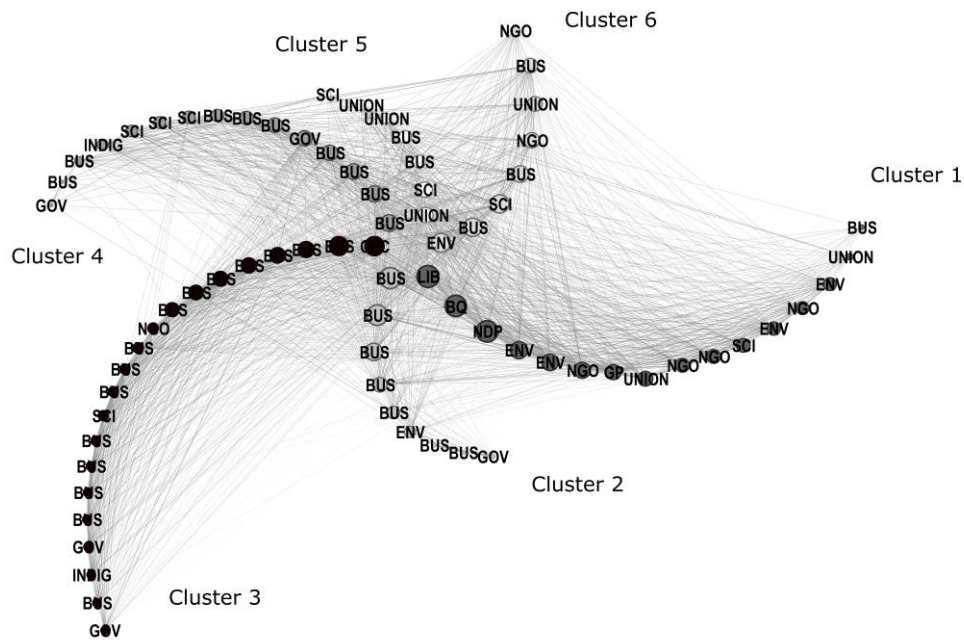


**Figure 11. Actor congruence network.**

Nodes are coloured by modularity class and are sized by degree (the number of links each node has with other nodes). The five federal political parties are highlighted, along with four key organizations that we analyze in the following section (Climate Action Network Canada, Canadian labour Congress, Canadian Association of Petroleum Producers, and Canadian Pension Plan Investment Board).

We visualize these actor clusters in clearer groups in Figure 12, where each node is labeled with its assigned type (shortform, see Table 2). Going through each grouping, Cluster 1 includes organizations of every type but only one business. It also has more environmental organizations than any other cluster. On the other hand, Cluster 2 is almost entirely made up of business organizations. Cluster 3 also consists of mostly businesses, including all the organizations representing the oil and gas sector, as well as representatives from the University of Calgary, the governments of Alberta and Saskatchewan, and the Public Policy Forum. Interestingly, seven organizations in this cluster are included in the Corporate

Mapping Project's *Fossil-Power Top 50* list (2017),<sup>270</sup> including Arc Resources (a subsidiary of ARC Financial), Enbridge, LNG Canada, Shell Canada, CAPP, CEPA, and the University of Calgary. CPPIB and BMO also make the Top-50 list. The fourth cluster includes businesses, scientists, government departments, and an indigenous group with interests in the Canadian mining sector and in alternative energies such as nuclear, geothermal, and biofuel. Cluster 5 is the smallest but includes more unions than any other cluster. Lastly, the sixth cluster rather diverse, with the Green Economy Network, several alternative energy companies, a scientist, two trade-related NGOs, and the postal workers' union.



**Figure 12. Actor congruence network, with cluster analysis showing six distinct communities. The network is arranged using a Radial Axis layout algorithm, which is useful for more easily visualizing groups and does not represent x or y axes.**

<sup>270</sup> Corporate Mapping Project 2017.

### 3.6.2.4 Linking arguments and organizations

After separately mapping out networks of ideologically aligned arguments (the concept layer of DNA) and networks of ideologically aligned actors (the actor layer), we integrate them with an affiliation network to see how four specific organizations—which represent diverse worldviews and sectors in Canadian society—relate to specific arguments. Within the broader research design, we are now taking a first step away from the social dimension of ideology—focused on the propagation of certain arguments in discourse—and towards a more cognitive and psychological perspective by looking closer at the relationship between actors and the content of ideological discourse—which goes even further in the CAM analysis.

First, CAN-Rac is a Canadian environmental network with 124 member organizations<sup>271</sup> “that brings labour, development, faith-based, and Indigenous groups together with the key national, provincial, and territorial environmental organizations working on climate change.”<sup>272</sup> Second, CLC is the largest labour organization in Canada, and represents dozens of unions and federations and over three million workers.<sup>273</sup> Third, CAPP is the largest association representing the interests of the oil and gas sector in Canada, with member companies producing “80% of Canada’s natural gas and oil and contribut[ing] about \$116 billion in revenues annually.”<sup>274</sup> Finally, the Canada Pension Plan (CPP) is one of the world’s largest pension funds, and its assets—currently sitting at \$519.6 billion, with projections as high as \$1.68 trillion by 2040<sup>275</sup>—are managed by CPP Investment Board (CPIB).<sup>276</sup>

Figure 13 shows the organizations on the left linked with the arguments—grouped by cluster (see Figure 8)—on the right. The number labelling each link indicates the cumulative strength of agreement (positive numbers) or disagreement (negative numbers). For example, there is cumulative disagreement (link strength of -1.0) between the CLC and the argument, “Technological innovation plays the biggest

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<sup>271</sup> Our Members – Climate Action Network n.d.

<sup>272</sup> About CAN-Rac – Climate Action Network n.d.

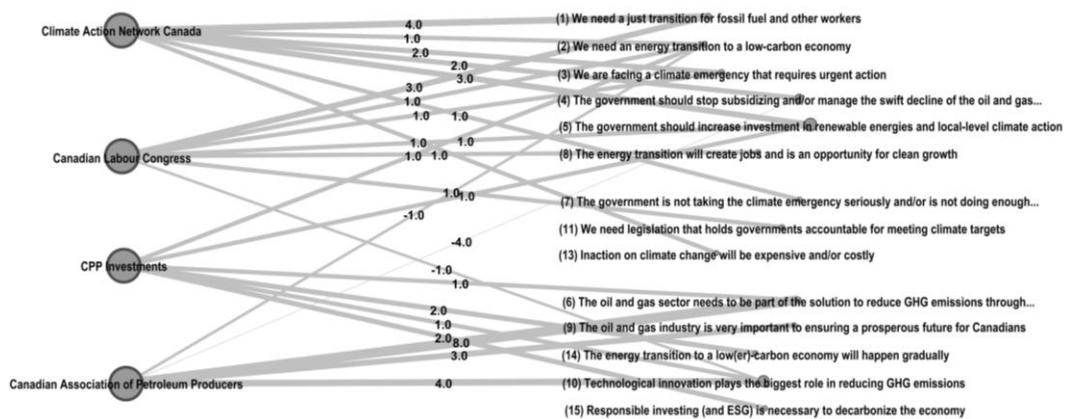
<sup>273</sup> Who We Are n.d.

<sup>274</sup> Membership n.d.

<sup>275</sup> The Fund n.d.

<sup>276</sup> Governance Overview n.d.

role in reducing GHG emission.” In contrast, there is cumulative agreement (link strength of 4.0) between the same argument and CAPP. Both CAN-Rac and CLC have the strongest agreement with the argument, “We need a just transition for fossil fuel and other workers,” while CAPP’s strongest agreement is with the argument, “The oil and gas sector needs to be part of the solution to reduce GHG emissions through responsible development and high ESG performance.” CPPIB has relatively weak links overall, but this is due to their smaller number of statements compared to the other three organizations. In addition to the CLC disagreeing with the argument about technology, CAPP (unsurprisingly) disagrees strongly with the belief that the government should “manage the swift decline” of their industry and disagrees with the idea that we need an energy transition at all. Note that none of the arguments, “A too-rapid energy transition will do more harm than good and/or have unintended consequences” (12), “Other natural resource industries will/should play an important role in the energy transition” (16), “We need a national framework for pricing carbon” (17) or “Delaying climate action, or acting insufficiently, is immoral/wrong” (18) are referenced by these organizations. Table 4 summarizes this affiliation network data for easier comparison across the three camps and the four organizations.



**Figure 13. Organization-argument affiliation network, including only CAN-Rac, CLC, CAPP, and CPPIB. Edges indicate the cumulative strength of agreement (> than 0, in green) or disagreement (< than 0, in pink) with an argument, based on all coded statements.**

**Table 4: Organization-argument affiliation network, in table format, grouped by camp. Values indicate the link strength between an organization and an argument (> than 0 represents agreement, < than 0 represents disagreement).**

Arguments		CPPIB	CAPP	CLC	CAN-Rac
<i>"Code-red"</i>	(13) Inaction on climate change will be expensive and/or costly				<b>1.0</b>
	(7) The government is not taking the climate emergency seriously and/or is not doing enough to meet climate targets				<b>1.0</b>
	(11) We need legislation that holds governments accountable for meeting climate targets			<b>1.0</b>	
<i>"Just Phase-out"</i>	(8) The energy transition will create jobs and is an opportunity for clean growth			<b>1.0</b>	
	(5) The government should increase investment in renewable energies and local-level climate action	<b>1.0</b>		<b>1.0</b>	<b>3.0</b>
	(4) The government should stop subsidizing and/or manage the swift decline of the oil and gas industry to get to net zero		<b>-4.0</b>		<b>2.0</b>
	(3) We are facing a climate emergency that requires urgent action			<b>1.0</b>	<b>2.0</b>
	(1) We need a just transition for fossil fuel and other workers			<b>3.0</b>	<b>4.0</b>
	(2) We need an energy transition to a low-carbon economy	<b>1.0</b>	<b>-1.0</b>	<b>1.0</b>	<b>1.0</b>
<i>"Transition-hesitant"</i>	(15) Responsible investing (and ESG) is necessary to decarbonize the economy	<b>2.0</b>			
	(10) Technological innovation plays the biggest role in reducing GHG emissions	<b>1.0</b>	<b>4.0</b>	<b>-1.0</b>	
	(14) The energy transition to a low(er)-carbon economy will happen gradually	<b>2.0</b>			
	(9) The oil and gas industry is very important to ensuring a prosperous future for Canadians		<b>3.0</b>		
	(6) The oil and gas sector needs to be part of the solution to reduce GHG emissions through responsible development and high ESG performance	<b>1.0</b>	<b>8.0</b>		

Lastly, we can use this analysis to map these four organizations onto the three argument clusters from Figure 8. CAPP’s expressed worldview aligns entirely with the “Transition-hesitant” camp, while CPPIB sits on the edge of “Transition-hesitant,” but only because it places stronger emphasis on responsible investing and increased investment in renewables. Both CLC and CAN-Rac straddle the “Just Phase-out” and “Code-red” camps, as they refer to many of the same arguments. But while CLC

expresses the belief that the energy transition will create clean jobs, and that the government should increase green investment, it does not directly call for an end to fossil fuel subsidies. Meanwhile, CAN-Rac emphasizes the costs of inaction on climate change and believes the government is not taking the climate emergency seriously enough, but it does not link this to arguments about clean growth or the role of technology in the energy transition.

### 3.6.3 Mapping dominant climate ideologies

Shifting further to the *inside-out* dimension of our methodology, we used CAM to go deeper into the cognitive perspective and visualize the ideological content of the four key contributors to the Parliamentary discourse. Using software called Valence, we generated four CAMs.<sup>277</sup> While we can draw valuable insights from single maps, a key strength of the method lies in comparing two or more CAMs to identify areas of similarity, difference, misunderstanding, or incommensurability between different ideologies. By mapping ideologies structurally, we can see how the meaning of a concept changes depending on its related concepts, and how certain concepts may play a bigger role than others. This section merely scratches the surface of CAM analysis but illustrates the value of “tunneling” down into individual actors’ ideologies, comparing them, and bringing those insights back up to the broader ideological landscape.

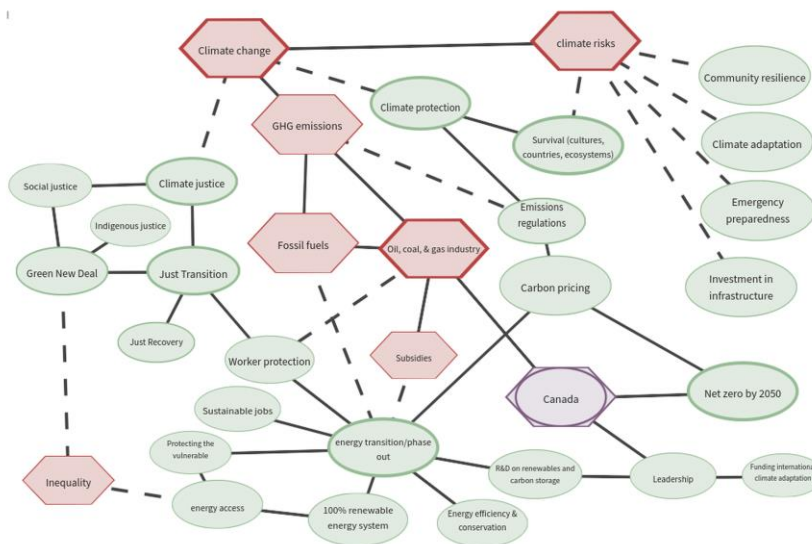
To produce a CAM for each group, we first analyzed their publications for frequently used concepts related to climate change, energy transition, and just transition. Next, we assessed the emotional valence of those concepts and drew links between concepts that were explicitly related in the texts and determined whether those relations were mutually supportive or discordant. Each CAM is a snapshot depiction of an organizational ideology, that illustrates the quasi-logical implications contained in an organization’s (or individual’s) representational network of meaning.<sup>278</sup>

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<sup>277</sup> Rhea, Carter et al. 2020.

<sup>278</sup> Note, too, that in creating CAMs of an *organization’s* ideology or worldview, we are drawing on Leader Maynard’s notion of “shared ideologies” as opposed to individual ideologies. Homer-Dixon 2015; Mock and Homer-Dixon 2015a; Leader Maynard 2022.

To interpret a CAM, linked sets of concepts can be understood as propositional phrases, such as “investment in infrastructure *is needed to mitigate* climate risks,” or “fossil fuel subsidies *are undermining or preventing* an energy transition.” This kind of analysis begins to get at an organization’s understanding of causation, its underlying theory of change, and how the belief system “feels” coherent to the organization. As depicted in Figure 14, CAN-Rac sees the threat of climate change as a matter of “survival for countries, cultures, and ecosystems.” But with severe climate impacts already being felt across Canada, and with several decades of impact already “locked in,” proactive responses to mitigating climate risk are seen as essential, particularly at the level of communities.

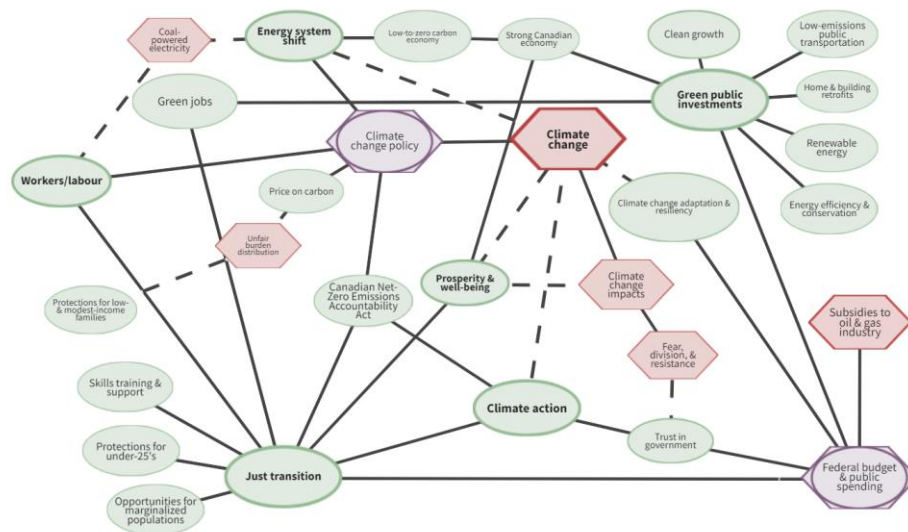


**Figure 14. CAM of Climate Action Network Canada (CAN-Rac)**

To protect the climate from further damage, CAN-Rac believes in (and advocates for) a “complete phase out of fossil fuels” towards an energy system based entirely on renewables. Key parts of an energy transition in Canada—and necessary measures to reach “net zero emissions by the year 2050”—include an “end to federal subsidies to the oil and gas industry” and the implementation of a

national framework on “carbon pricing.” However, CAN-Rac acknowledges that these measures will significantly impact resource industry workers as well as marginalized groups across the country. To ensure “worker protection,” future “sustainable jobs,” and equitable “energy access,” CAN-Rac advocates for Just Transition legislation, which it also links to a “Green New Deal,” climate and social justice, and fighting inequality.

Interestingly, Canada itself is represented as ambivalent—positive because of its Paris Agreement commitments and its potential for global leadership on “renewables research and development”; but negative because of its close ties and dependence on the oil and gas industry. Ambivalent concepts such as these are especially informative because they capture *contextual* cognitive association, which DNA is unable to account for effectively due to constraints around data aggregation. Another example is seen in the CLC’s CAM (Fig. 15), which links climate change to not only “Just Transition,” but also to the ambivalent concept of “climate change policy,” which it sees as potentially positive *and* a potential source of “unfair burden distribution” from things like carbon pricing and the “energy system shift.” In instances such as these two, simply adding or averaging these positive and negative valences (as is done in DNA) would misrepresent the actor’s ideology.

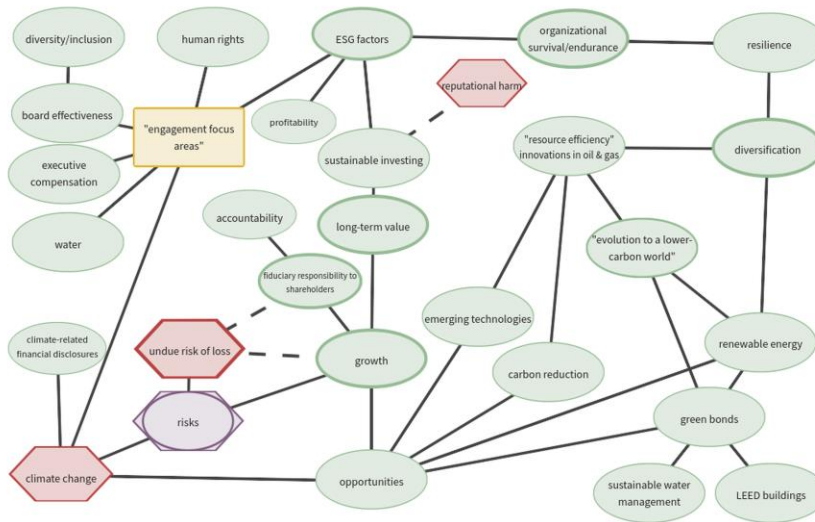


**Figure 15. CAM of the Canadian Labour Congress (CLC)**



Overall, the CLC's CAM centres around the need for a "Just Transition" for fossil fuel workers, young people, low- and modest-income families, and marginalized populations. The CLC views "green public investments" and "green jobs" playing a key role, both in preventing "unfair distribution of burdens" related to climate policy, and in ensuring "prosperity/well-being" for Canadians in the face of increasing "climate disruption/impacts" and a coming period of adaptation. The CAM points to the importance of "public trust in government" to effective climate action, which could be undermined by "fear and division" about the right way forward. Government "subsidies to the oil and gas industry" are viewed negatively and an "energy system shift" to a "low or no carbon economy" are viewed positively—but, in contrast with CAN-Rac, most of the ideological content concerns the impacts on Canadian workers rather than the economy at large or the longer-term consequences of climate change.

In contrast with both CAN-Rac and CLC, the CPPIB CAM (Fig. 16) emphasizes that climate change—while understood negatively overall—provides both significant investment risks *and* opportunities. Since CPPIB has a fiduciary responsibility to its shareholders, "growth" and "long-term value" are the most significant positive concepts, with "undue risk of loss" as the most significant negative concept. Further, while investment risks due to climate change could result in losses, risks are also seen as necessary for growth, so the concept is depicted as ambivalent. CPPIB sees many opportunities because of climate change, especially the chance to "diversify" across both "renewable energy" and "resource efficiency innovations in oil and gas." Both areas are viewed as supporting the "evolution to a lower-carbon world."



**Figure 16. CAM of CPPIB**

The final CAM, depicting CAPP’s ideology (Fig. 17), also includes mostly positive concepts, nearly all of which relate to the role of the oil and gas sector in addressing climate change. Interestingly, we were unable to find any indication in the data of either a “felt connection” or a semantic link between “oil & gas industry” and “climate change”—only indirect links through “addressing climate change.” The documents frequently emphasize that “Canada’s GHG emissions are relatively small” when compared to global emissions and other big emitters (CAPP only considers “upstream” emissions associated with the production—not consumption—of oil and natural gas), and that the real goal of climate action should be to “reduce *global* emissions” (even if that means only slightly reducing Canadian emissions). The industry is seen not only as essential to a “prosperous Canada,” but as a partner in “Indigenous economic reconciliation.” The most important belief in the CAM, however, is the set of linked concepts about “responsibly produced oil and gas.” CAPP emphasizes that because of Canada’s “stringent environmental regulations” and the industry’s focus on “technology and innovation,” Canadian producers can supply the world with more “responsibly produced oil and gas” than other exporting countries (like Saudi Arabia and



four of these organizations use the language of “transition” in the DNA, CAM gives us a deeper understanding of where transition-related beliefs actually “sit” within the actor’s ideology. CAM also reveals or points to the parts of an actor’s ideology that it is selective about sharing in public discourse.

Second, CAM adds nuance to DNA by teasing out multiple meanings of the same concepts across actors, rather than just establishing positions of agreement or disagreement. For example, while both the CAN-Rac and CPPIB CAMs include concepts about “survival” and “resilience,” the *referent* could not be more different. CAN-Rac emphasizes cultural, country, and ecosystem survival and community resilience. CPPIB focuses on its own organizational survival and resilience through diversification and “ESG factors”; investments that respect the environment, people, and good governance are seen to be more sustainable, more profitable, and more likely to produce long-term value for shareholders. Further, ESG factors matter for “sustainable investing” because *not* including them could lead to “reputational harm.” Identifying these multiple meanings of concepts is especially important when we consider the structural power of different actors in the discourse network. High-centrality organizations, highly represented actor types, and especially “loud” actors all have more power to promote certain meanings of concepts in the broader discourse network. If we take seriously the idea that concepts acquire meaning, in part, through their relations with other concepts, then being able to articulate multiple actors’ meanings of a concept is essential for understanding actors’ contributions to discourse and the whole ideological landscape.

