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Tesis:

“When can we expect States to select a transgovernmental network instead of an intergovernmental organization to effectively deal with biosecurity threats?”

Para obtener el grado de Doctor en Estudios de Desarrollo Global

Presenta

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I dedicate this dissertation to you, beloved mother.

DECLARATION

I hereby declare that this thesis is an independent work. All sources used are fully quoted to the best of my knowledge.

Xalapa-Enriquez, Veracruz, Mexico, 15th January 2020.

Octavio Miguel González Segovia

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LIST OF ABBREVIATIONS

TRANSGOVERNMENTAL NETWORKS ORGANIZED ACCORDING TO POLICY FIELDS

Biosecurity/Health Governance

APEC HWG: Asia-Pacific Economic Cooperation Health Working Group

BRICS HN: BRICS Health Network

EUCERD: European Union Committee of Experts on rare diseases

FPGHI: Foreign Policy and Global Health Initiative

FSQG: Food Safety Quadrilateral Group (integrated by Australia, Canada, the UK, the US and New Zealand).

GHSAG: Global Health Security Action Group

GHSI: Global Health Security Initiative

G5 HS: G5 Health Summit

G7: Group of Seven

G8: Group of Eight

NACOBPI: North America Coordinating Body for Avian and Human Pandemic Influenza

PIC/S: The Pharmaceutical Inspection Cooperation Scheme

Terrorism

APEC CTTF: Asia Pacific Economic Cooperation Counter Terrorism Task Force

L/R Group: Lyon/Roma Group

CTAG: Counter Terrorism Action Group

GHSI: Global Health Security Initiative

GICNT: Global Initiative to Combat Nuclear Terrorism

Non-proliferation

GPWMD: Global Partnership against the spread of Weapons of Mass Destruction

NSSG: Nuclear Safety and Security Group

HLGNP: High Level Group on Non-proliferation

NPEG: Non-proliferation Experts Group

MTCR: Missile Technology Control Regime

PSI: Proliferation Security Initiative

AG: Australia Group

NSG: Nuclear Suppliers Group

CTR/MPC&A: Cooperative Threat Reduction program and Materials Protection Control and Accounting program

Finance

FATF: Financial Action Task Force

BCBS: Basle Committee on Bank Supervision

EG: Euro Group

FSF: Financial Stability Forum

G8: Group of Eight

G5: Group of Five

G20: Group of twenty

PUMA: Public Management Service of the Organization for Economic Co-operation and Development

SNBFC: Six Nations Benefit Fraud Conference (integrated by Australia, Canada, Ireland, the UK, the US and New Zealand).

T-T.C: Tri-Treasury Conference (integrated by Australia, Canada, the UK and the US).

Trade and economics

G8: Group of Eight

G5: Group of Five

G20: Group of twenty

ICPEN: The International Consumer Protection and Enforcement Network

ILAC: The International Laboratory Accreditation Cooperation

Organized Crime

L/R Group: Lyon/Roma Group

TCP: The Technical Cooperation Program (integrated by Australia, New Zealand, Canada, the UK and the US).

Environment

EEN: Environmental Enforcement Network

INECE: International Network for Environmental Compliance and Enforcement

G5: Group of Five

G8: Group of Eight

SAICM: The Strategic Approach to International Chemicals Management

UCPM: Union Civil Protection Mechanism

OTHER ACRONYMS

ABC: Brazilian Agency of Cooperation

A (H1N1): Influenza A virus subtype H1N1 (New flu)

A (H5N1): Influenza A virus subtype H5N1 (Bird flu)

ACTO: Amazon Cooperation Treaty Organization.

CDC: Center for disease Control and Prevention

CoG: Chief of Government

COVID-19: Coronavirus disease 2019

CPLP: Community of Portuguese Language Countries

ECOFIN: Economic and Financial Affairs Council of the European Union

E. Coli O104:H4: Escherichia Coli O104:H4
EVD: Ebola Virus Disease
FIOCRUZ: Oswaldo Cruz Foundation.
GATT: General Agreement on Tariffs and Trade
IGO: Intergovernmental Organization
IHR: International Health Regulations
ISAGS: South American Institute of Government in Health
MERS: Middle East Respiratory Syndrome
MSF: *Médecins sans Frontières* (a.k.a. Doctors Without Borders)
NAFTA: North American Free Trade Agreement
NAPAPI: North American Plan for Avian and Pandemic Influenza
OAS: Organization of American States
ORAS CONHU: Andean Health Organization Hipólito Unanue Agreement.
OECD: Organization for Economic Co-operation and Development
PAHO: Pan American Health Organization
PHEIC: Public Health Emergency of International Concern
SARS: Severe Acute Respiratory Syndrome
SARS-CoV-2: Severe Acute Respiratory Syndrome Coronavirus 2 (novel coronavirus)
SPP: Security and Prosperity Partnership of North America
UN: United Nations
UNASUR: Union of South American Nations
WHA: World Health Assembly
WHO: World Health Organization
WTO: World Trade Organization