## **3.7 Discussion and Conclusion**

### *3.7.1 Key findings*

We conclude with four main findings for the study of ideology and climate change more broadly. First, our analysis demonstrates that the ideological landscape of climate politics is diverse and complex, and cannot just be reduced to believers versus deniers, or even to collections of specific interest groups (although, of course, interests are still a major factor). This point is likely to extend to most other contexts

of climate politics beyond Canada. In many parts of the world, public and political discourse has evolved beyond debates between climate deniers and believers. Other research on global climate politics using CAM similarly indicates the *multiple* fault lines between various ideological orientations of negotiators at the United Nations Framework Convention on Climate Change (UNFCCC).<sup>280</sup> By taking a complex reflexive systems approach to ideology, we suggest that ideologies are dynamic, open systems, and thus the boundaries that we draw around them are likely to change over time. The rate at which ideologies evolve is likely particularly acute for climate change since climate change impacts from wildfires, hurricanes, drought, and other extreme weather events are rapidly reshaping public understanding of the problem and perceptions of risk. Ideological boundaries in climate politics should therefore be treated pragmatically, with the goal of better understanding *real* political variation in different social-ecological systems, rather than articulating rigid taxonomies.

This need for pragmatism leads to a second key finding, which is that actors participating in climate political discourse likely hold different meanings of key concepts like “survival” and “resilience.” Meaning can vary in terms of conceptual substance, referent object, scale, and even timeframes—so we cannot assume actors are on the same page simply because they use the same terms. Further, contributors to climate discourse may choose to define and bound both the problem and solutions in a way that aligns with their beliefs and interests. For instance, CAPP emphasizes that “Canada’s GHG emissions are relatively small” when compared to global emissions and other big emitters (they only consider “upstream” emissions associated with the production—not consumption—of oil and natural gas), and that the real goal of climate action should be to “reduce *global* emissions,” even if that means missing Canada’s climate targets.

Third, we find that while literal denial of climate change is becoming less common, what we might call “delayism” is becoming increasingly prominent—especially among politicians and corporations insisting on a “slow and gradual decline” of fossil fuel production. Sometimes, this delayism

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<sup>280</sup> Milkoreit n.d.; Milkoreit and Mock 2014.

comes from what seems to be genuine concern about the social and economic impacts of rapid change. But often, it is used more strategically by members of the oil and gas sector to stretch out development opportunities and give them more time to reposition themselves in a changing global energy market.

Fourth, our analysis found that there is a tendency for groups to acknowledge the severity of climate change *while* continuing to advocate for continued economic growth and generally maintaining the status quo, a position we call “whilism.” CPPIB and CAPP demonstrated what Peterson et al. (2019) call “ideological denialism,”<sup>281</sup> in statements such as “we need to reduce carbon intensity while meeting growing energy demand” or “we can grow Canada’s economy while also meeting our Paris commitments.” Importantly, no group in our case study talks about transforming our economic systems at all, though a few MPs talk about shifting to a “circular economy.”

### 3.7.2 *Limitations of the study*

Our case study demonstrates the potential of a novel research design that integrates an outside-in and inside-out approach to describing or measuring ideologies as complex reflexive systems. However, our analysis covers a relatively short period of time (2019-2021) and therefore stops short of exploring key coevolutionary dynamics like ideological change, transmission, and “stickiness.” Another limitation of the case study is that it does not examine the *causal* relationship between ideology and climate policy outcomes—that is, the relative impact or influence of an ideology on political behaviour. Longitudinal studies using these methods could track political decisions and other policy outcomes over time in addition to the coevolution of ideologies within policy-adjacent fora like Parliamentary hearings. But researchers will need to contend with intervening and confounding variables such as incentives, path dependency, and other structural constraints—variables that could perhaps be accounted for by incorporating process tracing, interviews, and other methods into the research design.

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<sup>281</sup> Petersen, Stuart, and Gunderson 2019.

One weakness of CAM at this point is that it is difficult to conduct useful analysis over a large set of CAMs and there is not yet an aggregation option. But here, DNA is able to handle large amounts of data from many speakers, and identify communities, clusters, and patterns. A strength of CAM is that because it is a more interpretive process, a researcher could use many different forms of data, including even visual and multimedia data such as symbols, pictures, memes, or short audio or video clips. The Valence software does not yet have the capacity to include these things right on the platform, but it is far from impossible. DNA, on the other hand, is strictly limited to written or spoken word.

### *3.7.3 Future research*

There are several promising directions for future research that integrates outside-in and inside-out approaches to understanding and measuring the impact of ideology on policy outcomes. First, additional CAMs could be constructed for other governance actors. Second, CAMs could be developed for one organization at several points in time, in order to trace ideological change. This would be particularly valuable in the case of Just Transition proposals pre- and post-pandemic. Third, using Parliamentary data would also allow us to systematically study the belief systems of individual MPs (based on their statements) compared to the overall party ideology. Finally, one could identify new and emerging issues within climate governance (such as adaptation to increasing numbers of severe weather events, or policies pushing for fast adoption of electric vehicles, for example) as focal points around which more fine-grained CAMs could be constructed. All three of these research avenues could prove useful to not only climate governance scholars, but also to policy makers and civil society actors who participate directly in these governance bodies.

As the study of ideology and climate change moves away from climate change denialism and towards an exploration of the nuanced and varied ideological landscape of organizations and individuals championing different policies and priorities, researchers must experiment with new methods and tools that bridge disciplines, integrate levels of analysis, and build on the strengths of inside-out *and* outside-in

perspectives. This paper offered one such experimentation and points to several exciting and innovative avenues for ideology studies, as a whole.



## Chapter 4

### Article #3: The Arms Trade Treaty: Ideological Conflict in Global Arms Control Advocacy and Opposition

#### 4.1 Preface

The trade in and control of weapons has long been a stage for ideological divisions, but the actual concept of ideology is seldom employed in the analysis of arms control initiatives, outside of the overly simplified ideological landscape of the Cold War. Arms control initiatives reflect(ed) people's beliefs about what/how the world is and how it ought to be vis-à-vis arms/weapons, and the ability to threaten or commit armed violence that they enable. However, these beliefs do not exist in a vacuum, nor are they isolated, atomized ideas that are independent from each other. Further, they are entangled with and help inform other beliefs about the appropriate means, strategies, and tactics to achieve one's advocacy goals. While much has been written about the role of individual ideas and norms in advocacy networks, as well as on the role of advocacy networks and opportunity structures in various arms control initiatives, this chapter argues that much of what occurs in this advocacy space is about ideology. Rather than focusing on any specific norm against a type or use of weapon—as most of the literature on this subject does—this paper takes those larger sets of beliefs, or *ideologies*, seriously, and makes the case for analyzing their impact.

Specifically, the chapter operationalizes my trans-scalar ideological networks framework to study the Arms Trade Treaty (ATT), and makes the case that multi-scale approaches are especially useful in studying these complex international advocacy spaces where ideology helps shape governance outcomes. The chapter argues that new developments in ideology studies can help address a lot of the challenges that other ideationally-focused sub-disciplines face, especially around this supposed “belief vs. strategy”

dichotomy. In the more narrative-based section, the chapter describes the post-Cold War background of arms control advocacy, as well as the key actors and events that led to the ATT being proposed and eventually passed. It demonstrates and explores the ideologies of four key organizations, and also compares insights across the four CAMs generated. It also maps the broader issue network using social network analysis (the outside-in approach) and analyzes how the CAM insights inform/explain some aspects of the network structure. Compared to Article #2, this article offers another way to operationalize my trans-scalar ideological networks framework, using the case of the ATT. It starts with the inside-out perspective of ideology and then turns to the outside-in perspective, showing that the framework is well-suited to more “established” cases in addition to more “active” ones (like the energy discourse case in Article #2).

## **4.2 Overview**

The trade in and control of weapons has long been a stage for ideological divisions, but the actual concept of ideology is seldom employed in the analysis of arms control initiatives, outside of the overly simplified ideological landscape of the Cold War. Instead, scholars have often used analytical tools such as the norm life-cycle or frame theory to study the role of ideational phenomena in arms control. Taking the case of the Arms Trade Treaty, this paper resituates ideology as an important concept for studying conflicting worldviews, especially when understood broadly and when operationalized using a network-based framework. Using a combination of Cognitive-Affective Mapping (CAM) and social network analysis (SNA), this paper examines the small arms and light weapons (SALW) issue network, starting in the mid-1990s and leading up to the 2013 ATT. However, rather than focusing only on what are considered the two main rival advocacy networks—as most studies of the ATT have done—I argue that the broader advocacy space around this issue was comprised of at least four competing and interconnected coalitions and ideologies. This approach, which I call *trans-scalar ideological network*

*analysis*, points to ways that interacting and overlapping *systems* of ideas—not just individual norms or frames—play a dynamic role in political contests.

### 4.3 Introduction

This paper brings together literature on ideology and arms control advocacy networks, using a complex reflexive systems framework. While much has been written about the role of individual ideas and norms in advocacy networks,<sup>282</sup> as well as on the role of advocacy networks and opportunity structures in various arms control initiatives,<sup>283</sup> recent innovations in the study of ideology have yet to be brought to bear in these literatures. Scholars continue to grapple with the interactions between non-material phenomena such as “ideational resources” and material phenomena such as network structure. Taking the case of the Arms Trade Treaty (ATT), this paper examines the dynamic role of ideology/ideological conflict and the emergent structure of the ATT “issue network,” in the advocacy efforts of non-state actor coalitions.

The trade in and control of weapons has long been a stage for ideological divisions, but the actual concept of ideology is seldom employed in the analysis of arms control initiatives, outside of the overly simplified ideological landscape of the Cold War. Motivated by a mixture of moral appeals, *realpolitik*, and other considerations, a vast historical range of initiatives—from bans on Greek fire in ancient Europe, to limits on early guns in 17<sup>th</sup> and 18<sup>th</sup> century Japan,<sup>284</sup> to international conventions on the production, trade, and use of a variety of weapons from the late-19<sup>th</sup> century to today<sup>285</sup>—reflect(ed) people’s beliefs about what/how the world *is* and how it *ought* to be vis-a-vis arms, and the ability to threaten or commit violence that they create. Rather than focusing on any specific norm against a type or use of weapon—as

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<sup>282</sup> Carpenter 2007; Cairney and Weible 2015; Krause 2001; Garcia 2011; Park, Murdie, and Davis 2019; Keck and Sikkink 1998.

<sup>283</sup> Brem and Rutherford 2001; Grillot, Stapley, and Hanna 2006; Alcalde 2012.

<sup>284</sup> Cooper 2011.

<sup>285</sup> Including the Hague Conventions of 1899 and 1907, as well as the Brussels Act of 1890 and the 1919 Treaty of St. Germain-en-Laye. See Karp 2006.

most of the literature on this subject does—this paper takes those larger sets of beliefs, or *ideologies*, seriously, and makes the case for analyzing their impact.

The paper investigates the nuances of ideological conflict surrounding the negotiation of the ATT, focusing on the advocacy efforts of several key non-governmental organizations (NGOs) and/or coalitions between 2003 and 2014—from the formation of the Control Arms Coalition (CAC, or Control Arms, hereafter) to the year the ATT finally came into force.<sup>286</sup> While there have been several studies<sup>287</sup> looking at the “competing coalitions”—with Control Arms on the one side, and the National Rifle Association (NRA) on the other—few/none of them consider the role of the looser but very active anti-arms trade/anti-war movement<sup>288</sup>, represented by organizations such as the United Kingdom-based Campaign Against the Arms Trade (CAAT). Furthermore, research that includes representatives from the defence industry (i.e., arms manufacturers) tend to treat the sector homogeneously in terms of their views on the ATT. And yet, early writings by some of Control Arms key founders demonstrate that the tension between the “control arms” versus “abolish arms” worldviews was as much a key factor as the “control arms” versus “gun rights” worldviews in how ATT advocacy evolved.<sup>289</sup> This ideological heterogeneity and its’ impact in the overall arms trade/control “issue network” has yet to be fully examined.

Using a combination of relatively new methods, I employ a conceptual framework grounded in complex systems theory and network science, which aims to integrate the individual, conceptual, discursive, and social dimensions of ideology. The framework treats ideologies as *complex reflexive systems* (discussed in more detail in Section 4.5) of concepts and emotions, embedded in social networks, and broader sociopolitical network structures—i.e., as “networks, all the way down.” I refer to this combination of nested networks as *trans-scalar ideological networks*. Using this systems-based approach, I argue that ideologies (or belief systems, or worldviews) both *shape* and are *shaped by* the discursive and

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<sup>286</sup> “The ATT was adopted by the UN General Assembly on 2 April 2013 with 154 votes in favour, 3 votes against, and 23 abstentions\*. The Treaty opened for signature on 3 June 2013 and entered into force on 24 December 2014 following its ratification, acceptance or approval by 50 states (in accordance with Article 22(1)).” Treaty Status n.d.

<sup>287</sup> Bob 2012; Bob 2010; Green and Macdonald n.d.; Grillot 2011.

<sup>288</sup> In fact, few NGOs in this space/movement have UN accreditation—sometimes for obvious reasons.

<sup>289</sup> See, for example Karp 2006; Karp 2002a.

social network structures in which they are embedded. By examining these trans-scalar ideological networks, we can begin to identify not only key actors and their relations in a given issue network, but also important discursive dynamics between actors, and interdependencies between the concepts that comprise those actors' ideologies.

The paper proceeds as follows. First, I review the relevant literature on arms control advocacy and its intersections with—first and foremost—ideology, but also with research on complexity and networks. Second, I make the case for a complex systems approach to studying ideological conflict in the context of multi/competing advocacy efforts and briefly summarize my trans-scalar ideological networks framework (which is discussed in much more detail in Paper #1). Third, I discuss the background, context, and outcomes of the ATT, focusing on several key non-governmental organizations and networks. Fourth, I outline the methods and tools I use to operationalize my conceptual framework. I use these tools to (1) trace the key moments, actors, and alliances leading up to the ATT, (2) dive deeper into the ideological structures of four key organizations in that issue network, and (3) analyze the network structure of the ATT advocacy space as a whole. Finally, I discuss several cross-cutting insights and lessons from the case study, which may inform future advocacy efforts on this or other issues. I also highlight key contributions to the study of ideology more broadly, including the complex systems-based approach demonstrated here, as well as suggestions for future multidisciplinary research on ideology-network interactions.

#### **4.4 Arms control, the “ideational turn” and early “ideology studies”**

Before the end of the Cold War, most international arms trade and/or control initiatives were motivated by concerns about maintaining stability in a bi-polar world.<sup>290</sup> But the collapse of the Soviet Bloc “released a veritable flood of weapons,”<sup>291</sup> especially small arms, and SALW went from being a

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<sup>290</sup> Krause 2001.

<sup>291</sup> *Ibid.*, 11.

“low” security issue to a “high(er)” one.<sup>292</sup> Conceptions of “security” itself were also shifting, from a primarily state-centric notion to a broadened “human security,”<sup>293</sup> leading to changes in many countries’ foreign policy. Furthermore, the types of conflicts that emerged and/or drew global attention in the early 1990s were largely internal, communal, or “ethnic” conflicts (e.g., Kaldor’s so-called “new wars”<sup>294</sup>). Small arms proliferation played a huge role in fuelling crime, conflict, and genocide in countries all over the world, including in Eastern Europe, Latin America and the Caribbean, Southeast Asia, and Central and East Africa, sparking new movements around arms control.

In this new security context, much of the research on the arms trade and humanitarian arms control (in International Relations (IR) and elsewhere) left “ideology” behind. The *ideational* phenomena that were deemed relevant to the arms control community included things like identity, culture, and norms—*not* ideology.<sup>295</sup> Instead, scholars turned towards analytical tools and such as frames<sup>296</sup>, norms<sup>297</sup> and “norm entrepreneurs,”<sup>298</sup> econometrics<sup>299</sup>, advocacy coalitions and networks<sup>300</sup>, regimes<sup>301</sup>, and others (see Fig. 18 for a comparison of the use of some of these concepts from 1962—the year Bell declared an “end” to ideology—and 2019). After all, with communism largely defeated and the unipolar world beginning to take shape (see, for example, the end of ideology, the end of history, and other premature declarations), there was no longer a need to consider grandiose, utopian visions of society. While scholars in the arms control community and elsewhere were, perhaps, right to abandon what was then a narrow, rigid, and pejorative concept of ideology, more recent theoretical and methodological innovations in ideology studies offer significantly more analytical power.

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<sup>292</sup> Krause 2001.

<sup>293</sup> *Ibid.*, 13.

<sup>294</sup> Kaldor 2012.

<sup>295</sup> Leader Maynard 2019.

<sup>296</sup> Oliver and Johnston 2000.

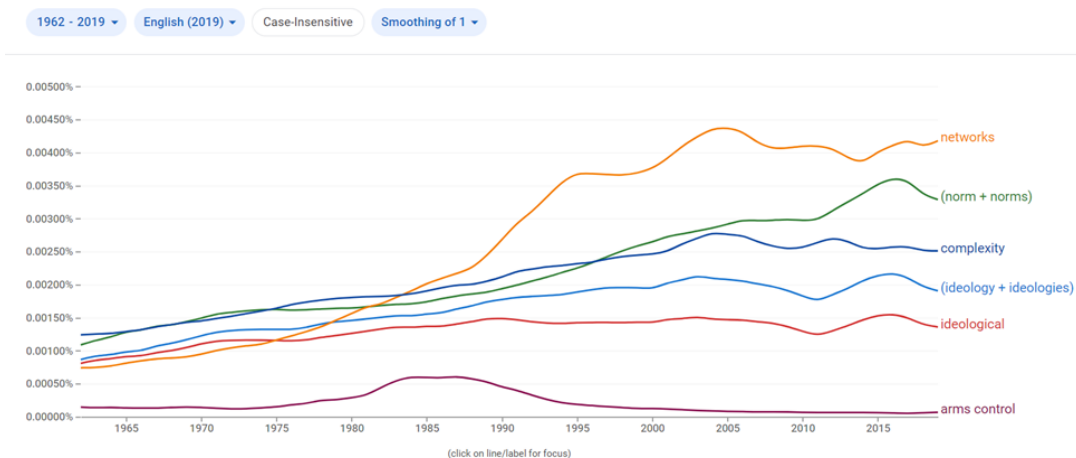
<sup>297</sup> Krause 2001; Bolton and James 2014; Erickson 2013; Laurance 2002; Price 1998.

<sup>298</sup> Goddard 2009.

<sup>299</sup> Brauer and Muggah 2006.

<sup>300</sup> Keck and Sikkink 1998.

<sup>301</sup> Garcia 2011.



**Figure 18. Google nGram**

While the field remained fragmented for decades (especially across the Atlantic divide), new alignments and synergies are beginning to take shape, most recently embodied in *The Routledge Handbook of Ideology and International Relations* (2023), in which Paper #2 of this dissertation is published.<sup>302</sup> However, despite a resurgence in the study of broadly-defined ideology, the insights of this research have not yet made their way into arms control scholarship. This paper aims to do just that, using a framework grounded in complexity science.

#### **4.5 Complexity, networks, and arms trade and control**

A growing number of political scientists employ complex systems methods, concepts, and frameworks in their work. While not a single cohesive theory, complexity science refers to a collection of concepts, principles and tools for studying systems composed of recursive causal connections, that exhibit non-linear and emergent behavior.<sup>303</sup> Because of its ability to cope with multi-level, disproportionate, and non-linear causality, complexity (as a concept, an approach, or an ontology) is increasingly seen as a

<sup>302</sup> Most recently, see, for example Leader Maynard and Haas 2023; Freedon 2019.

<sup>303</sup> Homer-Dixon et al. 2013; Homer-Dixon et al. 2014.

“bridge”—between supposedly incommensurable theoretical traditions, competing epistemologies, agency and structure,<sup>304</sup> between “levels” or “scales” of social analysis, and even between constitutive and causal explanations.<sup>305</sup> For Bousquet and Geyer (2011), “complexity acts as both a bridge between the positivist and post-positivist traditions in International Relations (IR) and at the same time goes beyond the limits of these two traditions.”<sup>306</sup> Further, Bousquet and Curtis (2011) argue that complexity adds value to key debates within IR, including relational or anti-essentialist ontologies, theories of the international system, the agent-structure problem, and the nature of global networks.<sup>307</sup> This paper demonstrates yet another bridging role for complexity: between the ideational, material, and institutional dimensions of ideology.

In some research on arms trade and control—but not on ideology—complexity theory has already been recognized as a potentially valuable framework or lens. For example, a 2006 UNIDIR publication points to the inadequacy of mechanistic thinking in trying to understand relationships between cause and effect in SALW proliferation, as well as unintended consequences within the larger international system.<sup>308</sup> The authors argue that “diplomatic rhetoric about complexity and interdependence” is insufficient, and the disarmament field needs to move “toward a real conceptual understanding about the characteristics and implications of these phenomena.”<sup>309</sup> One such implication is that the initial conditions of a complex system—the components and their arrangement, the rules of interaction, the flows of energy, matter, and information—are important because they shape the possible-set of system trajectories and the mechanisms that reproduce them. Pierson (2004) refers to that process of shaping trajectories as *path dependence*, or the as “dynamic processes involving positive feedback, which

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<sup>304</sup> Goddard 2009.

<sup>305</sup> Elsewhere, I discuss Ylikoski’s (2013) concept of “developmental explanation,” which incorporates “significant changes in the system’s causal capacities” over time, and Norman’s (2021) “interpretive process tracing” framework, which “nests” causal explanations and constitutive explanations within each other to account for time. I argue that both of these approaches to time-aware explanation can be captured using a complex adaptive systems approach. See: Ylikoski 2013; Norman 2021.

<sup>306</sup> Bousquet and Geyer 2011.

<sup>307</sup> Bousquet and Curtis 2011.: 44.

<sup>308</sup> Introduction, Borrie and Randin 2006.

<sup>309</sup> Mercay and Borrie 2006., 131.



generate multiple possible outcomes depending on the particular sequence in which events unfold.”<sup>310</sup> In other words, history—and the sequence of history—matters.

There are many ways to model and understand different complex systems, and different tools are effective at capturing certain structures and dynamics. So far, applications of complex systems *tools* within the general topic of guns include stock and flow models of individual demand for small arms<sup>311</sup>; epidemiological models and agent-based computer simulations of individual gun ownership and small arms proliferation<sup>312</sup>; social network theory applied to state-to-state transfers and illicit arms trade<sup>313</sup>; and agent-based models and social network analysis of arms control advocacy networks, themselves.<sup>314</sup> Within the arms trade literature and elsewhere, there is growing interest in using these tools and analyses as more than simply metaphors.

#### *4.5.1 A closer look at networks*

Of these different tools, network theory has arguably had the biggest impact in the study of arms trade and control, and in political science, more broadly. However, early applications tended to focus on “networked forms of coordination” (e.g., “actor network theory,” “networked governance,” or “dark networks”) and treated them as mostly flat and cooperative.<sup>315</sup> For example, much of the early literature on advocacy networks focused on the “network” metaphor and the “networking” verb, rather than the actual structure of those networks. But following the emergence of “new network studies” in the late-

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<sup>310</sup> Pierson 2004, 20.

<sup>311</sup> Brauer and Muggah 2006.

<sup>312</sup> Mercay and Borrie 2006., 151.

<sup>313</sup> Because arms transfers are “embedded in relationships of mutual defense,” Kinsella (2003) argues that the global arms trade is better understood as a network rather than a market. In a market, price serves as a control mechanism; in a network, relationships based on trust and reciprocity norms are what keeps the network, as a whole, together. While price certainly plays a role in the arms trade, relationships between states and firms are much more significant. See Kinsella 2003b. See also: Akerman and Larsson Seim 2014; Lebacher, Thurner, and Kauermann 2020.

<sup>314</sup> Carpenter 2007; Carpenter 2011; Carpenter et al. 2014; Bloodgood and Clough 2017.

<sup>315</sup> Keck and Sikkink 1998; Krahnemann 2005; Price 1998; Yanacopulos 2005.

1990s and early 2000s, subsequent research started to pay attention to the hierarchies and power dynamics that emerged from these supposedly flat structures.<sup>316</sup>

First theorized by Barabasi et al. (1999), *scale-free networks* refer to network structures in which the links between nodes are based on a “power law”: a few nodes—called *hubs*—have many connections and most others have very few (i.e., there is no real average number of connections). In the global airport system, for example, there are millions of airports worldwide but only a dozen or so major transport hubs—including those in London, Los Angeles, New York City, Toronto, Tokyo, Vancouver, and others—that handle a disproportionate amount of all air travel. Network analysis—using measures of density, centrality, degree, and others—then offers a method for describing and exploring the “topography” of these scale-free networks, whether at the scale of the human brain, the global transportation network, or anything in between.

When applied to agent-based networks—where the nodes are activists, policymakers, organizations, or some other entity with “actorhood”—network analysis also enables empirical investigation of the social structures that emerge from repeated interaction, which illustrate power dynamics, relationships of influence, and differential network-shaping capacities.<sup>317</sup> For instance, in their work on human security and weapons norms, Carpenter et al. (2007, 2011, 2014) takes the *structure* of advocacy networks seriously. She and her colleagues find that the salience—and ultimately, the success—of a particular advocacy “issue” is intimately connected to the structure of the advocacy network, itself, especially regarding high-centrality organizations (i.e., the hubs) that function as gatekeepers.<sup>318</sup> The decision processes (agenda setting and vetting) of the hubs do more to influence the focus of the network as a whole, Carpenter argues, than the “norm entrepreneurs” at the fringes of the network can do with little influence on their own.<sup>319</sup> However, recent work on anti-drone advocacy networks finds that less

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<sup>316</sup> See, for example, Kahler’s (2009) distinction between “networks-as-actors” and “networks-as-structures” approaches. Kahler 2009; Faul 2016; Lake, Wendy H. Wong, and Wong 2007.

<sup>317</sup> Barabasi and Albert 1999; Barabási 2009; Hafner-Burton, Kahler, and Montgomery 2009; Papadopoulos et al. 2012.

<sup>318</sup> Carpenter 2011.

<sup>319</sup> *Ibid.*, 98–99.

powerful groups can *also* “vet” partnerships and issue framings<sup>320</sup>, in part, due to the reputational costs and constraints that high-centrality organizations face as a result of their position—a dynamic explored in great depth by Stroup and Wong (2017) in *The Authority Trap* and elsewhere.<sup>321</sup> But regardless of the level of network centrality, the outcomes of these decision processes shape both the subsequent network structure, and the nature of the network’s attraction for new members. In this way, network structure is both the *product* of action/interaction and the *context* in which action/interaction is enabled and constrained.<sup>322</sup>

A second key finding of this area of “new network science” is that there are (semi)predictable patterns of network growth and change, dynamics that Barabasi termed *preferential attachment*. As new nodes enter a network, they generally attach to the most “popular” nodes (i.e., those with the most links) or the most “similar” nodes (via homophily; “similar” could mean many different things here, of course). These attachment processes create “rich get richer” and/or “like attracts like” dynamics in the network<sup>323</sup>, which have the potential to reinforce differential capacities of nodes. Even though popularity-based and affinity-based attachment conditions are not inherently agent-centred, Henry’s (2011) research demonstrates that preferential attachment dynamics also stand up in *agent-based* networks such as emergent networks of policymakers. He finds that “networks are held together by power-seeking relationships” that make it easier for network actors to change policy, but “ideological similarity appears to be a necessary condition for power-seeking mechanisms to drive the cohesion of policy networks.”<sup>324</sup> In other words, in an agent-based network, network structure depends on a *combined interaction* of popularity-based (linking to nodes with lots of resources and/or power) and affinity-based attachments (linking to nodes with similar ideas or ideologies). Both material and ideational factors matter.

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<sup>320</sup> Nylén 2021.

<sup>321</sup> Stroup and Wong 2017.

<sup>322</sup> Kahler 2009.

<sup>323</sup> Barabási 2009; Papadopoulos et al. 2012.

<sup>324</sup> Henry 2011, 379.

It is this combination of ideationally and materially motivated attachment dynamics, along with scale-free network structure that informs my approach to ideological conflict in and between advocacy networks in the global arms control governance space. Using networks to illustrate/model relational structures within and across these scales—networks of meaning embedded in networks of people embedded in broader sociopolitical networks—the framework produces/illustrates what I call *trans-scalar ideological networks*.

#### 4.5.2 A new framework: *Trans-scalar Ideological Networks*

As discussed in detail in Chapter 2, recent comprehensive mapping of the field of ideology studies reveals three categories of approaches: conceptual approaches, which emphasize the relational structures of ideological content<sup>325</sup>; discursive approaches, which focus on the communicative practices that construct, comprise, and diffuse ideology<sup>326</sup>; and quantitative approaches, which aim to identify correlational and causal relationships between ideology and political behaviour.<sup>327</sup> Chapter 2 outlined a new, complex reflexive systems approach that integrates and draws on the strengths of each of these dominant approaches, as well as bridges between the individual-scales<sup>328</sup> and group- or social-scales of ideology.<sup>329</sup>

As systems of belief—rather than just individual ideas or norms—ideologies comprise not just normative or moral beliefs about what *ought* to be (for example, Karp asks “what is to be mankind’s relationship with the gun?”<sup>330</sup>), but also ontological beliefs about what reality *is*, and epistemological beliefs about how one comes to *know* reality. These different types of belief do not just exist side-by-side,

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<sup>325</sup> Freeden 1996; Skinner 1974; MacKenzie 2003; Leader Maynard 2013.

<sup>326</sup> Leader Maynard 2013.

<sup>327</sup> Jost, Kay, and Thorisdottir 2009; Tajfel and Turner 1979; Tajfel and Turner 1986.

<sup>328</sup> Such as those focusing on brain physiology (Amodio et al. 2007; Kanai et al. 2011; Chiao et al. 2009.) and socio-psychological factors (Jost, Kay, and Thorisdottir 2009; Haidt 2001; Haidt 2007; Haidt 2012; Greenberg et al. 1990.); see also Michael Freeden’s (Freeden 1996; Freeden 2003.) “morphological” approach regarding the internal structure of ideologies.

<sup>329</sup> Such as critical discourse analysis (Fairclough 2001; Fairclough 2010; van Dijk 1995; van Dijk 2000b.) and poststructural approaches (Zizek 1994; Laclau 1997; Norval 2000.).

<sup>330</sup> Karp 2002b, 180.

but “interact with,” co-constitute, and inform each other (following a network theory of meaning<sup>331</sup>). Furthermore, human agents are *reflexive* in that they can “observe” their internal schemas while also being “participants” in them—they are not entirely separate from their mental representations, but they are also not the same thing as their mental representations.<sup>332</sup> Ideologies are “directed back on [themselves]” through feedbacks that involve the ideology holder’s perception, introspection, learning and “updating.”<sup>333</sup>

So, ideologies can be understood as complex reflexive systems of emotionally charged concepts that are built, shared, and learned through various discursive and social practices. Ideologies themselves “exist” in individual minds but they are (re)produced through social processes that are subject to in-group/out-group dynamics, (mis)perception, identity construction, conflict, material and nonmaterial interests, and various kinds of influence—making them “a crucial bridge between individual minds and collective behavior.”<sup>334</sup> Importantly, ideologies are not built in isolation from each other; they often evolve in response to some other existing worldview. For example, early Marxism emerged to directly challenge the prevailing Liberalism of the day. More recently, the ideological cluster comprised of “men’s rights,” “the Red Pill,” “incels,” and “men’s lib” evolved largely online (on Reddit and other discussion-based websites) in direct contestation with and response to Feminism.<sup>335</sup> But ideologies also shape sociopolitical networks via self-sorting, since “People may be attracted to (or repelled from) other people when they realize the similarities (or differences) in their individual belief systems.”<sup>336</sup> Over time, agents’ choices and actions—which are informed by their ideologies—construct and maintain broader social structures. However, these structures then provide the environment in which sociopolitical networks grow and change, the context in which ideologies are (re)invented or (re)learned, and the constraints on agents’

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<sup>331</sup> Homer-Dixon and Karapin 1989.

<sup>332</sup> In Elias’ words, humans and their internal schemas “can be considered separately, but not as being separate.” Elias 1978, 85.

<sup>333</sup> Beinhocker 2013.

<sup>334</sup> Homer-Dixon et al. 2013.

<sup>335</sup> Perry and DeDeo 2021; Clapp 2021.

<sup>336</sup> Homer-Dixon et al. 2013, 344.

future choices and actions. As with norm contestation and “issue interdependence,”<sup>337</sup> the re/de-construction of ideologies does not happen in a vacuum. In other words, ideologies, and the social structures in which they exist co-evolve through the mechanism of agents acting in/on the system.<sup>338</sup>

The remainder of this paper applies this trans-scalar ideological network framework to the NGO advocacy efforts surrounding the ATT.

#### **4.6 Case study: ideological conflict and the Arms Trade Treaty**

The ATT—and the lead up to its opening for signature in 2013<sup>339</sup>—is especially fascinating from a global governance perspective (rather than just IR) because it contains elements of first, second, and third track diplomacy or “new diplomacy”; social movements and direct activism; transnational advocacy networks and interest group lobbying; international law and policymaking; and UN politics, more generally. As an international legal instrument, the ATT is unique in that it provides a platform for both the arms trade itself as well as international efforts to regulate arms transfers. Previous mechanisms, such as the Ottawa Treaty or the UN Register, focused on one aspect or the other. While the ATT does not specify new pariah weapons, it is considered a “hybrid” treaty, with elements of a trade agreement, a reporting mechanism, an arms control regime, and a human rights and humanitarian law instrument.<sup>340</sup> Furthermore, prior to the 2006 UN Resolution to start working on an arms trade treaty, “the field [of small arms control] ha[d] devoted most of its energy to the illicit trade, not because it is the most dangerous aspect of small arms proliferation, but because it is the only aspect on which states could agree to work

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<sup>337</sup> Park, Murdie, and Davis 2019.

<sup>338</sup> For a similar study on the co-evolution of human rights issues, ideas, and norms, see Ibid.

<sup>339</sup> At the time of writing, 112 states are Party to the treaty (including nearly all of Europe, much of South and West Africa, most of Central and South America, China, Japan, Australia, Mexico, and Canada); 29 states have signed but not yet ratified—most notably, the United States, which initially signed the treaty under then-President Obama, symbolically (and relatively meaninglessly) “un-signed” it in 2019 under then-President Trump, but has yet to reaffirm its commitment as a treaty signatory under current-President Biden; and 54 states—including the Russian Federation, currently the second largest arms exporter, and three of the five top arms importers (India, Saudi Arabia, and Egypt)—have not yet joined the treaty.

See: Treaty Status n.d.; Wezeman, Kuimova, and Wezeman n.d.

<sup>340</sup> Bolton et al. 2014.

together.”<sup>341</sup> The ATT signified a major shift in both the form and content of international arms control initiatives.

That shift came about, in part, due to the advocacy efforts of—and dynamics and contests between—hundreds of NGOs, activists, academics, and lobbyists that sought to re-make/shape the post-Cold War world, specifically regarding SALW. These actors included everything from humanitarian and human rights coalitions (e.g., the International Action Network on Small Arms (IANSA) and the Control Arms Campaign (CAC)) to anti-militarist groups (e.g., the Campaign Against the Arms Trade (CAAT)), arms manufacturers associations (e.g., Defense Small Arms Advisory Council (DSAAC)), and gun rights organizations (e.g., the National Rifle Association and its’ Institute for Legislative Action (NRA-ILA))—all with very different visions for how this re-shaped world should look. This paper not only explores this ideological heterogeneity and the broader social network(s) in which it is embedded but argues that it partly *explains* the outcome of the ATT as it was adopted.

In what follows, I first describe my overall methodology and the relationships between the two main methods and datasets I use to explore this case study. I then outline in detail my data collection methods and resulting datasets. Next, I discuss the origins of the ATT and trace the key moments, actors, and alliances that ultimately shaped the adoption of the ATT in its final form. Following this descriptive/narrative analysis, I turn to mapping and visualizing specific ideologies that played a key role in shaping the ATT outcome, and then to mapping the overall stakeholder/social network of this transnational advocacy space. In the discussion section, I offer some findings and cross-method insights and then conclude with noting key limitations of the study as well as directions for future research.

#### *4.6.1 Methodology*

I operationalize my trans-scalar ideological networks approach here by combining Cognitive-Affective Mapping (CAM) with stakeholder mapping and network analysis. First, CAM is a method for

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<sup>341</sup> Karp 2006, 23.

visually representing belief systems as “maps” or networks of interacting concepts and emotions. A “cognitive-affective map” represents “an individual’s or a group’s concepts and beliefs about a particular subject, such as another individual or group or an issue in dispute.”<sup>342</sup> Using easy-to-recognize shapes and colours, CAMs provide a way to “zoom in” on the ideologies of specific actors and, more importantly, compare them to each other. Cross-CAM analysis will reveal important areas of difference, hidden tension, comparative silence, misunderstanding, or incommensurability, but also potential common ground or “creative pathways for compromise.”<sup>343</sup>

Second, as discussed in earlier sections of this paper, network analysis enables a sort of “topographical description” of various kinds of systems, illustrating important flows of information and energy, power dynamics, socio-political relationships, and identifying agents with network-shaping capacity.<sup>344</sup> In my view, this “relational turn” can help researchers reconcile over- and under-socialized approaches to human behaviour, and offers a more empirical way to study the coevolution of ideology and the social context in which it is embedded.<sup>345</sup> Because of its emphasis on relationships, interaction, and socially constituted structure, network theory can account for both the purposive action of agents (enabled and constrained by network structure) and the social structures and forces (constituted and reproduced by action over time) that shape the possible fields of action.

Unlike the case study in Chapter 3, which aimed to map emergent ideological “boundaries” and clusters of ideologically similar actors, this chapter starts with a specific issue network where coalitions of actors with similar views already exist.<sup>346</sup> So, rather than starting from the *outside-in* perspective using

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<sup>342</sup> Homer-Dixon et al. 2013, 347.

<sup>343</sup> Mock and Homer-Dixon 2015b.: iv.

<sup>344</sup> Barabasi and Albert 1999; Barabási 2009; Hafner-Burton, Kahler, and Montgomery 2009; Papadopoulos et al. 2012; Wasserman and Faust 1994.

<sup>345</sup> Polanyi 1968; Granovetter 1985.

<sup>346</sup> Furthermore, only a small handful of the NGOs accredited to the ATT PrepCom process delivered statements during those three meetings or the larger UN meetings. Those organizations that did speak or issue statements had already coordinated with their respective networks/coalitions to deliver a unified front—the clusters of ideologically similar actors were already clear from the beginning. As such, little would be gained from a full discourse network analysis of the ATT issue network, as we did for Chapter 3’s case study. It is more than likely that an actor-congruence network analysis of these same data would look very similar to the *social network analysis* presented later in this paper.



discourse network analysis to inductively identify actor-congruence and argument-congruence—as the climate chapter does—this chapter first uses CAM to analyze and compare specific actors from the *inside-out*. Then, it “zooms out” using stakeholder/influence mapping to get a fuller picture of the multiple competing and overlapping advocacy networks in this space.

As discussed in Sections 4.4 and 4.5, much of the early work on advocacy coalitions and transnational advocacy networks (TANs) falls closer to the networks-as-actors approach, where network members intentionally join a network with the goal of strengthening collective action around a specific set of issues.<sup>347</sup> This ATT case contains many of these kinds of intentional networks, including several of the organizations and/or coalitions discussed in the background section. However, there is often a tendency to treat these advocacy networks as relatively independent, isolated, and with discrete boundaries of membership. To challenge these assumptions, Holzscheiter et al. (2022) coin the phrase “advocacy coalition *constellation*” to emphasize the emergent network-as-structure around any given issue.<sup>348</sup> I take the idea of constellations one step further and argue that, by combining the intentional actor networks (such as CAC and CAAT) with the “organizing concept” of networks as the study of interaction, we can analyze the whole set of actors and competing coalitions *as a network*. To do this in a way that does more than just produce a sort of “sky of separate constellations,” I identify a key social site or focal point where all these different networks connect and treat it as the main hub node (akin to an ego-network). For the ATT, that key site of interaction is/was the ATT PrepCom process, and that is where my stakeholder analysis began.

The network mapping and analysis also serves to “triangulate” some of the insights that emerge from both the narrative and CAM analysis of the ATT advocacy space. Those areas of intersection in the network analysis—whether overlapping memberships, forked and/or contested concepts, divergences—should then tell us interesting things about the interactive and mediating relationship between network structure and ideological conflict.

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<sup>347</sup> Keck and Sikkink 1998; Lake and Wong 2007.

<sup>348</sup> Holzscheiter, Gholiagha, and Liese 2022.

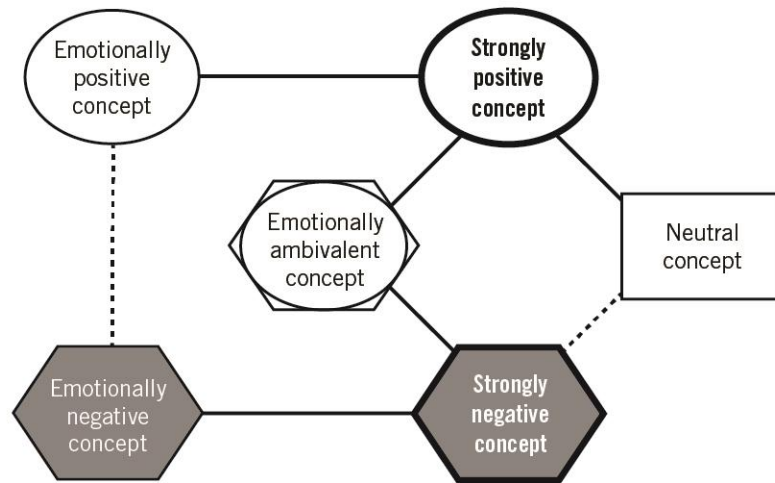
#### 4.6.1.1 CAM data and methods

My dataset for CAM was made up of publicly available texts from each organization, and included mission statements, “about” website pages, blog posts, magazine articles, press releases<sup>349</sup>, newsletters, third-party interview transcripts, official statements to the UN during the negotiation process, and journal/book publications by individuals with a leadership role in one or more of the organizations. Using these texts, I constructed four CAMs according to the following steps: (1) identify the main concepts of the subject concerning the issue in question; (2) identify these concepts as emotionally positive, negative, neutral or ambivalent, and represent them accordingly with ovals, hexagons, rectangles or ovals with hexagons, respectively; (3) identify supportive (solid lines) or opposed (dashed lines) relations between concepts and the relative strength of these relations; (4) arrange the concepts and their relations in such a way as to minimize crossing links—which brings closely related concepts into proximity with each other and helps identify highly connected concepts; and (5) confirm the validity of the resulting map, by either:

- Showing it to the subject to see if it accurately captures his or her understanding of the issue (because the method is easy to grasp, a subject can quickly understand and, if necessary, correct CAMs representing his or her viewpoint);
- Showing it to other people familiar with the subject’s views on the issue in question; or
- Assessing it against interview, survey or textual data that reveal the subject’s beliefs and emotional attitudes that had not been used previously to develop the CAM.

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<sup>349</sup> Control Arms maintains an archive of all their news articles from March 4, 2011, to the present, as well as archival resources from 2003-2013.



**Figure 19. Model of a Cognitive-Affective Map**

The components of a CAM (see Fig. 19 for a complete legend)—emotionally valenced concepts (i.e., nodes), plus connections between them (i.e., links)—can be understood as a network of propositional statements where the concepts are nouns, and the links stand for verb phrases. Solid links represent *concordant* relationships between concepts, carrying semantic content such as “is necessary for,” “is an example of,” “includes,” “likes,” or “supports.”<sup>350</sup> Dashed links represent “discordant” relationships between concepts, carrying semantic content such as “is detrimental to,” “is dangerous for,” “excludes,” “dislikes,” or “fears.”

When constructing a map, however, the phrasing of concepts in a particular relationship has implications for what kind of valence they should have (positive or negative) and what type of link should connect them (solid or dashed). Take, for example, the concepts of “small arms and light weapons” and “human rights.” I feel negatively about “SALW (red)” and positively about “human rights (green)”, and I believe that SALW *hurt or threaten* human rights (dashed). But if we rephrase the human rights concept

<sup>350</sup> While some researchers who use CAM—including one of the method’s inventors, Paul Thagard—refer to these relationships as *coherent/incoherent*, I use the terms *concordance* and *discordance* to avoid confusion with early literature on coherence as a necessary feature of ideology.

to “human rights abuses,” the map depiction changes. Now, I feel negatively about “SALW (red)” *and* negatively about “human rights abuses (red)”, and I believe that SALW *lead or contribute to* human rights abuses (solid). Further, if we consider this concept-relation as part of a bigger CAM, it may actually be necessary to include both the “human rights” *and* “human rights abuses” concepts, depending on how the structure takes shape. But not all CAMs require a concept’s opposite in addition to the main concept.

While the size and scope of any individual CAM is technically unlimited, the maps are typically constructed around a particular topic or issue area, either by a researcher working from coded texts (e.g., an interview transcript, a speech, or a mission statement) or by a research participant themselves.<sup>351</sup> For this paper, CAMs have been constructed around the core concepts of “arms trade” and “the ATT.” Generally, we can expect that CAMs depicting reform-oriented ideologies will be more complex and include more ambivalent concepts. The more “extreme” or absolutist CAMs, on the other hand, will likely be more negatively valenced overall, but with a few positive core concepts on which everything else depends. This difference does not necessarily imply more or less robust ideological arguments, but it does tell us something about the importance of emotional coherence within ideology and therefore, incoherence or incommensurability across/between some ideologies. Section 4.6.3 illustrates these ideas.

#### 4.6.1.2 Issue network data and methods

For my second dataset, and to get a broader understanding of the actors in and around this “issue network,” I consulted a list of NGOs that was specific to the ATT PrepCom process and collected any additional relevant NGOs with consultative status in or before 2013 from the ECOSOC database. From this initial search, I identified 133 UN-accredited NGOs (111 of which received special accreditation to the PrepCom process). I then expanded this dataset by collecting lists of members and partners from the websites of four key coalitions: IANSA, the Control Arms Campaign/Coalition, CAAT<sup>352</sup> and its

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<sup>351</sup> A limitation of CAM (and the Valence software used to generate the maps) is the method only includes text, not images, symbols, or audio/video data. One crude way around this is to briefly describe the non-text data in a CAM concept.

<sup>352</sup> While CAAT does not maintain a public list of members and partners (especially because many of them are volunteers), I managed to gather some key names and organizations for issue-area network mapping via co-authored press releases, blog posts, partner websites, and academic publications.

umbrella network, the European Network Against Arms Trade (ENAAT), and the NRA's Institute for Legislative Action (NRA-ILA) and its umbrella association, World Forum on Shooting Activities (WFSA).<sup>353</sup> However, because all these organizations still exist and have evolved since the period of this case study, I used the Internet Archive's Wayback Machine<sup>354</sup> to collect archived "captures" of key web pages with details about membership, as they existed in or shortly before 2013.

Many organizations are members of multiple networks, so rather than storing this information in a simple Excel spreadsheet, I built a live relational database using the online platform, Airtable. The database I designed could handle "many-to-many" relationships as well as key attributional data about both the individual *actors* (such as location, website URLs, organization type, affiliations, and partnerships) and the *relationships* themselves (including the type of relationship—e.g., director, employee, board member, general member, formal partner, collaborator, co-publisher, etc.—the estimated formality/strength of the connection, and shared topics/areas of focus. Using a system of "coalition tags," I kept track of each actor's key memberships/partnerships, which made navigating and analyzing the dataset much simpler. This structure allowed me to iteratively grow the database as my "snowball" web research revealed additional actors and relationships.

Using the Wayback Machine, I located the Control Arms Coalition's membership list as of 2013, which included 99 members at the time. I was interested to see whether there were organizations that had previously joined IANSA and later also joined (or did not join) the Control Arms Coalition, so I cross-referenced the CAC 2013 membership list to an archived list of IANSA members that same year; 32 of the then-99-member network were also part of IANSA. Next, I identified 43 ENAAT members (or sub-members—i.e., members of one of the national networks that are affiliated with ENAAT) and 53 WFSA members. Lastly, I did not seek out a full list of International Peace Bureau (IPB) partners but did tag an organization when its website indicated some sort of collaborative partnership with IPB. The final

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<sup>353</sup> In the case of DSAAC, the organization does not have a public web presence and so I had to rely on material/statements they provided to the UN, and on several interview transcripts with DSAAC's president, D. Allen Youngman.

<sup>354</sup> Internet Archive: Wayback Machine n.d.

dataset—which was made up of mostly NGOs but also included key individuals such as founders, directors, or high-visibility advocates—comprised 331 entities and 575 connections. These data were exported to Gephi for network analysis and visualization, which allowed me to turn my relational database into a series of network visualizations and extract additional metrics. These are explored in section 4.6.4 on mapping the ATT advocacy network.

#### *4.6.2 The Story of the ATT: key moments, actors, and alliances*

Before getting into the advocacy dynamics surrounding the ATT, let me briefly summarize the official negotiation timeline of events at the diplomatic level. In 2006, the UK and a small group of supportive states tabled the first resolution to work towards an arms trade treaty, which was adopted by the UN General Assembly (A/RES/61/89). Several stages then occurred between 2006 and 2013, including the Secretary General’s Consultation on the Feasibility, Scope and Parameters of an ATT in 2007, a Group of Governmental Experts (GGE) in 2008, an Open-Ended Working Group in 2009 (to consider the results of the GGE report), and three Preparatory Committee (PrepCom, hereafter) meetings in 2010 and 2011.<sup>355</sup> All of these efforts eventually culminated in two Diplomatic Conferences in 2012 and 2013, the first of which failed to produce an outcome and prompted a vote (in November 2012) to organize the second and final conference. The final draft of the ATT was then adopted April 2, 2013, and it entered into force (with the required 50 ratifications) on September 24, 2014. (See Appendix A for the full diplomatic *and* advocacy network timeline of events.)

##### *4.6.2.1 The ATT’s Origins*

The origins of the ATT are woven into the broader history of advocacy work by NGOs and civil society campaigns around arms control and disarmament. Throughout the 1970s and 1980s, advocacy groups had some success around prohibiting specific weapons or categories of weapons, where a case

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<sup>355</sup> Macdonald and Pytlak 2015.

could be made that they violated existing international humanitarian law.<sup>356</sup> But these NGOs and activists were less successful when it came to “conventional weapons,” especially small arms and light weapons (SALW).<sup>357</sup> For example, even the Convention on Certain Conventional Weapons (CCW) (first signed in 1983) and its Additional Protocols was limited to types of weapons that were “considered to cause unnecessary or unjustifiable suffering to combatants or to affect civilians indiscriminately.”<sup>358</sup>

Post-Cold War organizing around the SALW issue can be traced back to several crucial moments during the mid- to late-1990s. First, a meeting in 1994 between arms control scholars and advocates at the American Academy of Arts and Sciences (AAAS) led to the publication of a landmark book—*Lethal Commerce: The Global Trade in Small Arms and Light Weapons*. Key participants included Edward Laurance (then at the Monterey Institute but hired by the UN Department of Disarmament Affairs [DDA] the following year), Aaron Karp (Old Dominion University), and Natalie Goldring (the British American Security Information Council (BASIC)). Many of the core NGOs that supported this early work on small arms—including Amnesty International, BASIC, the Federation of American Scientists, Human Rights Watch, International Alert, Oxfam, Pax Christi, and Saferworld<sup>359</sup>--were also involved in the parallel International Campaign to Ban Land Mines (ICBL) and were keen to apply its innovative model to the SALW issue. Several years later, a key conversation between then-Canadian Foreign Minister, Lloyd Axworthy, and Edward Laurance at the Ottawa Treaty<sup>360</sup> signing ceremony (in December 1997) led to new levels of coordination and inclusion within the emerging SALW disarmament network.<sup>361</sup> With Axworthy’s encouragement and a promise to fund the start of a small arms campaign, Laurance launched

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<sup>356</sup> See, for example, the 1972 Biological Weapons Convention, the 1993 Chemical Weapons Convention, the 1996 Comprehensive Test-Ban Treaty (not yet in force), and the 1997 Mine Ban Treaty (formally, The Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction).

<sup>357</sup> According to Krause (2001), both Amnesty International and the Stockholm International Peace Research Institute (SIPRI) had, as far back as 1979, attempted but ultimately gave up on projects or campaigns about SALW. See Krause 2001, 11.

<sup>358</sup> These originally included non-detectable fragments (Protocol I), mines (Protocol II), and incendiary weapons (Protocol III), and later, included blinding laser weapons (Protocol IV) and explosive remnants and unexploded ordnances (Protocol V).

<sup>359</sup> Brem and Rutherford 2001, 179.

<sup>360</sup> Formally, the Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction.

<sup>361</sup> Bob 2012, 121.

his Project PrepCom website as a centralized information resource,<sup>362</sup> which, in 2000, transformed into the International Action Network on Small Arms (IANSA).

A highly decentralized and diverse network, IANSA was composed of grassroots organizations, academics, and think tanks and served (initially) as a “clearing house” for information about SALW proliferation and its impacts. At its peak, IANSA was nearly 300-members strong.<sup>363</sup> Initially, the network of campaigns approach (vs. one single campaign) was seen as a strength. But not long after its formation, critics “warned that the IANSA’s approach may be too broad, as it covers ‘virtually everything that comes under the umbrella of human security.’”<sup>364</sup> In an attempt to articulate more specific goals, three leading IANSA members (Saferworld, BASIC, and International Alert) launched the “Biting the Bullet” project in 2000 to build public awareness and government support for global action on the SALW issue.<sup>365</sup> But structurally, the decentralized and diverse nature of the network meant that no-one was “steering the ship,” so to speak, and many different angles/concerns/lenses on the SALW issue emerged. For example, Bob (2012) discusses in detail the tensions between those focused on humanitarian disarmament (such as Laurance) and those concerned with gun control, more specifically (such as Canada’s Coalition for Gun Control).<sup>366</sup> Another debate was whether or to what extent the network could “avoid antagonizing gun groups,” either by framing the issue narrowly and/or somehow sidestepping particular domestic politics.<sup>367</sup> There were also “clashing interests in leadership,” according to Grillot et al. (2006), in that several people within IANSA “wanted to be Jody Williams” (the Nobel Peace Prize-winning Director of the ICBL).<sup>368</sup> In the end, these tensions led to an absence of a common agenda and focal point for the network’s energy and resources.<sup>369</sup> As Grillot et al. (2006) argue, IANSA “never found

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<sup>362</sup> The full name of the project was the Preparatory Committee for a Global Campaign on the Spread and Unlawful Use of Small Arms and Light Weapons.

<sup>363</sup> Laurance 2002.

<sup>364</sup> Brem and Rutherford 2001, 178.

<sup>365</sup> Ibid.

<sup>366</sup> Bob 2012, 122.

<sup>367</sup> Bob 2012.

<sup>368</sup> Grillot, Stapley, and Hanna 2006, 78.

<sup>369</sup> Shawki 2011, 110.



the single normative principle required to build an international consensus and guide its long-term action.”<sup>370</sup>

Ultimately, the product of IANSA’s efforts was the 2001 Programme of Action (PoA). But it was seen as a weak outcome—a so-called “zombie policy”<sup>371</sup>—since it only included nonbinding agreements and its content was heavily vetted by the U.S. Reflecting on the UN Small Arms Conference and evaluating the PoA, Edward Laurance described some of the critical challenges that laid ahead for IANSA: “There has been nothing approaching a campaign to emerge from the NGO community. [IANSA] is the leading umbrella organization and has the potential to become more proactive. It needs to do so.”<sup>372</sup> He and others also called for future processes to happen outside the auspices of the General Assembly’s First Committee—which proved to be a “dead end,” largely because of the consensus requirement—and beyond the sole leadership of the UN Office of Disarmament Affairs.<sup>373</sup> As Aaron Karp put it, “if there was an overwhelming lesson of the 2001 Conference, it was ‘look elsewhere.’”<sup>374</sup> The sense in the arms control community was that they needed to start over.

#### 4.6.2.2 The arms lovers

Part of the challenge for IANSA was that, around the same time as NGOs began organizing around the SALW issue, opposing organizations started to mobilize as well. As Bob (2012) recounts, the NRA’s 1992 annual meeting featured a speaker from the Sporting Shooters’ Association of Australia (SSAA), who—facing new gun restrictive policies at home—called for a global network to guard gun owners’ rights. In response, the NRA helped establish the International Conference on Firearms Legislation (ICFL), which was later superseded by the WFSA in 1997 as a global association of shooting, hunting, and industry organizations. Described by arms control activists as IANSA’s “rival transnational

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<sup>370</sup> Grillot, Stapley, and Hanna 2006, 21.

<sup>371</sup> Bob 2012, 140.

<sup>372</sup> Laurance 2002, 198.

<sup>373</sup> Alcalde (2012) makes the argument that the changes in the “rules of the game,” including the consensus requirement, are the main reason for the ATT’s success, compared with the PoA. Alcalde 2012.

<sup>374</sup> Karp 2002b, 179.

network,”<sup>375</sup> WFSAs mission as an advocacy organization is “to further the study, preservation, promotion and protection of sport shooting activities on every continent.”<sup>376</sup> The contentious relationship between the NRA-ILA and the arms control movement has been very well-documented by scholars and activists alike. For example, Bob (2010) described these two coalitions of NGOs—IANSAs, the small arms movement, and sympathetic states on the one hand, and the NRA-ILA, WFSAs, and anti-regulation states such as the US, on the other—as “two networks of competing global governors.”<sup>377</sup>

Ironically, Karp (2002) notes that the 2001 UN Conference and the lead up to it had the unintended consequence of “compel[ling] gun advocates—led by the National Rifle Association—to take the defensive... [and] to become internationally active for the first time.”<sup>378</sup> The NRAs Institute for Legislative Action (NRA-ILA)—the lobbying arm of the broader, membership-based NRA—also sought and gained consultative status with UN ECOSOC in 1996, and WFSAs has been accredited at the UN since 2002. Both NRA-ILA and WFSAs representatives have since frequently been included in the US delegations to UN meetings, including the first review conference (RevCon) of the PoA in 2006, and later, both organizations were accredited to the ATT PrepCom process in 2010 and 2011.<sup>379</sup>

#### 4.6.2.3 The arms controllers

Things began to shift for the small arms movement in 2002 when the IANSAs secretariat appointed Rebecca Peters—formerly the head of the Australian Coalition for Gun Control<sup>380</sup>—as the new Director and hired a handful of policy analysts and advocacy staff. According to Karp, Peters brought with her the more combative approach that some founding IANSAs members had been keen to avoid. A year later, IANSAs, Amnesty International, and Oxfam came together (along with over 100 other civil

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<sup>375</sup> Alcalde 2012, 10.

<sup>376</sup> About WFSAs : WFSAs n.d.

<sup>377</sup> Bob 2010, 196.

<sup>378</sup> Karp 2002b, 186.

<sup>379</sup> Represented by Ted Rowe and Thomas Mason, respectively.

<sup>380</sup> Peters was already well-known to the NRA and global gun rights community, her having contributed to numerous gun control policies, bans, and buyback programs in Australia. Peters later debated NRA Executive Director, Wayne LaPierre, on live TV. See: Stop U.N. Gun Ban 2007.

society organizations) to form the Control Arms Campaign/Coalition in 2003. This initiative marked a critical turning point in the role of NGOs in arms control advocacy.

Internally, the initial focus of the Coalition was to develop a set of “golden rules,” detailing the group’s expectations of a new arms trade treaty. This effort built on the earlier work of a group of Nobel Peace Laureates<sup>381</sup>—led by former Costa Rican President, Dr. Oscar Arias Sanchez in 1995—to draft an international Code of Conduct on Arms Transfers. Later, Control Arms published a position paper that further developed their ideas into six “golden principles,” which emphasized the responsibility of states to oversee arms transfers, outlined the criteria under which a state should deny a transfer, underscored the Coalition’s desire for a broad scope treaty, reinforced the importance of states’ transparency and of strong treaty implementation and monitoring mechanisms, and lastly, called for an international cooperation framework for providing cross-country knowledge and financial assistance towards implementation.<sup>382</sup>

In their public-facing work, the Coalition called for a “bulletproof” and all-inclusive arms trade treaty to help prevent human rights abuses and humanitarian law violations.<sup>383</sup> In 2004, the CAC launched its “Million Faces” petition. The petition was submitted to then-Secretary General, Kofi Annan, in 2006, after which, the UN General Assembly passed a resolution (Resolution 61/89) to start work on developing an arms trade treaty.<sup>384</sup> CAC also conducted dozens of “People’s Consultations” in between 2006 and 2007, largely in the Global South. Through an international wave of rallies, public demonstrations, celebrity endorsements, petitions and awareness campaigns, Control Arms aimed to keep the global arms trade at the forefront of the social conscience. Former Director of Oxfam International, Jeremy Hobbs summarizes CAC’s public framing of the issue well:

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<sup>381</sup> The group included impressive individuals such as His Holiness the XIV Dalai Lama, Ellie Wiesel, Betty Williams, Gururaj Mutalik (International Physicians for the Prevention of Nuclear War), Jose Ramos-Horta, Susan Waltz (Amnesty International), and Donald Gann (American Friends Service Committee). Garcia 2017.

<sup>382</sup> Whall and Pytlak 2014, 455.

<sup>383</sup> Control Arms Campaign 2013a.

<sup>384</sup> The resolution was tabled by a small coalition of states, led by the United Kingdom.

Arms companies are global, yet arms regulations are not, and the result is the arming of abusive regimes. Europe and North America are fast becoming the IKEA of the arms industry, supplying parts for human rights abusers to assemble at home, with the morals not included. It is time for an Arms Trade Treaty to close this litany of loopholes.<sup>385</sup>

Campaign literature and media relied heavily on straightforward statistics such as the number of bullets in the world or the number of guns that go missing each year, and intentionally avoided politicizing the arms trade in favour of maintaining their humanitarian and human rights discourse.<sup>386</sup> In a special issue of *Global Policy*, several of the key leaders and organizers of the Control Arms Campaign published their perspectives on the entire ATT advocacy and negotiation process. Whall and Pytlak (2014) describe how Control Arms maintained “meticulous control of the exchange of information,” which included sharing backgrounders and fact sheets with national delegations, convening and presenting survivor testimonies, daily briefings with Coalition members to ensure everyone was “singing from the same songsheet,” and an determined social media campaign to engage a public audience.<sup>387</sup> The Control Arms website included a rigorously maintained blog and frequent press releases. CAC also helped facilitate its members’ UN/ECOSOC accreditation requests, and over 300 CAC members attended the first Diplomatic Conference.<sup>388</sup>

#### 4.6.2.4 The arms makers (and investors)

While some scholars argue that the private sector had not really engaged in the process before around 2011<sup>389</sup>, it is clear from both campaigner’s accounts and UN statements that there were several key defence industry actors involved much earlier. For example, Macdonald and Pytlak (2015)—Anna Macdonald was Control Arms Co-Chair and Alison Pytlak served as the Control Arms Campaign

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<sup>385</sup> Arms 2006.

<sup>386</sup> Control Arms Campaign 2013b.

<sup>387</sup> Whall and Pytlak 2014, 460–461.

<sup>388</sup> Macdonald and Pytlak 2015.

<sup>389</sup> Kytömäki 2014.

Manager at the time—note that the Control Arms Campaign reached out to the UK Defence Manufacturer’s Association (DMA) as early as 2006, when they *jointly* submitted the Million Faces petition to the UK Foreign Office (before submitting it to the UN).<sup>390</sup> A 2012 public statement from the UK’s defence industry association suggests even earlier collaboration:

Since 2003, the UK defence industry, with other European defence industries, has worked closely with governments and NGOs to ensure that the ATT becomes an effective mechanism for implementation for higher international standards in the defence export arena. The underlying security and humanitarian principles that drive the need for an ATT are consistent with the UK defence industry’s strong commitment to corporate social responsibility.<sup>391</sup>

The Sporting Arms and Ammunition Manufacturers Institute (SAAMI)—also a member of WFSA—was also involved in the implementation phase of the PoA (largely as a technical advisor), gained ECOSOC consultative status in 2005, and came out against the inclusion of ammunition in the ATT early on in the development process.<sup>392</sup> Furthermore, a June 2011 Chatham House report<sup>393</sup> demonstrates earlier industry collaboration with think tanks, governments, and UN agencies.<sup>394</sup> Following the establishment of an Open-Ended Working Group in December 2008, “few countries opted to include industry representatives in their national delegations,”<sup>395</sup> and some larger defence associations did not come out in public support of the ATT until after the PrepCom process was complete.<sup>396</sup> By contrast,

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<sup>390</sup> Macdonald and Pytlak 2015.

<sup>391</sup> ADS (Aerospace, Defence, Security Space, UK) 2012.

<sup>392</sup> Patterson 2012; Patterson 2013.

<sup>393</sup> Co-authored by Peter Lichtenbaum (then-recently retired) Vice President for Regulatory Compliance and International Policy at BAE Systems, Inc.), Rachel Stohl (then an Associate Fellow with Chatham House’s International Security Programme and a consultant to the UN Office for Disarmament Affairs), and Andrew Wood (then Director of Strategic Export Controls at Rolls Royce PLC and the Industry representative within the UK delegation to the ATT PrepCom).

<sup>394</sup> Lichtenbaum, Stohl, and Wood 2011.

<sup>395</sup> Kytömäki 2014, 19.

<sup>396</sup> *Ibid.*

several US and European firearms industry representatives did directly participate in meetings vis-à-vis NGO accreditation to PrepCom.

One such organization was The Defense Small Arms Advisory Council (DSAAC), a US national trade association of military small arms manufacturers. Established in 2004 and composed of just seven members, DSAAC acts as a liaison between its member companies and various US government agencies. While there is very little public information about DSAAC, an article in the gun magazine *Small Arms Review* describes that one of the motives for creating DSAAC was that *small arms* manufacturers, specifically, felt overshadowed by the major defence companies in other trade associations in the context of PoA negotiations. Initially, DSAAC's director, Allen Youngman, made statements to the General Assembly expressing displeasure with how the PoA was being implemented and expanded. Later, when the ATT prepCom process was announced, the organization took the opportunity to get involved *before* diplomatic negotiations began. In its one-and-a-half-page application for consultative status with the UN (as reported in a 2010 memo of the Committee on Non-Governmental Organizations)<sup>397</sup>, DSAAC described several avenues where it intends to engage, including the Open-ended Working Group towards an Arms Trade Treaty and others,<sup>398</sup> and re-emphasized that, "small arms are a legitimate means for United Nations Member States to exercise their sovereign right of self-defence" under the UN charter.<sup>399</sup>

Private sector involvement continued after the PrepCom process, as well. For instance, just before the 2012 Diplomatic conference, 39 investment firms and managers with a combined US\$3 trillion in assets issued a statement in support of the ATT.<sup>400</sup> All the investors were also signatories to the UN's Principles for Responsible Investment (PRI), and the ATT's emphasis on preventing human rights

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<sup>397</sup> NGOs applying for consultative status must also include a financial statement summary. DSAAC indicates that its sole source of income is membership dues, which amounted to 72,000 USD in 2010, and that its sole expenditure is "administration," which also amounted to 72,000 USD in 2010. It should be noted that few other applications submit such round and balanced numbers.

<sup>398</sup>The International Small Arms Control Standards project via the UNDP, the PoA, as well as UNODC's implementation of the Protocol against the Illicit Manufacturing of and Trafficking in Firearms, Their Parts and Components and Ammunition.

<sup>399</sup> ECOSOC Committee on NGOs, New applications received for consultative status, 26 May- 4 June 2010 (esp. Defense Small Arms Advisory Council) 2010.

<sup>400</sup> Rohrbein 2012.

violations and corruption aligns with PRI’s “ESG”—environment, society, and good governance—investment priorities and values.<sup>401</sup> This alignment allowed for seemingly odd bedfellows—as suggested by Macdonald and Pytlak’s article’s title, “The Banker, the Arms Dealer, and the Activist”—to find common ground.

While the absolute number of defence and private sector representatives engaging in the process (i.e., attending the UN meetings) may have been low—especially compared to the 300+ member organization, IANSA—the power and proximity of these industry actors to key delegations (specifically the UK and the US), to important relevant UN agencies and experts, and to the NGOs leading the campaign efforts seems to have shaped the overall outcome in important ways.<sup>402</sup>

#### *4.6.2.5 The arms abolitionists*

Alongside the ramp-up within the arms control community, groups opposed to the arms trade itself increased their efforts beginning in 2001, the first year the world’s largest defence exhibition or “arms fair”—Defence and Security Equipment International (DSEI)<sup>403</sup>—was held in East London, UK. The event has been a major target of the anti-arms trade movement—which consists of pacifist, faith-based, anti-nuclear, anarchist, and labour groups—with thousands of protesters participating and direct action every year DSEI is held. One of the most well-resourced actors in this space is the Campaign Against the Arms Trade (CAAT). Established in 1974 in London, CAAT engages in lobbying, public awareness campaigns, and public demonstrations and, like other anti-arms trade groups, has a straightforwardly abolitionist agenda, rather than on regulating or restraining the arms trade.<sup>404</sup> So it

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<sup>401</sup> PRI | Home n.d.

<sup>402</sup> Defence and other industry representatives also continued their presence at the preparatory meetings for the annual ATT Conferences of State Parties (CSP) after the treaty was ratified. For example, the July 2015 meeting included representatives from DSSAC, the NRA-ILA, SAAMI, WFSA, the Second Amendment Foundation, Dynamit Nobel Defence, the German Security and Defence Industry (BDSV), Rolls-Royce plc, and others. See: First ATT CSP final Prep Mtg, provisional list of attendees.docx 2015.

<sup>403</sup> DSEI is a biennial event that draws over a thousand vendors and over 30,000 military and trade delegates, and has been a major target and focal point for the anti-arms trade movement. In 2009, the name of the event was changed from Defence *Systems* and Equipment International, maintaining the acronym.

<sup>404</sup> Rossdale 2019, 242. In Canada, Labour Against the Arms Trade (LAAT).

comes as little surprise that the organization held a skeptical view of an ATT from the beginning, insisting that “there is no such thing as a ‘*responsible*’ arms trade.”<sup>405</sup> In April, 2011, CAAT issued a briefing on the arms trade and included this assessment and warning:

The UK Government has been at the forefront of pushing for an international Arms Trade Treaty, presenting this as a panacea for all arms trade ills. However, like its own arms export guidelines, a future treaty is not intended to reduce UK arms exports at all—a fact acknowledged by the Foreign Office and which is astonishing given the UK’s status as one of the world’s largest arms sellers. The concept of a treaty has the support of arms companies in the UK which see it as providing a ‘level playing field’ with the potential for increasing their market opportunities. There is a serious risk that the overall consequence of the Arms Trade Treaty, as presently envisaged by the government, would be to further legitimise the arms trade.<sup>406</sup>

One of the main criticisms against the ATT by organizations like CAAT was that the arms manufacturers themselves largely favoured the ATT, an indication of a weak-toothed treaty. In an interview about BAE Systems, CAAT’s Andrew Smith stated, “The current [treaty] gives a fig leaf of respectability to arms dealers: it gives them something to hide behind. It isn’t going to have any meaningful impact on the way arms companies they [sic] do business. It isn’t going to change the way military licenses are being awarded to oppressive states.”<sup>407</sup> The fact that the defence industry later came out in support of the treaty only served to confirm CAAT’s initial suspicion that the ATT “is unlikely to substantially reduce arms transfers and because it serves as a public relations boost for the arms industry.”<sup>408</sup>

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<sup>405</sup> CAAT - Arms Trade Treaty n.d.

<sup>406</sup> CAAT 2011.

<sup>407</sup> Bermingham 2014.

<sup>408</sup> Rossdale 2019, 240.



CAAT was not a member of the Control Arms Coalition/Campaign (it was, however, a member of IANSA), and while they did not directly participate in the ATT PrepCom process<sup>409</sup> (there are very few anti-militarist organizations accredited to the UN at all<sup>410</sup>), CAAT's views were represented at the ATT negotiations, at least in part, by organizations such as the Women's International League for Peace and Freedom (WILPF), which has had consultation status with the UN for decades. In a position paper written by the then-director of WILPF's disarmament and demilitarization project, *Reaching Critical Will*, Ray Acheson argued:

A strong ATT can help build the foundations for not just the regulation but also the *reduction* of the arms trade, along with the reduction of militarism throughout politics and society, reduction of military spending, and redirection of economic resources.<sup>411</sup>

*Reaching Critical Will* also maintained an active blog, the ATT Monitor, throughout the PrepCom and negotiation process and was vocal about their criticisms. Staff members at similarly "radical" organizations such as War Resisters International, Action on Armed Violence (AOAV) and Stop Wapenhandel in the Netherlands, also wrote frequently about the ATT in newsletters, briefings, blog posts, and more broadly published articles.

In his recent book, *Resisting Militarism*, author Chris Rossdale—who is also an active member of CAAT's Steering Committee—provides a deep insider's look into CAAT's position on the ATT.

Rossdale explains that "most of the more radical and direct action-oriented elements within British anti-militarism have remained at best suspicious, and often actively hostile, towards the ATT."<sup>412</sup> CAAT's

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<sup>409</sup> Several organizations linked to the broader ENAAT, however, did have either special or general accreditation to PrepCom, including War Resisters International, Justicia i Pau (Spain), Fundacio per la Pau (Spain), and the International Peace Bureau.

<sup>410</sup> I should note, too, that there were also groups on the NRA side of the debate that refused to directly join the process because they did not want to be seen "legitimizing the UN." So, we have two very different instances of a sort of "conscientious objection"—some pro-gun groups refusing to engage with an institution they believed were attacking their freedoms, and some anti-militarism/arms abolitionists refusing to engage with an institution they believed were enabling the military industrial complex.

<sup>411</sup> Acheson 2012.

<sup>412</sup> Rossdale 2019, 239.

view—which, according to Rossdale, “has at times damaged its relationship with other NGOs”<sup>413</sup>—was that the treaty depoliticizes the arms trade by distinguishing between “legitimate” and “illegitimate” transfers, and that “it risks legitimising and even giving humanitarian veneer to arms sales which are compliant with the regime.”<sup>414</sup> A then-employee of CAAT, Kirk Jackson, wrote that “by recognizing the ‘legitimate interests’ of states to acquire arms, the treaty privileges states at the expense of non-state actors such as stateless peoples and ethnic groups oppressed by their own governments.”<sup>415</sup> Jackson and some other critics even went so far as to shame humanitarian NGOs for promoting the ATT.<sup>416</sup> However, after the treaty passed, there was substantial disagreement within CAAT and the broader anti-arms trade community about how to deal with the ATT going forward. In ENAAT’s published dispatch of its 2013 annual meeting, they describe the tensions within the network about the then-newly signed ATT:

The discussions became very passionate in the workshop on the United Nations Arms Trade Treaty (ATT). In some countries, big NGOs had stirred unrealistic hopes in that treaty (presumably for funding reasons), while governments use the treaty to legitimise arms sales and relax export regulations. At the same time, the ATT is a significant development on the international plain that cannot be ignored, especially because the future benefit or harm of the treaty depends on lobbying efforts in individual countries. The passionate debates continued long into the night, without finding a common approach about how to deal with the ATT in the future. Though one conclusion was that it is important to get involved in this kind of big campaign early on, in order to be able frame the perception and expectations about the potentials of international treaties of a more realistic level.<sup>417</sup>

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<sup>413</sup> Ibid.

<sup>414</sup> Ibid.

<sup>415</sup> Jackson 2013, 8.

<sup>416</sup> See the comment section in Jackson 2013.

<sup>417</sup> ENAAT Annual Meeting 2013 Dispatch n.d.

These tensions—and those within the other key actors discussed above—become visible in the following section. Beginning with the *inside-out* perspective, the next section uses CAM to investigate and visualize the ideologies of four key organizations: CAC, CAAT, the NRA, and DSAAC.

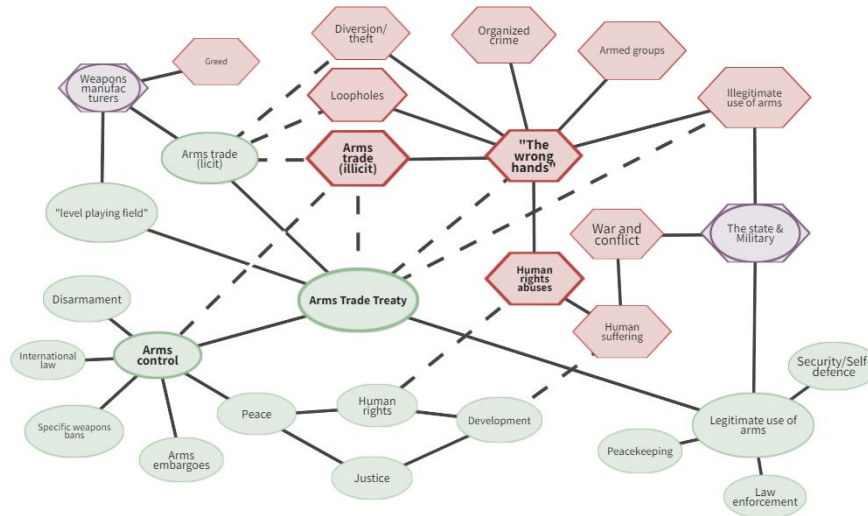
#### *4.6.3 Mapping ideologies: CAM visualization and analysis*

As described in the introduction, arms control in the name of humanitarianism is not a new phenomenon. The Hague Conventions of 1899 and 1907, the 1949 Geneva Conventions, and others were undertaken to more explicitly address the impacts of weapons and war on human beings/bodies. These initiatives were led by churches and faith groups, humanitarian organizations, doctors, and those who had seen massive suffering in wartime. Many in this “camp,” such as the International Committee of the Red Cross, value(d) and adhere(d) to political neutrality to maintain access to conflict zones, with the goal of preventing “unnecessary suffering.”<sup>418</sup> These themes were very much present in the Control Arms Coalition’s campaign, and form core sections of CAC’s CAM as well (Fig. 20). But unlike previous humanitarian initiatives (including the PoA), the CAC explicitly invoked a human rights (HR) frame in much of its work. Solovyev and Hynek (2021) describe this as “a shift from HR-augmented humanitarianism to a position of prominence assumed by HR.”<sup>419</sup>

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<sup>418</sup> Bolton and James 2014, 441; Cooper 2011.

<sup>419</sup> Solovyeva and Hynek 2021, 10.



**Figure 20. CAM of the Control Arms Coalition**

This CAM contains a fair amount of nuance, especially compared to the other three CAMs presented and analyzed in this section. First, CAC differentiates between legal and illegal arms trade. While legal arms trade is seen as necessary for maintaining peace and security, illegal arms trade is associated with illegitimate actors, organized crime, and human rights abuses. Ultimately, this ideology prizes human rights and human security, and abhors human suffering. Second, weapons themselves evoke both positive and negative emotions, as do weapons manufacturers; the reaction depends on how the weapons are being used and how the manufacturers are behaving. In terms of arms control, all the surrounding concepts are generally positive. Where CAC places the most concern is around inconsistent application of standards, and the loopholes or circumventions of existing legislation. Finally, the challenge that this ideology comes up against is defining exactly what are considered “legitimate uses” of weapons and who are considered “legitimate actors”—the concept of “the wrong hands” can easily be manipulated by states or other advocacy groups who have different interests and beliefs.

The NRA CAM (Fig. 21), on the other hand, is fairly straightforward, with arms control in direct opposition to the right to bear arms. In this view, arms control is the beginning of a slippery slope to disarmament and complete abolition, and is directly linked to the expropriation of private property. The Arms Trade Treaty is essentially viewed as an avenue for the “gun grabbing” NGOs and the UN to exert

more power and control. On the other hand, the right to bear arms—grounded in the US constitution, but with similar ideas/beliefs held in other countries—is the foundation of personal security, self-defence, deterrence of crime, and even protecting one’s family. Some gun rights advocates want to distinguish between the intended use of particular firearms in order to prevent control measures being placed on sporting weapons. But others are of the opinion that civilians should be able to have access to essentially any gun the military can have.



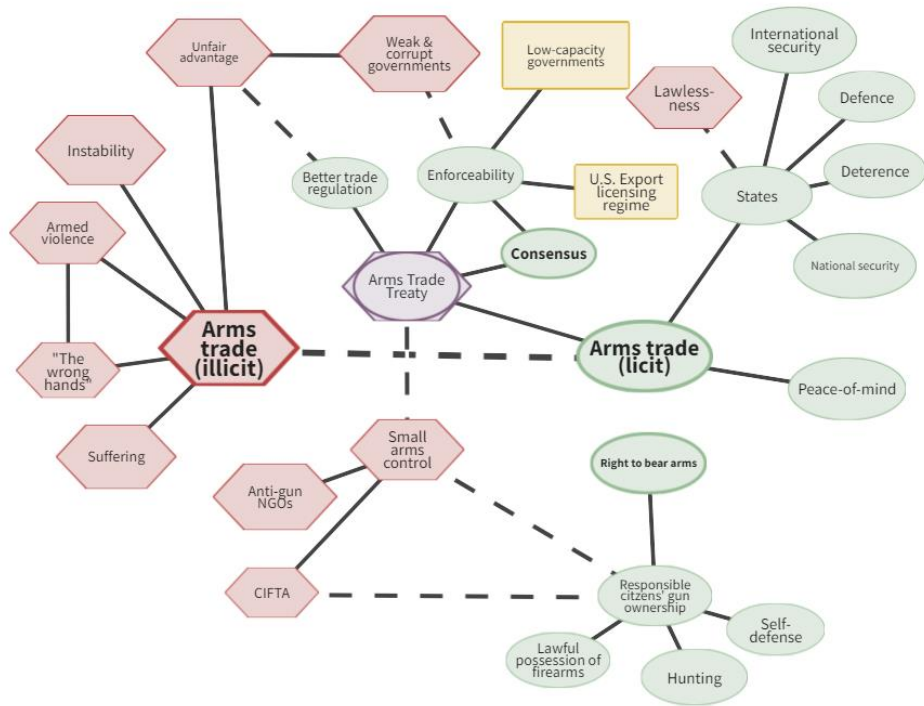
**Figure 21. CAM of the NRA-ILA**

But more powerful than these “reasons” are the symbolic meanings attributed to these concepts. At its core, this ideology is about liberty and freedom versus tyranny. Importantly, the government/state and the military are depicted as ambivalent because they are seen as the potential source of both liberty and tyranny (although generally, governments are viewed in a negative light). This goes to the foundational myth (and the group social identity<sup>420</sup>) that the NRA has worked so hard to construct, which

<sup>420</sup> Lacombe 2019.

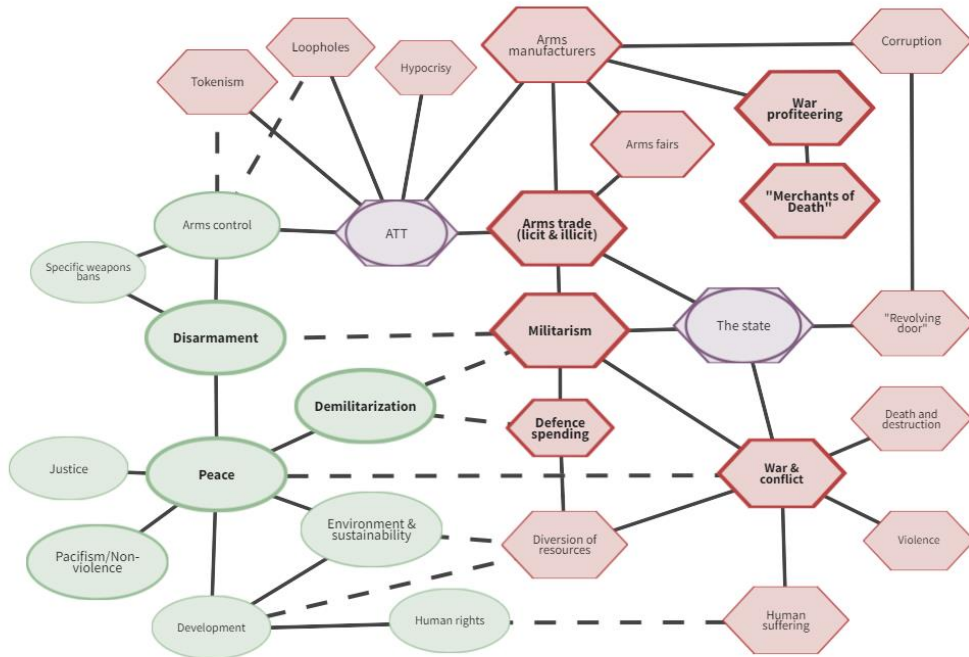
is that the Second Amendment is the only thing standing in the way of massive overreach by the US government and the descent into tyranny.

The third CAM has some commonalities with the NRA CAM, but perhaps fewer than one might expect. While the defence industry actors were not very involved in the ATT process until 2010/2011, a closer look at their worldviews points to, and even explains, some of the key tensions between the ideologies of other coalitions. Like CAC, DSAAC makes the distinction between legal/licit and illegal/illicit arms trade (see Fig. 22). They also connect the illicit trade to the concept of “the wrong hands,” which is linked to armed violence, instability, and suffering. Additionally, they make a “business case” against the illicit trade and for the ATT, suggesting that weak global regulation gives the illicit trade an “unfair advantage” over legal manufacturers (including DSAAC’s members). There is also disdain for “weak and corrupt governments” versus a sort of pity for “well-meaning but low-capacity governments” in terms of the ability to enforce existing or future arms trade regulation. Most importantly, both small arms control and “anti-gun NGOs” are seen as negative, partly because they believe any focus on non-trade issues in the ATT would make it less likely to succeed, but also because of a fear/concern that the inclusion of small arms control measures would infringe on citizen’s lawful possession of firearms. Decision-by-consensus and enforceability, therefore, are seen as crucial to creating a “realistic” treaty.



**Figure 22. CAM of the Defense Small Arms Advisory Council (DSAAC)**

Ultimately, what comes across in this CAM is a calculation of reputational costs and competitive advantage. But there is also a clear belief in the existing state-led global order to maintain international security and prevent lawlessness through legitimate manufacture, trade, and use of weapons, which obviously stands in stark contrast to CAAT’s worldview, which I explore next.



**Figure 23. CAM of the Campaign Against the Arms Trade**

The largest concern in this CAM (Fig. 23) is the arms trade itself—CAAT’s content typically makes no distinction between legal and illicit trade—because of its connection to militarism, war, and war profiteering. The state is still a central focus, but is depicted as ambivalent because while the state is responsible for security (positive), it is connected to a slew of negative concepts. The concept of corruption also features prominently in the CAM, because of the regulatory “revolving door” between arms manufacturers and the state. Arms control is seen as positive because of the belief that ultimately, it will lead to peace. However, there are significant concerns about legislative loopholes, and the tokenistic attitude of states who publicly commit themselves to arms control treaties/programs. For Jackson, “there is no such thing as a ‘responsible’ arms trade,” and the ATT is really just “business as usual.”<sup>421</sup> Other CAAT members argue that the ATT amounts to hypocrisy since the arms industry’s support for the agreement suggests that it will not have much of an impact on curbing the arms trade. Even further, some

<sup>421</sup> Jackson 2013.



fear that the NGOs involved in the Control Arms Campaign have unwittingly undermined broader challenges to the arms trade by legitimizing certain practices and institutions of the status quo.<sup>422</sup>

#### 4.6.3.1 Cross-CAM Analysis

From the CAMs presented above, it is clear that ideologies about arms control are wrapped up in many deeper questions and beliefs—questions about who and what is considered “legitimate” and why; beliefs about the (im)morality of weapons manufacturing and trade; traditions of humanitarianism, pacifism, revolution, and of “just war”; beliefs about the consequences of arms control and/or disarmament; beliefs about the level of human responsibility to humanity and/versus to one’s self; questions about the effectiveness of incremental reform versus full system change; and many others.

Though published shortly before the ATT was adopted, Bob concludes in his book, *The Global Right Wing and the Clash of World Politics* (2012), that “Center stage was deep disagreement over the most basic issues—indeed two conflicting world views.”<sup>423</sup> My analysis demonstrates that there are at least two additional conflicting worldviews that helped shape the ultimate outcome. By mapping the ideologies of four—rather than just two—“sides” of this overall issue network, the CAMs and their analysis reveals more nuanced instances of ideological competition, yes, but also cooperation and cooptation.

Because of my issue-specific approach, some of the key concepts are the same across all four CAMs (e.g. the state, weapons, arms trade and arms control). However, because those concepts are uniquely embedded and connected in each CAM, a concept that appears in multiple ideologies may have entirely different meaning and connotation. The biggest example here is, of course, “arms control,” which means very different things to gun rights advocates, abolitionists, humanitarians, and small arms manufacturers. For abolitionist organizations like CAAT and ENATT, arms control is connected to

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<sup>422</sup> Rossdale 2019, 242.

<sup>423</sup> Bob 2012, 145.

demilitarization, disarmament and peace<sup>424</sup>, all with positive emotional value. But for groups like the NRA-ILA and WFSA, arms control is linked to negative conceptions of disarmament, abolition and—worst of all—tyranny.

#### *4.6.4 Mapping the advocacy network: network visualization and analysis*

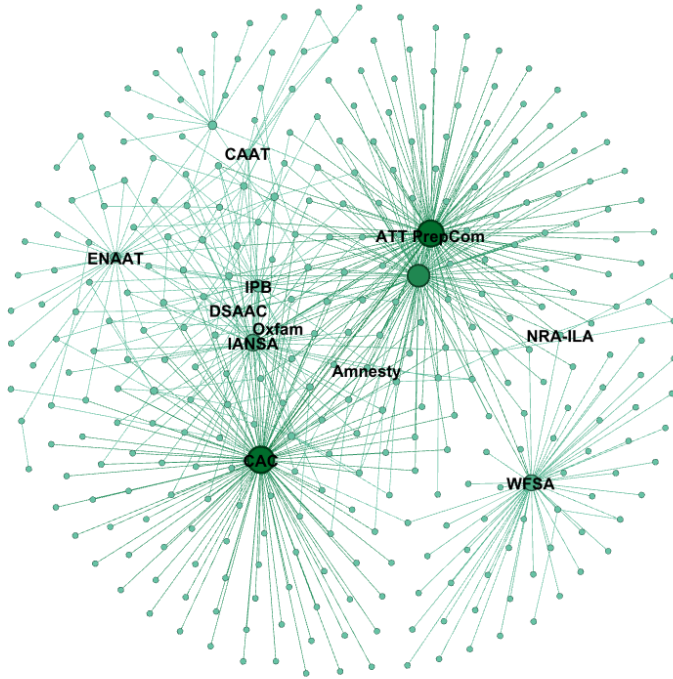
In mapping the advocacy network surrounding the ATT, I was interested in several lines of inquiry. First, while I knew the final SNA metric of *degree* would entirely depend on my manual identification and inclusion of actors in the network—and this was far from comprehensive, for some sections of the network—the *relational* metrics of “betweenness,” “closeness,” “reach-efficiency,” and others could tell me more interesting things about various bridge and/or gatekeeper nodes/actors. Furthermore, because this dataset includes many types of nodes and links, we have no consistent metric to assign relationship strength between two nodes, for example. Second, areas of the network that are dense vs. distributed should tell us something about levels of affinity and/or homophily between actors in the advocacy space. Third, network clustering or community detection would also be highly dependent on my dataset, but network analysis *would* tell/show me which actors were members of multiple coalitions/communities, pointing to potential network “brokers” and/or “bridge” nodes. Finally, detecting those bridge nodes would then allow me to trace paths through the network from one specific node to another—say, from CAAT to IANSA Director, Rebecca Peters—to determine degrees of separation and identify any small-world network phenomena. Of course, all of these potential findings come with the caveat that the network data is as complete as possible but not exhaustive.

Turning to the visualizations, Figures 24 and 25 are network representations of the actors in the ATT issue area. Other than the ATT PrepCom node—which represents accreditation to that series of three

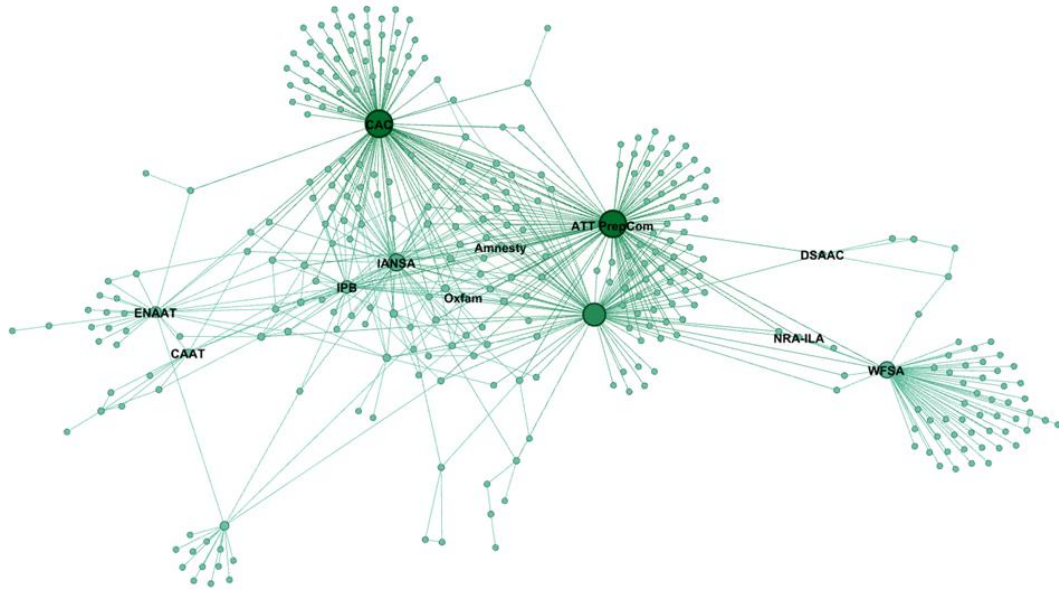
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<sup>424</sup> The way that the concept of “peace” is situated in CAC’s CAM compared to CAAT’s CAM is telling. Interestingly, in 2012, Control Arms was nominated for the Nobel Peace Prize by the International Peace Bureau. That same year, CAAT was awarded one of four Right Livelihood Awards—often referred to as the “Alternative Nobel Prizes”—for their work campaigning against the arms trade. See: Arms 2012; CAAT - Campaign Against Arms Trade awarded “Alternative Nobel Prize” n.d.

conferences—each node represents an organization, whether NGO, UN body, or company. The links indicate relationships such as membership, partnership, or financial exchange/support, and are based on the empirical work described in the previous section. For example, a person is linked to an organization if they are an employee, sit on the board of directors, or are a scientific advisor. Two organizations may be linked if they have formally partnered on a project, are a donor/recipient set, or explicitly endorse each other on their websites or in print materials. The data in each network are the same but are visualized using two different layout algorithms, the first of which pulls higher-degree nodes to the centre of the circle. The second layout pulls clusters of nodes closer together, based on network modularity analysis, and more clearly shows which organizations have or do not have shared connections (e.g., nodes in the CAAT/ENAAT cluster on the left-hand side of the network have no direct links to the NRA/WFSA cluster on the right-hand side).



**Figure 24. Network representation of the actors in the ATT issue area. Nodes are arranged using the Fruchterman Reingold algorithm, which pulls higher degree nodes towards the centre of the circle while maintaining visibility of the network clusters/communities. Nodes are also sized by degree.**



**Figure 25. Network representation of the actors involved in the ATT issue area. Nodes are arranged using the Force Atlas algorithm, which pulls clusters together for easier community identification. Nodes are sized by degree.**

Taking the network as a whole, we see areas that are very dense, but also a high level of fragmentation, overall.<sup>425</sup> This structure illustrates something similar to Henry’s (2011) findings that, “network structures that are highly fragmented (characterized by many disconnected groups of actors) or sparse (characterized by few overall relationships) potentially signal entrenched political conflict and noncooperation.”<sup>426</sup>

Following a scale-free structure, some organizations in the network can be understood as highly connected nodes, or “hubs,” which have the power to adopt, set or vet specific issues. As gatekeepers, hub actors like Oxfam or Amnesty International have disproportionate influence in the network, and determine issue salience (e.g., SALW and ammunition over blinding lasers or white phosphorous). The high centrality or prominence of an actor also implies greater visibility, and the hub acts as a broker or

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<sup>425</sup> This particular study is not interested in *formal* community detection using modularity algorithms, due in part to nature of the data used to construct the network and the lack of criteria for measuring the strength of links. Future studies could adopt emerging multilayer and/or multimodal network analytical approaches to try and better capture the diversity of actor types and relationship types in this space.

<sup>426</sup> Henry 2011, 361.

bridge to other networks, accessing information, support, and other resources. Hubs' agendas are also seen as "proxies" for the whole network agenda, which creates issue "contagion effects". For a prominent non-governmental organization working on arms control issues, like Amnesty International, its position in the institutional network affords it greater influence over other organizations working on similar issues and greater access to state and multi-lateral actors. From the perspective of the UN, then, Amnesty International might be viewed as the leader or "proxy" for the entire arms control agenda, leading many other organizations to take a similar stance or align themselves with Amnesty's work for reasons of self-interest and agenda success.

But visibility and credibility come with constraints as much as they confer advantage – network ties can be both a benefit and a cost. Prominent actors are typically cautious/strategic about which issues, tactics, or affiliations they endorse because those choices may affect how others in (and beyond) the network view their legitimacy. Relationships *between* issues and organizations have potentially stronger implications than the actual issues or organizations themselves.<sup>427</sup> For example, "opposition to the U.S. military's research and development into future combat systems has come from the antiwar movement so far and included protests, direct action, and arrests – the type of advocacy work the International Committee of the Red Cross (ICRC) tends to avoid being seen as associated with."<sup>428</sup> Stavrianakis (2012) describes this phenomenon as a "policing dynamic" within the "NGO and campaign world," where "Mainstream NGOs try to distance themselves from more radical ones... Those explicitly non-violent yet radical groups, in turn distance themselves from direct action activists that do not adhere to a similar policy on non-violence."<sup>429</sup> CAAT, for example,

[...] is explicit about its adherence to a code of non-violence that tends toward the more pacifist end of the spectrum even though as an organisation, it does self-identify as pacifist. While CAAT was described in interviews as 'over the top' by more insider

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<sup>427</sup> Carpenter et al. 2014.: 464.

<sup>428</sup> Carpenter 2011.: 97.

<sup>429</sup> Stavrianakis 2012, 19.

NGOs, it is criticized by some direct action activists for not being outsider enough, for not taking a more overtly direct action stance.<sup>430</sup>

This need for caution and reputation management means that well-connected organizations are shaped not only by the ideational dynamic of their own network, but also the larger security, human security and social environments in which they are viewed and understood by others. Connection strategies within an advocacy or institutional network become critical; it matters who and what a node is connected to. Thus, as agenda-setters and “agenda-vetters”, highly central organizations are as self-interested as they are principled.<sup>431</sup>

In the arms control advocacy space, especially, it makes no sense to look at these multiple competing TANs in isolation, because they are also interdependent and overlapping (e.g., co-constituted, reactionary, co-constructed, signalling). *Within* a single TAN—perhaps CAC or CAAT—network structure is shaped via shared beliefs and resource/influence-seeking behaviours. *Between* TANs, network structure is more likely shaped by shared beliefs because 1) their resources come from very different places, and 2) because “influence” and “legitimacy” are perceived differently, as a function of their belief system. As an example of interdependence, the Defense Small Arms Advisory Council (DSAAC) sought consultative status at the UN precisely *because* the Control Arms Coalition had succeeded in getting ATT negotiation onto the General Assembly’s agenda. Regarding overlap, it is largely unsurprising that WFSA members did not overlap with any of the other membership networks. If industry actors (other than DSAAC) had been more involved in ATT advocacy early on, and if there had been enough justification to include them in this network dataset, then perhaps a small number of actors would be connected to both WFSA and CAC—but these would have been very weak ties. More intriguingly, in my view, there were very few overlaps between the ENAAT membership list and those of CAC, IANSA, or IPB.<sup>432</sup> This

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<sup>430</sup> Ibid.

<sup>431</sup> Carpenter 2011., 70-71.

<sup>432</sup> These include the Swedish Peace and Arbitration Society (member of CAC and ENAAT); the Norwegian Peace Association (member of CAC, ENAAT, and IPB); the Italian Network for Peace and Disarmament (member of

minimal overlap potentially suggests a self-sorting dynamic based on perceived incommensurability—or at least, an ill fit—between the organizations’ core missions and visions. Furthermore, the only organizations that were ENAAT members *and* had UN consultative status were Cold War-era anti-nuclear or peace groups.<sup>433</sup>

These network visualizations also illustrate what advocacy scholars have argued for decades regarding density versus fragmentation in advocacy networks. For example, in their seminal work on transnational advocacy networks (TANs), Keck and Sikkink (1998) find that those that are more successful, are “dense, with many actors, strong connections among groups in the network, and reliable information flows.”<sup>434</sup> Expanding on this early work, Lake and Wong (2009) find that the overall structure of an advocacy network shapes “their ability to create and disseminate norms. Looser networks lack a strong central node, which in turn hobbles the network’s ability to coordinate action and control normative content.”<sup>435</sup> As explored in section 4.6.2, the shift from IANSA to the Control Arms Campaign as the central node in the small arms movement enabled more consistent messaging and information flows across the network, as well as more coordinated action directed towards the PrepCom process. In contrast, the shift on the pro-gun side of things was from the NRA and WFSA as the core actors in the mid-90s and early 2000s, to a diversification of voices, ranging from UK defence companies and small arms manufacturers, to global investment firms. These new(er) actor held somewhat different “pro-gun” beliefs that were, compared to the NRA’s views, compatible with some version of arms control. The densification and homogenization in one area of the network combined with diversification and

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CAC, ENAAT, and IANSA); the UK Campaign Against Arms Trade, the Spanish Delas Center for Justice and Peace, and the Finnish Alliance of Peace or “Rauhanliito” (member of ENAAT, IANSA, IPB); and Ribbon International (member of ENAAT and IPB).

<sup>433</sup> Including the International Peace Bureau (accredited since 1977), International Physicians for the Prevention of Nuclear War (IPPNW) (accredited since 1980 via the World Health Organization), the International Association of Lawyers against Nuclear Arms (IALANA) (accredited since 1995), War Resisters International (accredited since 1973), and Ribbon International (born of the Ribbon movement against nuclear weapons, and became an official UN NGO in 1991). See: Macafee n.d.

<sup>434</sup> Keck and Sikkink 1998, 28.

<sup>435</sup> Lake and Wong 2007, 149.



fragmentation in other areas of the network meant that the hardline position and message of the NRA and WFSA were diluted.

#### 4.7 Discussion and Conclusion

Much of the clustered structure of the advocacy network as the stark differences in CAMs can be symbolized by one of the most iconic sculptures in the world, discussed by Aaron Karp<sup>436</sup> in his 2006 essay, “Escaping Reutersward’s Shadow.” Carl Fredrik Reutersward, who died in 2016<sup>437</sup>, was a Swedish artist best known for his painting and sculpture, *Non-Violence*—more commonly called The Knotted Gun (see Fig. 26).<sup>438</sup> He first created the piece in 1980 in reaction to the murder of John Lennon, who was a friend, as an artistic tribute to Lennon’s vision of peace. A large metal cast of the sculpture was initially placed in New York City’s Central Park, but was donated to the United Nations in 1988, and now sits in front of their NYC headquarters. Since then, The Knotted Gun has become “the ubiquitous metaphor for small arms control,”<sup>439</sup> and serves as a kind of Rorschach test for assessing worldviews about weapons and small arms.

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<sup>436</sup> Karp, remember, was one of the attendees at the 1994 small arms control meeting, along with Natalie Golding and Edward Laurance.

<sup>437</sup> Slotnik 2016.

<sup>438</sup> Another sculpture takes The Knotted Gun’s argument to its next logical conclusion. The Right Livelihood Award Sculpture, designed and created by Swedish artist Eva Hild and presented to Award Laureates since 2020, is made of “Humanium Metal”—metal from seized and recycled guns, as part of gun destruction programs in North and Central America and Southern Africa. See: Award Sculpture n.d.

<sup>439</sup> Karp 2006, 18. The sculpture was actually created in reaction to the murder of John Lennon in 1980 and a large cast metal version was gifted by the government of Luxemburg to the UN in 1988.



**Figure 26. *Non-Violence*. Source: Wikimedia Commons**

Karp argues (somewhat derogatorily) that for some, the sculpture “presents the bumper-sticker message that guns are a fundamental part of the problem, that their elimination is a fundamental part of the solution [to violence].”<sup>440</sup> This “reading” of the sculpture is akin to the view of the abolitionists, such as CAAT. For others, it “is the most prominent statement of the goal they dare not dream of. It confuses perceptions of their projects and trivializes their efforts, which can never approach such a standard.” This perhaps captures the more humanitarian view of the arms controllers, such as CAC (and Karp himself, notably). But for still others—and in the case of this paper, for the NRA and likeminded groups—The Knotted Gun is “the physical manifestation of...the gun-grabbing authoritarians of world government and repression—it illustrates their fears perfectly.”<sup>441</sup>

The core message of Karp’s essay is implied by its title—that the small arms control movement (circa 2006) needed to “free itself of the Reutersward’s shadow,” to take the wind out of the sails (so to speak) of the two abolitionist “readings” of The Knotted Gun. In other words, it needed to “take control over its [own] identity,” by *distancing* the notion of “control” from “abolition” and everything that

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<sup>440</sup> Ibid.

<sup>441</sup> Karp 2006.

accompanies it.<sup>442</sup> Ultimately, it seems CAC was successful in doing this, in part because of its outreach to defence industry actors who aligned with them on the distinction between “legitimate” and “illegitimate” arms trade. Still, some groups saw the ATT’s passing as a step towards abolition (the NRA’s view), and others viewed it as a tool of continued proliferation (CAAT’s view). It appears that the meaning of the ATT, like the *Knotted Gun*, lies in the mind of the beholder.

I now conclude with four main findings for the study of ideology, arms control, and transnational advocacy groups, more broadly. Most importantly, the chapter points to the need to pay attention to ideological conflict and network dynamics not just between CAC and the NRA, but also between CAC and CAAT, CAAT and the NRA, DSAAC and CAC, etc. Specifically, it finds that the overall network structure of the ATT advocacy space was shaped, in large part, by the *presence* of actors who a) held a particular ideology vis-à-vis arms control, and b) had had previous success on previous campaigns (both on the pro-control and anti-control sides), but also by the *absence* (or very late entry) of actors who a) held ideologies that overlapped very little with the majority of the network, and/or b) were largely dismissive of the whole negotiation process until it was too late to shape the conversation, and/or c) were themselves unable to form a coherent enough stance on the ATT to even be able to join the conversation. The challenge to develop a coherent stance on the ATT was especially difficult for CAAT and the anti-arms trade movement, because advocacy for the treaty butted up against the core of their ideology—that the arms trade itself should not exist. One could say there was a lack of “ideological fitness” between CAATs beliefs and the institutional context of the ATT negotiations.

Second, my trans-scalar ideological networks approach points to some of the ways that *relations* can have causal efficacy. For instance, the appointment of Rebecca Peters to the Control Arms Campaign secretariat did not directly cause the NRA to become more vocal in their anti-ATT critique. But the existence of the relationship did raise red flags for the NRA, which prompted their response. If we accept that reasons can be causes, and the relation between Peters and the CAC was one of the main reasons the

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<sup>442</sup> Ibid., 20.

NRA “upped its game,” then we can treat/understand the relation to have causal efficacy (or to be causally efficacious). This is an inherently reflexive dynamic, of course, because the NRA had an existing “mental representation” of who Peters was in the context of the Australian gun control scene, updated its model when she joined the CAC, and anticipated/extrapolated what she would do in her new role and how they could counter or undermine it. Every connection in a network sends a signal.

Third, the chapter demonstrates the importance of going beyond the role of frames, framing, and contra-framing strategies of NGOs, as many SALW scholars have done.<sup>443</sup> While some early social movements research essentially treats frames as being synonymous with ideologies, Oliver and Johnston (2000) contend that “Frame theory offers a relatively shallow conception of the transmission of political ideas as marketing and resonating, while a recognition of the complexity and depth of ideology points to the social construction processes of thinking, reasoning, educating, and socializing.”<sup>444</sup> For example, all of the competing coalitions around the ATT invoked some sort of rights frame; the NRA and DSAAC emphasized gun rights, CAC focused on general human rights protection, and CAAC focused on the human right to peace, justice, and development. As Oliver and Johnston (2000) astutely observed over two decades ago, “Ideology is of central importance in understanding social movements and other political formations, and it is trivialized when it is seen only as a frame. We need both concepts, and we need to understand the relation between them.”<sup>445</sup> The CAM method is one useful way to parse out and visualize these distinctions and interrelations within and between ideologies, getting underneath the frames and discourse that actors use.

Finally, I certainly found evidence of preferential attachment dynamics in the broad issue network. Organizations that had existed for longer and/or had more substantial funding and/or institutional capacity were more likely to attract new connections (demonstrating a “popularity” mechanism). Further, new entries in the network usually formed coalitions and connections with other

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<sup>443</sup> Alcalde 2012, 9.

<sup>444</sup> Oliver and Johnston 2000, 37.

<sup>445</sup> *Ibid.*, 38.

organizations that shared their views on arms control advocacy (demonstrating an “affinity” mechanism). However, I also observed something like “preferential avoidance” or “preferential detachment.” Of course, this makes sense when we recognize that assessing “affinity” requires an evaluation of difference just as much as an evaluation of similarity (after all, the brain itself is a “comparator”). For different actors and ideologies, the importance of the substance of those differences/similarities matters qualitatively, not just as a matter of degree. For instance, if the “what-different” or “what-similar” are core/hub concepts in an ideology, then that plays a more central role in either preferential attachment or avoidance. This, for example, is how we end up with “strange bedfellows” and “unlikely” allies, but also purposeful non-collaboration between some groups. In other words, in an agent-based network, network structure depends on a *combined interaction* of popularity-based (linking to nodes with lots of resources and/or power) and affinity-based attachments (linking to nodes with similar ideas or ideologies). Both material and ideational factors matter, as do both network cohesion and fragmentation.

The final section below considers some of the limitations of this study and describes several opportunities for future research, focusing on expanded methodology and research design.

#### *4.7.1 Limitations of the study and future research opportunities*

First and foremost, I would have preferred to do a comparative analysis of network structures at two or three distinct time intervals. For instance, the overall advocacy space looked very different at the time of early and pre-IANSA, compared to the PoA period, and later, to CAC and the ATT. While the narrative portion of the chapter identified many key characters and events that led to major shifts for the movement, examining the actual network structure before and after those shifts could offer additional insights. Due to time constraints, I chose to focus on analyzing the network structure at the time of peak advocacy around the Treaty. Future research should consider conducting a comparative analysis to track more gradual changes in network structures over time.

Additionally, in comparing the activities and effectiveness of IANSA to those of CAC, it is clear that there exists some kind of threshold level of both network centralization and information throughput

in order to coordinate action. It is beyond the scope of this paper to specifically measure that threshold, but further network analysis that includes a communication flow component could be up to the task, and would make for interesting future research.

Furthermore, the inclusion of more insider information regarding the perspectives of the various groups—especially about how the groups viewed each other—would have enhanced the case study. While I was able to gather some insights from existing interviews, having direct input from key stakeholders might have revealed some of the more interpersonal dynamics involved that never made it into a publication. For instance, I could not find records of commentary CAC made about CAAC or DSAAC, but something of that nature might further clarify the “preferential avoidance” phenomenon I observed in the data.

Another future research direction could be to construct CAMs of the organizations at multiple points in time to track changes in their ideologies. For instance, it is clear in my narrative-based section that key leaders in the arms control movement shifted their thinking in response to the rather disappointing PoA, but also in the context of a rapidly changing global security environment. It would be interesting to identify which parts of the CAM stay consistent, which ones adapt, and how ideological change happens on a concept-by-concept basis. Using these cross-timescale CAMs could be used in conjunction with dynamic (i.e., temporal) discourse network analysis to trace these shifts in a more granular way. Additionally, the use of new multi-layer network analysis tools to convert CAMs into network data—with intra-links between concepts within a single CAM and inter-links between concepts across two or more CAMs—could prove valuable in comparative analysis.

A final note is worth making here regarding the timing of the case study. The ATT is now over a decade old, and both the global security landscape and the transnational advocacy network space have changed tremendously. From the ongoing conflicts in Ukraine, Palestine, Yemen, Sudan, and elsewhere, to the resurgence of fascist-leaning politicians and the rise of so-called “red-brown” alliances in some areas of civil society and academia—the ideological fault-lines of the 2000s and early 2010s have demonstrably shifted. With these shifts, come new and emerging issues where questions of arms

control/trade and ideology are intertwined, which deserve to be studied with the same nuance I have endeavored to use in this chapter.

Debates continue, for example, about the transfer of military aid to Ukraine, to Israel, and to Saudi Arabia. As the currency of security alliances across the globe, arms transfers *are* subject to the ATT, but *realpolitik* still frequently trumps human rights concerns. So conventional weapons are still very much part of the picture, despite regulatory advances. Additionally, nuclear weapons have recently regained the spotlight, first because of the successful (though limited) signing of the Treaty on the Prohibition of Nuclear Weapons (TPNW) in 2017, and second because of the Hollywood blockbuster film, *Oppenheimer*. Given the upcoming U.S. presidential election, and with Donald Trump likely on the ballot, anxieties about nuclear weapons may increase again, as they did during Trump’s presidency. Existential threats—as with existential questions—often prompt ideological conflict.

New technologies, too, pose governance challenges that come with ideological implications. 3D-printed guns, or “ghost guns” as they are called, are becoming much more common across Canada and the United States, aiding criminal networks and often evading police detection. The explosion of artificial intelligence models and platforms in the public sphere follows the already-prolific use of autonomous weapons by militaries across the globe, prompting every response from visions of techno-utopia to doomsday events. Additionally, significant advances in satellite and rocket technology have meant more private and commercial actors involved in space activity than ever before. Libertarian-minded people laud the currently largely unregulated access to these technologies. But many others are concerned about the safety risks the technologies pose to the communities, norms, and systems we rely on. Of course, wrapped up in all of these issues are beliefs and values about authority, individualism, capitalism, democracy, common good, self-sufficiency, wealth, and more. And the question before policymakers is not simply “to regulate or not to regulate,” but how to ensure technological advances benefit the most people while causing the least harm.

All of these issues are concerning—even disturbing. But as every student of security and politics says, they also represent important and fascinating pathways for future research. Using my trans-scalar

ideological networks approach, we could better untangle and understand the ideological commitments involved and hopefully, identify ways to reinforce perspectives and network relations that contribute to peace and security as we try to solve some of the biggest challenges of this century.



## Chapter 5: Conclusion

Grounded in a complex systems ontology, my dissertation aims to identify the ways that ideological conflict shapes policy and governance decisions, and how those decisions shape future ideological conflict. As explored in previous chapters, complexity science refers to a collection of concepts, principles and tools for studying systems composed of recursive causal connections, that exhibit non-linear and emergent behavior.<sup>446</sup> Recognizing a system as complex and—in living systems—adaptive, rather than just complicated or mechanistic allows us to identify behavior and patterns that might otherwise be invisible to us. A complexity lens emphasizes the relational and interactional nature of systems, highlighting feedback loops and dense causal connections, while paying attention to dynamics of change, adaptation, and emergence.<sup>447</sup> This dissertation argues that ideologies can be understood as complex reflexive systems of emotionally charged concepts that are constructed, shared, and changed through social interaction and communication. As (scale-free) networks of meaning, they serve “as a crucial bridge between individual minds and collective behavior.”<sup>448</sup>

In seeking to answer the question of how, where, and when ideologies matter in policymaking and global governance, the conceptual framework I developed in Chapter 2 draws on several key foundations and claims. First, ideology is best approached from a complex systems ontology in order to deal with multicausality across multiple analytical scales, and dynamics of coevolution and nonlinearity. Ideologies not only shape dialogue and negotiation, but also iteratively shape and are shaped by the approaches put forward to address global challenges. Second, network-based tools grounded in a complex systems ontology offer a robust way to study ideologies themselves, including tools to identify “keystone concepts,” incommensurable versions of concepts across different ideologies, and other points of conflict

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<sup>446</sup> Homer-Dixon et al. 2013; Homer-Dixon et al. 2014.

<sup>447</sup> Jervis 1997; Bertuglia and Vaio 2005; Scheffer 2009.

<sup>448</sup> Homer-Dixon et al. 2013.

or commonality. Third, network theory is also useful to approach the individual/group problem, deal with embeddedness, and account for both agency and structure in networks of social relations. Additionally, it offers new ways to unpack the myriad forms of power (including ideational and productive power) operating and interacting in global governance settings across analytical scales. Researchers can begin to identify which groups and actors have more influence over the contents of ideologies, and therefore have more capacity to shape the outcomes of disputes. Insights in this regard open up opportunities to assess and even challenge the “agenda-setting and -vetting power” of certain actors. By examining ideologies using a network-based framework, we can add to what is known about the relationships between individual ideas, collective behaviour, and material realities and processes, in the context of specific global issues.

While this dissertation included two very *topically* different case studies—energy transition and arms trade and control—my findings using my Trans-Scalar Ideological Networks framework are sometimes similar and always complementary. A key component that unites the three chapters is that they all demonstrate *that* and *how* ideology matters in policymaking at the national and transnational level, beyond just simple bipolarity. Each of the three papers in this dissertation contribute to the goals outlined above, first along a theory-building track, then along two empirical tracks.

## **5.1 Summary of findings**

In Paper #1 (Chapter 2), I outlined a network-based framework that treats ideologies as (1) networks of meaning embedded in (2) networks of people embedded in (3) networked systems and structures—producing what I refer to as *trans-scalar ideological networks*. While ideologies themselves exist as networks of concepts and emotions in individual minds, they are shared and changed through social interaction and communication—processes that are subject to in-group/out-group dynamics, perception/misperception, identity construction, material and nonmaterial interests, and various forms of power and influence. I argue that the structure of networks at each scale—of ideologies themselves, of

social networks, and of broader socio-political networks—shapes or mediates interactions across/between scales. I proposed a novel combination of methods to operationalize this framework, using CAM, DNA, and SNA, which, while developed separately and decades apart, provide the sort of trans-scalar analysis of ideology I believe to be so crucial.

In Paper #2 (Chapter 3), I (along with my co-authors) operationalized this newly developed framework to examine recent Canadian Parliamentary discourse surrounding energy transition and climate change. We demonstrated the value of the framework via a case study of ideological heterogeneity within energy transition discourse in Canadian Parliamentary proceedings. Using Cognitive-Affective Mapping (CAM) and Discourse Network Analysis (DNA), the case study mapped the relationships between concepts *within* specific actor's belief systems, visualized the emergent categories or “camps” of beliefs *among* a population of actors, and identified ideologically similar clusters *across* actors. By inductively identifying key—rather than “typical”—ideological arguments and concepts using DNA, the paper assesses the overall structure of the discourse network, maps emerging ideological “boundaries” and their component concepts, identifies clusters of ideologically similar actors, and, finally, observes how/whether these structures, boundaries, and clusters changed over time.

Further, Paper #2 uses CAM to add nuance to the DNA results by teasing out multiple meanings of the same concepts across actors, rather than just establishing positions of agreement or disagreement. Identifying these multiple meanings of concepts is especially important when we consider the structural power of different actors in the discourse network. High-centrality organizations, highly represented actor types, and especially “loud” actors all have more power to promote certain meanings of concepts in the broader discourse network. If we take seriously the idea that concepts acquire meaning, in part, through their relations with other concepts, then being able to articulate multiple actors' meanings of a concept is essential for understanding actors' contributions to discourse and the whole ideological landscape.

The chapter identifies several emerging ideological fault lines that will shape the next decade of climate policymaking. We find that one of the key components in this dynamic ideological landscape is an increased tendency toward both climate action “delayism” and “whilism.” Both of these tendencies are

likely to persist and intensify in the coming years, especially given Canada's slow economic recovery following the COVID-19 pandemic. The consequences of these trends could have long-lasting effects on Canada's environmental policies and goals, some of which we are currently seeing in the debate about delaying the federal carbon tax hike.

Paper #3 (Chapter 4) takes a somewhat different operational approach to the trans-scalar ideological networks framework to study ideological conflict within the Arms Trade Treaty transnational advocacy space. In this second case study, the dissertation offers one of the most comprehensive stakeholder network maps of the transnational advocacy space surrounding the Arms Trade Treaty, going beyond—but also linking/tracing the connections between—the two coalitions/groups typically studied. Using CAM, I identified and mapped four main ideologies that shaped and were shaped by the overall transnational advocacy network space surrounding the ATT. The chapter points to the mediating role of social networks on ideology's influence in transnational advocacy arenas, similar to how our neural networks deal with various types of dissonance and consonance. I find that network cohesion is causally important to successful advocacy, but network fragmentation is also causally important in different ways, suggesting that the number and thickness of “bridges” between parts of a network convey ideological (in)congruence as well as social (in)cohesion).

In both case studies, I demonstrate that CAMs are useful in highlighting key points of disagreement between major disputing groups, finding unlikely common ground, ways to frame/reframe the issue, potential alliances or mutual interests, and possible avenues for reconciliation. They can also be used as educational and reflective tools to illustrate the profound nature of political and social disputes. However, they also reveal areas of incommensurability due to fundamentally different understandings of a concept (e.g. “arms control”); when definitions are emotionally motivated and founded, new facts have little effect. Finally, if we also understand these ideational networks to be embedded in social networks, we can begin to identify which groups and actors have more influence over meaning and emotional valence of concepts, and thus more capacity to shape the outcomes of disputes. Depending on underlying

motivations, these insights can give disputants, mediators, and peace practitioners opportunities to develop better-informed strategies to intervene in, resolve or “win” a conflict.

## 5.2 Future research

In addition to the opportunities for future research discussed in each of the three papers, I conclude here with several broader potential research trajectories. The first is the continuation of methodological innovations in how we map ideologies and the broader “ideological state space,” as well as fruitful ways to do comparative analysis. The second is bringing the insights from this project, and neo-ideology studies as a whole, to praxis on mis/disinformation, conspiratorial thinking, and societal-level epistemic fragmentation. Finally, I include a call—and a proposed direction—for advancing the “complexity turn” in the political social sciences: to systematically explore the implications of a complexity ontology for our understanding of power, one of the most important yet essentially contested concepts in our field.

Future applications of the methodology—and conceptual framework—could benefit from incorporating experimental applications of CAM, such as those by Mansell et al. (2021) and others, as well as interviews with key actors that occupy “spaces” that are analytically interesting from a network analysis perspective (e.g., nodes with high degree or high betweenness centrality measures). The examination of sociopolitical networks could also go further by mapping the formal and informal relationships between actors (outside of the defined discourse space) and accounting for financial and material flows.<sup>449</sup> Further, while this application of DNA used non-digital data—that is, the transcripts of in-person Parliamentary Proceedings—the method is primed for and highly amenable to a whole range of

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<sup>449</sup> A potential model to follow is the Corporate Mapping Project’s investigation of the Canadian fossil fuel industry, including senior executives and board members, and their relationships with think tanks, other corporations, industry groups, and financial institutions. Available at: <https://www.corporatemapping.ca/database/>.

digital media and communications data<sup>450</sup>, which could also help bridge gaps between qualitative and quantitative approaches to studying ideology.

There are also new innovations in network science for modeling, analyzing, and visualizing 3D or multilayer networks. Though more prominent in other fields, some important work has also been done to develop and apply multi-level network models in the social sciences.<sup>451</sup> The recent second edition of *The SAGE Handbook of Social Network Analysis*, for instance, contains some valuable new concepts and innovative research designs using multi-level, multi-layer, multi-mode, and signed networks. Much of this work's focus is on methodological questions or on culture and cognition broadly, rather than ideology specifically. However, there is a lot of potential here to combine the qualitative value and insights of CAM and DNA with these new powerful approaches to study trans-scalar ideological networks more seamlessly and with more cross-scale precision. Multilayer networks could also prove to be a more robust way to compare and analyze a large set of CAMs, or even incorporate additional forms of data and media, such as memes, digital content, or symbols.

As part of my goals for dissemination of this research, I plan to publish my dissertation as a book and then as several shorter articles. I will also create a personal academic website where I can host not only my CV-related information, but also details on how to use the framework I will have (helped) developed, including a CAM manual, recommendations for using social network analysis to study ideology, and instructions for creating an ideological state space. One of my goals is to develop workshop material (potentially including user-friendly software) that helps individuals and groups do ideological analysis on their own in order to improve their own self-awareness, their understanding of others' perspectives on an issue, and their ability to find creative solutions to ideological conflict. These kinds of materials could prove especially useful in an era of worsening mis/disinformation, conspiratorial thinking, and societal-level epistemic fragmentation.

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<sup>450</sup> DNA could also be combined with methods from computational social science, such as Structural Topic Modelling (see Farrell 2016.)

<sup>451</sup> Lazega and Snijders 2016; McLevey, Scott, and Carrington 2024.

### *5.2.1 A serious and systematic theorizing of power in complex reflexive systems*

While writing this dissertation—particularly chapter four—I became even more intensely interested in reading, thinking, and theorizing about how power works in complex reflexive systems. My curiosity led me down quite the rabbit hole, and for a time, I considered adding an entirely separate chapter devoted to the topic. I even presented my preliminary findings at the 2023 International Studies Association conference and received excellent feedback, even getting requests for a copy of my draft from well-established complexity scholars (which I chose not to oblige at the time). Ultimately, my committee and I decided that this vast intellectual pursuit would be better suited to post-doctoral work—not least because what I had written was starting to eclipse my ideology-focused writing. However, I want to plant a figurative signpost here and share some of what that work looks like, since I think the subject of power needs to be sufficiently dealt with in any future complex reflexive systems approaches to human social and political life.

As briefly discussed in Chapter 1, there are two main reasons why I felt compelled to study power more deeply. First, while I use a non-pejorative approach in defining and studying ideology, the term/concept nonetheless emerged from work on class struggle, power, and domination (by Marx, then Gramsci, and later, Lukes). Gramsci's work on hegemony led to a kind of coupling of the concept of ideology with domination and power, where the ruling elite's (or bourgeoisie's) control over the "ideological apparatuses" of society ensured the compliance/consent of the masses. As previously mentioned, neo-ideological approaches reject this "ideology as hegemony" thesis, in part because they think there are much more interesting things to say and study about ideology. For many ideology scholars, the concept is still tightly coupled with power dynamics. Some of my previous chapters engage only briefly with power, particularly in discussions about networks.

Second, and perhaps more importantly, complex systems approaches to the social and political sphere have historically been criticized for neglecting the role of power in their analysis. These critiques, as related to power, tend to make one or more of the following three arguments. In the first, the concern is

that complexity approaches—especially those focused on modelling systems—obscures the historical, power-laden processes that led to or *constructed* the current system’s structure. For example, drawing on Foucault and Bourdieu, Malaina (2014) emphasizes the *structure* of the global capitalism system “is not the mere result of evolutionary selections in the adaptive dynamics of the system,” but rather, “is the result of history, resulting from struggles for the positions of power and domination...”<sup>452</sup> In “omit[ting] the constructed nature of the rules of the system,”<sup>453</sup> the CAS modellers “eliminat[e] from the model the history that explains the agent’s behavior and its position in social space.”<sup>454</sup> In other words, the approach (according to this critique) favours the *constitutive* question, “what explains the system dynamics we observe?” and sidesteps the *causal* question, “how did the system become this way?”

The second argument contends that a complex adaptive systems approach both resonates with and *reifies* a neoliberal worldview and governing model because it obscures the current asymmetries of power that maintain/reproduce *structure*. Complexity runs the risk of becoming an “ideology” (in the false-consciousness sense) used to justify existing (neoliberal) political-economic structures and dynamics as natural and even inevitable.<sup>455</sup> Several scholars, including Walker and Cooper (2011), are especially disturbed by the apparent similarities between C.S. Holling’s work on resilience and *Panarchy* and Hayek’s free-market philosophy, and therefore doubt the ability of complexity approaches to do anything other than undermine liberal values.<sup>456</sup> The discourse and practice of “security as resilience,” in particular, has been critiqued as simply a way for states and international institutions to “pass the buck” onto self-responsibilized citizens, and that “complexity science...functions to neutralize critical inquiry into the disastrous consequences of neoliberal approaches” to regulation and governance.”<sup>457</sup>

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<sup>452</sup> Malaina 2014.

<sup>453</sup> *Ibid.*, 471.

<sup>454</sup> *Ibid.*

<sup>455</sup> Malaina 2014.

<sup>456</sup> Grounded in a particular reading of CAS as a primarily mathematical modelling effort, drawing on cellular automata, Malaina (2014) argues that, “devoid of any historicist and sociological context, extracted from its mathematical background and applied uncritically to the social, [the model] dovetails perfectly with the ideological mystifications of von Hayek and the neoliberal School of Chicago, where there would be no more than micro movements of the system and individual interactions, without any underlying structure of relations.” *Ibid.*, 473. See also Walker and Cooper 2011.

<sup>457</sup> Walker and Cooper 2011, 144.



As a kind of consequence of the first and second, a third argument is that a complexity approach ignores or obscures individual *agency* in two important ways. First, it severely complicates the idea of *responsibility*, particularly culpability for harms (including socio-ecological harms) done. For example, Chandler (2013) argues that “power relations can easily evaporate into complex processes of indirect interconnection, where responsibility for the actions of governments as much as the actions of individuals, is seen to be shared much more equally.”<sup>458</sup> Second, it dismisses the agency involved in resistance and transformation, or “the transforming potential of the subject, which is always able to exercise resistance over power and to change the rules of the game.”<sup>459</sup> Again, Chandler (2013) argues that “agency is distributed away from the formal centres of political power (the focus of liberal ontologies) and towards the margins or the ‘everyday’ where the ‘tactics’ or ordinary people contest and disrupt the strategies and understandings of the powerful.”<sup>460</sup>

Taking these critiques together, the concern is that a complex systems approach to social systems (1) conceals or eliminates the historical power struggles that built/led to the current structure of the system, (2) obscures the current asymmetries of power that reproduce and reify the structure of the system, and (3) complicates/diminishes agency such that identifying/assigning responsibility for harms done (by the powerful) becomes near-impossible *and* the transformative capacity of agents is dissipated. Interestingly, these critiques are uncannily similar to some Critical Discourse Analysis and post-structuralist critiques of ideology. As Leader Maynard describes, “both approaches analyse the way certain ideological discourses depoliticize or legitimate states of affairs through processes of ‘naturalization’, ‘reification’, and the perceptual occlusion of responsible agents.”<sup>461</sup> These are certainly concerns worth considering, not least because they get at fundamental questions of not only political science, but the philosophy of science itself—how should we understand the relationships between agency and structure, between cause and effect, between stability and change over time? For social

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<sup>458</sup> Chandler 2013, 178.

<sup>459</sup> Malaina 2014, 483.

<sup>460</sup> Chandler 2013, 178–179.

<sup>461</sup> Leader Maynard 2013, 305.

scientists, the characteristics of complex adaptive systems that we typically find so appealing and useful—such as nonlinearity or emergence—are often the very properties that make power analysis difficult. However, despite limited engagement with power’s role in complex adaptive systems so far, I argue that the two are not necessarily incommensurable—rather, the implications of a complex systems ontology for understanding power dynamics have yet to be fully explored.

Of course, a significant part of the problem/challenge here is the general dis-consensus on what “power” in social systems even is! It has almost become a cliché to begin a paper about power with reference to its “essentially contested-ness.” Drezner (2021) recently started his discussion this way: “International Relations (IR) scholars do not agree about much, but they are certain about two facts: power is the defining concept of the discipline and there is no consensus about what that concept means.”<sup>462</sup> For example, IR has focused on “power to” and “power over,” but there are other verbs that theorists attach to power, too. For Arendt, what matters is “power with,” or the power of the group against an “authority” (similar to Lake’s “relational authority” concept), where the use of violence against the group implies an absence of power. Foucault, similarly, describes violence and power as antithetical. Other scholars discuss “power as,” and come to many different conclusions. Bourdieu treats power as (various forms of) capital, for instance. On top of all these different verb treatments, we also attach dozens of different adjectives to power in an attempt to articulate types (hard, soft, smart, ...) Drezner argues further that, “Having a central concept so poorly defined is a problematic state of affairs for the discipline. It contributes to intellectual monocultures (McNamara, 2009) and partially explains the current consensus (Dunne et al., 2013: 406) that there has been ‘less and less inter-theoretic debates across paradigms (or isms).’”<sup>463</sup> Before coming to terms with what power “means” in complex systems, we first need to grapple with the power dis-consensus itself.

Whether in response to one or more of the critiques, or arising from an endogenous need to account for power in a particular subfield, there have been several attempts to conceptualize power *within*

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<sup>462</sup> Drezner 2021, 29.

<sup>463</sup> Drezner 2021.

a complex systems framework/lens. Interestingly, these attempts often find themselves back in the middle of the earliest debates about power as a capacity vs. relation, power as exercised by actors vs. structures, power as largely synonymous with influence vs. only instances of ‘significant affecting,’ power as necessarily conflictual vs. consensual, the question of ‘intentionality’ and unintended consequences, the relationship between power and responsibility, the fungibility of resources in the mobilization of power, the role of material vs. ideational sources of power, and more.

But many of these scholars also offer some important insights that power theorists themselves could benefit from. First, there is the need to bring the *environment* back into power frameworks, not only as a possible source/resource of power but as a component of power relations themselves.<sup>464</sup> As Boonstra points out, “Social scientists conventionally associate the use of power with human or social interaction and not with interactions between humans and their biotic and abiotic environment. The natural environment is typically only analyzed as one source of power that is used in human interaction.”<sup>465</sup> On the contrary, sociologist Johan Goudsblom argues that by domesticating fire, “early humans dramatically changed how they could exercise power over the conduct of other human groups, themselves, and other species, as well as the social and ecological contexts in which they lived.” (Boonstra) The very possibility of *(re)invention* points to a constantly shifting landscape of the sources, means, conduits, and even targets of power.

As a second insight, some socio-ecological systems scholars remind us that the notion of ‘responsibility’ does not always imply *causality* (e.g., we regularly talk about legal or political responsibility by virtue of one’s formal role/job, and we talk about social or corporate responsibility to suggest care-taking of our shared commons). It is no surprise, then, that resilience scholars such as Boonstra (2016) and Avelino and Rotmans () are drawn (at least in part) to Lukes’ radical conception of power. Lukes explicitly links power to both agency and responsibility because, “It enables us to keep in

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<sup>464</sup> Boonstra 2016.

<sup>465</sup> Ibid.

focus the very question of the difference that agents can make to outcomes and to cast a critical eye on attempts by powerful agents to escape their own responsibilities by ‘blaming the system.’”<sup>466</sup>

Third, socio-ecological systems scholars also emphasize *interdependence* between agents and between agents and their environment. However, in power theorist circles, the concept of interdependence rather fell out of favour because it was used by [Keohane?] to suggest that interdependence between states would necessarily tame power. Relatedly, the question of how “significant” power’s effects must be to cross the threshold beyond just *causation* is all the more complicated by a complexity ontology. In just one example from the field of global health governance, Moon (2019) argues that “limiting the concept of power to only ‘significant’ instances of influence would risk missing vast parts of the picture, because seemingly minor acts of influence in one part of a complex adaptive system can have major effects elsewhere.”<sup>467</sup> Furthermore, nonlinearity in complex adaptive systems implies that “actors traditionally characterized as weak in international affairs may have significant impacts on the system’s outcomes.”<sup>468</sup>

Finally, because so many scholars in this field are interested in social and system change (and transition), they bring a much more *temporal* understanding to their engagement with power concepts, and are inherently interested in identifying levers that might uproot the status quo in certain segments of society. In a socio-technical transition context, for example, an appropriate framework of power “needs to include long-term and intergenerational dynamics, to account for radical, nonlinear transformative change and to allow for interdisciplinary and ‘interparadigmatic’ use. It needs to acknowledge the dimension of time in social reality, i.e. that social processes are subject to an interplay between short-term and long-term change and stability, and that these dynamics can cover various generations...Moreover, an interparadigmatic approach is necessary: bridging various paradigms, acknowledging both positivist science (i.e. ‘facts, numbers & statistics’, as part of an integrated systems analysis) and constructivist

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<sup>466</sup> Hayward and Lukes 2008, 12.

<sup>467</sup> Moon 2019, 5.

<sup>468</sup> Ibid.

science (i.e. ‘values, discourse and perceptions’).”<sup>469</sup> These are just some of the insights from other disciplines that should be accounted for in a complex systems conceptualization of power.

For this ambitious future research project, the challenge ahead is to develop a theory of power that both satisfies or encompasses existing theories—including those that focus on ideational or ideological power dynamics—and actually maps onto the reality of complex adaptive systems. As the emerging neo-ideology studies field becomes more established, it is my hope that not only will trans-scalar approaches become more common and valuable, but that a complexity ontology on power will prevent ideology studies from receding back into the “ideology as hegemony” thesis.

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<sup>469</sup> Avelino and Rotmans 2011, 797–798.

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## Appendix

### A: Towards an Arms Trade Treaty: A Timeline of Events

Founding of the International Conference on Firearms Legislation (ICFL)	1993	
Activist meeting @ the American Academy of Arts and Sciences	1994, February	Aaron Karp, Edward Laurance, Natalie Goldring, SALW project @ American Academy of Arts & Sciences, Committee on International Security Studies (CISS)
Creation of UN Panel of Governmental Experts on Small Arms	1995	United Nations, Mitsuro Donowaki (Japanese Ambassador), Edward Laurance
NRA-ILA gets UN ECOSOC consultative status	1996	
WFSA supersedes the ICFL	1997	
Report of the Panel of Governmental Experts published	1997	
Website Launched: Laurance creates the online Preparatory Committee for a Global Campaign on the Spread and Unlawful Use of Small Arms and Light Weapons (Project PrepCom)	1998, January	
Founding of IANSA as a formal NGO	2000, February	
Adoption of the PoA by UN member states	2001	
Institutionalization of IANSA - new director and policy staff	2002	
WFSA gets UN consultative status	2002	
Launch of Control Arms Campaign	2003	Amnesty International, Oxfam International, International Action Network on Small Arms (IANSA)
Launch of the Million Faces campaign	2004	
Great Gun Debate live TV event	2004, October	Rebecca Peters, Wayne LaPierre
Submission of "Million Faces" petition to UNSG Kofi Annan	2006	Control Arms Coalition
First PoA Review Conference	2006	
UN resolution passed to start work on developing an ATT	2006, December	UK, UN General Assembly
UNSG's Consultation on the Feasibility, Scope and Parameters of an ATT	2007	
"People's Consultations"	2007	Control Arms Coalition
Group of Governmental Experts established	2008	UN
Open-Ended Working Group established	2009	UN
First ATT PrepCom	2010	

Control Arms Secretariat is established	2011	
Second ATT PrepCom	2011	
Third ATT PrepCom	2011	
Second PoA Review Conference	2012	
First Diplomatic Conference on the ATT	2012, July	
Vote to organize a final UN Conference on the ATT, with significant support	2012, November	
Second Diplomatic Conference on the ATT	2013, March 18-28	
ATT is adopted	2013, April 2	
ATT opens for signature	2013, June 3	
ATT enters into force	2014, September 24	

### **B: Towards an Arms Trade Treaty: PrepCom Accredited NGOs (111)**

	PrepCom accredited?	Accredited since		
Acronym Institute for Disarmament Diplomacy	Yes	2013		
Action aides aux familles démunies	Yes	2002		
Action on Armed Violence	Yes	2012		
American Conservative Union	Yes	2007		
Amnesty International	Yes	1964		
Amnesty International (Chilean section)	Yes	?		
Arewa Women Commission	Yes	?		
Arias Foundation for Peace and Human Progress	Yes	2003		
Armenian Assembly of America	Yes	1999		
Arms Control Association	Yes	?		
Article 36	Yes	2016		
Asabe Shehu Yar'Adua Foundation	Yes	2012		
Asociacion de Lucha para el Desarme Civil	Yes	?		
Asociacion para Politicas Públicas	Yes	?		
Association de la jeunesse congolaise pour le développement	Yes	2011		
Association des jeunes pour le développement humain et la protection de l'environnement	Yes	2010		
Canadian Coalition for Gun Control	Yes	?		
Center for Policy Studies	Yes			

Centre d'accueil et de volontariat pour orphelins, abandonnés et handicapés du Cameroun	Yes	2011		
Centre d'encadrement et de développement des anciens combattants	Yes	2015		
Centre for Women Studies and Intervention	Yes	2017		
Centro de Prevención de la Violencia	Yes	?		
Conflict Analysis Resources Center	Yes	?		
Child Development Foundation	Yes	2007		
Colonie des pionniers de développement	Yes	2008		
Comité catholique contre la faim et pour le développement	Yes	1998		
Commission of the Churches on International Affairs of the World Council of Churches	Yes	1969		
Control Arms	Yes	2012		
Dar Al-Salam Organization	Yes	2013		
Defend International	Yes	?		
Defense Small Arms Advisory Council	Yes	2014		
ECOWAS Youth and Citizens League	Yes	?		
ECPAT (Guatemala)	Yes	?		
Ethiopian Change and Development Association	Yes	2014		
Federation de droit de femmes	Yes	?		
Fellowship of Reconciliation	Yes	1979		
Femmes des medias pour la justice au Congo	Yes	?		
Femmes unies pour la paix dans la région des Grands Lacs	Yes	?		
Foundation Martin Luther Jules	Yes	?		
Fundació per la Pau	Yes	?		
Geriatrics Care Foundation of Pakistan	Yes	2004		
Groupe de recherche et d'information sur la paix et la sécurité	Yes	?		
Groupement de promotion intégrale	Yes	?		
Higa-onon Ha Migsabuwa Ta Lanao	Yes	?		
Human Rights Advocates	Yes	1985		
Human Security Initiative Organization	Yes	2009		
IANSA Women's Network (Nigeria)	Yes	?		
Indian Institute for Peace, Disarmament and Environmental Protection	Yes	?		
Institute for Security Studies	Yes	2001		
Institute of Human Rights Communication Nepal	Yes	?		
Instituto de Enseñanza para el Desarrollo Sostenible	Yes	?		
Instituto Sou da Paz	Yes	2018		



International Action Network on Small Arms	Yes	2011		
International Association against Drug Trafficking and Drug Abuse	Yes	?		
International Association of Lawyers against Nuclear Arms	Yes	1995		
International Commission of Jurists	Yes	1957		
International Committee of Museums and Collections of Arms and Military History	Yes	?		
International Institute for Human Rights, Environment and Development	Yes	1996		
International Peace Bureau	Yes	1977		
International Physicians for the Prevention of Nuclear War	Yes	Via WHO		
International Shinto Foundation	Yes	2001		
International Women Bond	Yes	1997		
ISHA Foundation	Yes	2007		
Justícia i Pau	Yes	?		
Kristna Fredsrørelsen	Yes	?		
Liberia Urban and Rural Women in Development	Yes	?		
Liberians United to Expose Hidden Weapons	Yes	2010		
Mines Advisory Group	Yes	2014		
Mur-Africa universel	Yes	?		
National Association of Vocational Education of China	Yes	2010		
National Rifle Association of America Institute for Legislative Action	Yes	1996		
Neighbour Organization — Nepal	Yes	2014		
Norwegian Forum for Environment and Development	Yes	2007		
Organisation de développement et des droits de l'homme au Cameroun	Yes	?		
Organisation pour la promotion et la protection des droits de la femme et de l'enfant au Burundi	Yes	2000		
Oxfam International	Yes	2002		
Pakistan Community Peace Foundation	Yes	?		
Pakistan Women's Lawyers Association	Yes	?		
Parliamentarians for Global Action	Yes	1998		
Pax Christi International	Yes	1979		
People with Disabilities Uganda	Yes	2004		
Project Ploughshares	Yes	?		
Réseau burundais d'action sur les armes légères	Yes	?		
Réseau d'action sur les armes légères au Togo	Yes	?		

Réseau d'actions paisibles des ancien combattants pour le développement intégré de tous au Burundi	Yes	?		
Ribbon International	Yes	1991		
Rural Initiatives in Sustainability and Empowerment	Yes	?		
Saferworld	Yes	2010		
Securitas Congo	Yes	?		
Simply Help	Yes	2005		
Somali Women Civil War Survivors Organization	Yes	2012		
Sporting Arms and Ammunition Manufacturers Institute	Yes	2005		
Stockholm International Peace Research Institute	Yes	2012		
Sudan Council of Voluntary Agencies	Yes	2004		
Uganda Management Assistance Programme	Yes	2012		
UNESCO Association of Guwahati	Yes	2010		
Union syndicale agriculteurs	Yes	2013		
United Christians Campaigning against AIDS, Violence and Injustice	Yes	?		
United Sikhs	Yes	?		
Vision GRAM-International	Yes	2016		
Viva Rio	Yes	2010		
West Africa Action Network on Small Arms (Nigeria chapter)	Yes	?		
West Africa Journalists Network for Security and Development	Yes	?		
Women for Peace and Democracy — Nepal	Yes	?		
Women's International League for Peace and Freedom (WILPF)	Yes	1948		
Women's Right to Education Programme	Yes	2006		
World Conference of Religions for Peace	Yes	1995		
World Federalist Movement	Yes	1970		
World Forum on the Future of Sport Shooting Activities	Yes	2002		
World Welfare Association	Yes	2012		
Zorzor District Women Care	Yes	?		
International Campaign to Ban Landmines	Not specifically	?		
Action internationale pour la paix et le développement dans la région des Grands Lacs	Not specifically	2005		

Africa Peace Fórum	Not specifically	2013		
Arab Red Crescent and Red Cross Organization	Not specifically	2009		
Cameroon Youths and Students Forum for Peace (CAMYOSFOP)	Not specifically	2013		
Canada's National Firearms Association (NFA)	Not specifically	2015		
Eastern African Sub Regional Support Initiative for Advancement of Women (EASSI)	Not specifically	2004		
Omega Research Foundation	Not specifically	2013		
War Resisters International	Not specifically	1973		
Gun Control Australia (formerly National Coalition for Gun Control)	Not specifically	2001		
International Committee of the Red Cross (ICRC)	Not specifically	?		
Sporting Shooters' Association of Australia (SSAA)	Not specifically	1998		
China Arms Control and Disarmament Association	Not specifically	2005		
Human Rights Watch	Not specifically	1993		
International Peace Research Association	Not specifically	via UNCTAD, UNESCO		
New Zealand Council of Licensed Firearms Owners	Not specifically	2008		
Swisspeace (Swiss Peace Foundation)	Not specifically	2005		
Verification Research Training and Information Centre (VERTIC)	Not specifically	1996		
World Council of Churches	Not specifically	category II, 1969; general, 2000		
World Vision	Not specifically	category II, 1985; general, 2004		

Of the 133 UN-accredited NGOs in this issue network at the time (111 of which only had special access to the ATT PrepCom meetings), 36 of them were also CAC members, 16 were International Peace

Bureau partners, 29 were IANSA members, 5 were ENAAT members, and 5 were WFSA members. The “pivot table” below summarizes these data (Table 4).

**Table 5. Pivot Table of overlapping network memberships**

	<i>Accredited</i>	<i>PrepCom- accr.</i>	<i>CAC Member</i>	<i>UN- accr. NGO</i>	<i>WFSA Member</i>	<i>IANSA Member</i>	<i>ENAAT Member</i>	<i>IPB Partner</i>	<i>Total</i>
<i>Accredited</i>	133	111	36	87	5	29	5	16	<b>133</b>
<i>PrepCom- accr.</i>	111	111	30	65	3	24	4	15	<b>111</b>
<i>CAC Member</i>	36	30	99	24	0	32	6	15	<b>99</b>
<i>UN-accr. NGO</i>	87	65	24	87	5	17	4	11	<b>87</b>
<i>WFSA Member</i>	5	3	0	5	53	0	0	0	<b>53</b>
<i>IANSA Member</i>	29	24	32	17	0	53	7	18	<b>53</b>
<i>ENAAT Member</i>	5	4	6	4	0	7	43	10	<b>43</b>
<i>IPB Partner</i>	16	15	15	11	0	18	10	33	<b>33</b>
<b>Total</b>	<b>133</b>	<b>111</b>	<b>99</b>	<b>87</b>	<b>53</b>	<b>53</b>	<b>43</b>	<b>33</b>	<b>286</b>

**Table 6. Subset of membership overlap**

	<i>ENAAT</i>	<i>CAC</i>	<i>IANSA</i>	<i>IBP</i>
<i>Swedish Peace &amp; Arbitration Society</i>	Yes	Yes		
<i>Norwegian Peace Association</i>	Yes	Yes		Yes
<i>Italian Network for Peace &amp; Disarmament</i>	Yes	Yes	Yes	
<i>UK Campaign Against Arms Trade</i>	Yes		Yes	Yes
<i>Spanish Delas Center for Justice &amp; Peace</i>	Yes		Yes	Yes

<i>Finnish Alliance of Peace</i>	Yes	Yes	Yes
<i>Ribbon International*</i>	Yes		Yes

### C: List of organizations

**Table 7. List of organizations in the organization-congruence network analysis (see Figures 5a, 5b, 6a, and 6b), grouped by cluster number and sorted by degree.**

<b>Organization Name</b>	<b>Cluster No.</b>	<b>Degree</b>	<b>Betweenness Centrality</b>	<b>Type</b>
<i>LIB</i>	1	75	113.905423	PARTY
<i>BQ</i>	1	73	80.200662	PARTY
<i>NDP</i>	1	73	80.200662	PARTY
<i>Equiterre</i>	1	58	23.07869	ENV
<i>Environmental Defence</i>	1	56	14.960475	ENV
<i>Council of Canadians</i>	1	54	13.84674	NGO
<i>GP</i>	1	51	19.192645	PARTY
<i>Canadian Labour Congress</i>	1	50	13.293511	UNION
<i>Canadian Centre for Policy Alternatives</i>	1	46	7.707723	NGO
<i>Pembina Institute</i>	1	46	7.707723	NGO
<i>University of Waterloo</i>	1	46	7.707723	SCI
<i>Climate Action Network Canada</i>	1	44	7.397244	ENV
<i>Canadians for Tax Fairness</i>	1	43	7.107642	NGO
<i>Green Budget Coalition</i>	1	43	7.041595	ENV
<i>Canada's Building Trades Union</i>	1	21	0	UNION
<i>NorthStar Earth and Space</i>	1	16	0	BUS
<i>CPP Investments</i>	2	72	74.885282	BUS
<i>Brookfield Asset Management</i>	2	70	67.047199	BUS

<i>Foresight Cleantech Accelerator Centre</i>	2	59	31.968301	BUS
<i>Fonds de solidarite des travailleurs du Quebec</i>	2	49	18.784306	BUS
<i>Nano One Materials</i>	2	41	22.185526	BUS
<i>ALUS</i>	2	36	7.934351	ENV
<i>Bank of Canada</i>	2	12	0	BUS
<i>GHGSat Inc.</i>	2	12	0	BUS
<i>Office of Infrastructure of Canada</i>	2	12	0	GOV
<i>CPC</i>	3	65	75.186805	PARTY
<i>Air Products Inc</i>	3	64	33.994091	BUS
<i>Whitecap Resources Inc</i>	3	54	20.237591	BUS
<i>Air Liquide Canada Inc</i>	3	52	18.461104	BUS
<i>Shell Canada Ltd</i>	3	51	18.630039	BUS
<i>Explorers and Producers Association of Canada</i>	3	50	20.892373	BUS
<i>Enerkem</i>	3	49	15.927977	BUS
<i>Canadian Association of Oilwell Drilling Contractors</i>	3	47	18.669202	BUS
<i>Public Policy Forum</i>	3	35	3.22379	NGO
<i>Quebec Forest Industry Council</i>	3	35	10.634302	BUS
<i>Canadian Association of Petroleum Producers</i>	3	34	2.664143	BUS
<i>Enbridge Inc.</i>	3	34	2.664143	BUS
<i>University of Calgary</i>	3	34	2.664143	SCI
<i>LNG Canada</i>	3	31	1.619548	BUS
<i>Canadian Energy Pipeline Association</i>	3	30	1.095932	BUS
<i>Lloydminster Oilfield Technical Society</i>	3	30	1.095932	BUS
<i>Fortis Inc</i>	3	29	1.457195	BUS
<i>MER, Government of Saskatchewan</i>	3	29	0.60719	GOV
<i>National Coalition of Chiefs</i>	3	29	0.60719	INDIG
<i>ARC Financial</i>	3	27	1.322871	BUS

<i>Government of Alberta</i>	3	26	0.155385	GOV
<i>Investissement Quebec</i>	4	57	29.064875	BUS
<i>Alaska-Alberta Railway Development Corporation</i>	4	55	12.693447	BUS
<i>TMX Group Ltd</i>	4	53	16.005963	BUS
<i>Canadian Nuclear Association</i>	4	52	30.491207	BUS
<i>Government of Canada</i>	4	51	16.725866	GOV
<i>Cameco Corporations</i>	4	49	20.017272	BUS
<i>BMO Capital Markets</i>	4	46	6.377457	BUS
<i>Canadian Critical Minerals and Materials Alliance</i>	4	41	12.048729	BUS
<i>ENTRANS Policy Research Group</i>	4	41	5.487182	SCI
<i>Individual</i>	4	39	0.968053	SCI
<i>Simon Fraser University</i>	4	38	0.635595	SCI
<i>Coastal First Nations</i>	4	36	0	INDIG
<i>Propulsion Quebec</i>	4	27	6.365978	BUS
<i>BlackRock Metals Inc.</i>	4	9	0	BUS
<i>Department of Natural Resources</i>	4	9	0	GOV
<i>Federation des travailleurs et travailleuses du Quebec</i>	5	51	10.340564	UNION
<i>University of Dundee</i>	5	51	10.340564	SCI
<i>First Cobalt Corp.</i>	5	42	5.160802	BUS
<i>Vision Biomasse Quebec</i>	5	42	5.160802	BUS
<i>Confederation des syndicats nationaux</i>	5	34	3.438824	UNION
<i>International Brotherhood of Electrical Workers</i>	5	34	3.438824	UNION
<i>Royal Roads University</i>	5	22	0	SCI
<i>Green Economy Canada</i>	6	64	34.252612	ENV
<i>H2 V Energies Inc</i>	6	62	28.624998	BUS
<i>HEC Montreal</i>	6	62	29.885853	SCI
<i>Analytica Advisors</i>	6	56	15.459968	BUS

<i>Reseau quebecois sur l'integration continentale</i>	6	51	9.706217	NGO
<i>Canadian Union of Postal Workers</i>	6	49	5.671989	UNION
<i>Opus One Solutions</i>	6	49	5.671989	BUS
<i>Trade Justice Network</i>	6	31	0	NGO