INTRODUCTION

BACKGROUND AND RESEARCH QUESTION

Networks are proliferating fast in a variety of issue-areas and their effects are shaping global governance. This applies as well for the biosecurity issue-area where transgovernmental networks (TGNs) are contributing to global health governance. TGNs are however not the only nor the most important actors operating in the biosecurity field. As I argue in Chapter 1, states deliberately choose between different institutional arrangements, because they regard one of them as more convenient for dealing with new conditions (e.g. Uncertainty about the state of the world) or new problems (e.g. dealing with a new strain of a virus or with biological terrorism). In the case of the biosecurity domain, the choice is restricted to two institutional arrangements: TGNs such as the BRICS Health Network or multilateral treaties linked to intergovernmental organizations (IGOs) such as the World Health Organization (WHO). I argue that under certain conditions (e.g. when speed is a priority or the interest and values of members are homogenous) States will consciously join or create TGNs because they regard them as more effective than IGOs for dealing with biosecurity threats or for influencing international outcomes (e.g. modifying other institutions such as the International Health Regulations).

Borrowing the definition from Fidler and Gostin (2008, 4–5), I define *biosecurity* as a society's collective responsibility to safeguard the population from dangers presented by pathogenic microbes, whether intentionally released as in the case of biological weapons or biological terrorist attacks (e.g. 2001 Anthrax mail attacks in the U.S.) or naturally occurring, as with infectious diseases such as influenza, Ebola, or Covid-19. Building upon this definition, this study asks, under what conditions can we expect States to select a TGN instead of an IGO to safeguard effectively the population from the dangers presented by pathogenic microbes irrespective of its source?

The new International Health Regulations (hereinafter IHR 2005) define these two sorts of dangers in a broad and ambiguous way, however the scope of regulation is fundamentally the same as in previous definition (Fidler 2005, 365; Nuzzo & Gronvall 2011,

4; Review Committee on the Functioning of the IHR (2005) 2011, 31)¹. As explained in the IHR 2005, a “public health emergency of international concern” (PHEIC) refers to an extraordinary event, including those of unknown causes or sources, which constitutes a public health risk to other states through the international spread of disease, and which requires a coordinated international response (WHA 2005, 9, 43). Hence, I equate the PHEICs with the threats posed by pathogenic microbes regardless of their source as described above.

RELEVANCE FOR RESEARCH AND POLICY.

This research project fulfils the two criteria, which according to King, Keohane & Verba should be satisfied by all research projects in the social sciences. First, it poses a question that is important in “the real world”. Second, it “makes a specific contribution to the existing social science literature by increasing our collective ability to construct verified scientific explanations of some aspect of the world” (1994, 15). Regarding the former, there are two reasons why this question is relevant: first, neither scholars nor state leaders know which institutional design will solve a particular problem (Koremenos, Lipson & Snidal 2001, 1082); second, we do not know the conditions under which TGNs are most likely to arise and be effective (Krahmann 2005, 7; Rathbun 2011, 252–5; Eilstrup-Sangiovanni Forthcoming, 4). This shows that we have not properly answered why states sometimes choose formal means as opposed to informal means for their international agreements (Lipson 1991, 498).

As for the second criteria that should be addressed by all research projects in the social sciences (King, Keohane & Verba 1994, 16–17), the study makes a specific contribution to

¹ One of the key issues debated during the negotiations of the IHR 2005 related to the convenience of explicitly mentioning biosecurity threats. The question then discussed was “Should the Regulations explicitly include chemical and radiological events and events involving deliberate and accidental release?” (Review Committee on the Functioning of the IHR (2005) 2011, 31). Nuzzo and Gronvall point out that during these negotiations there was a deadlock because various countries objected the inclusion in the text of any precise reference to a deliberate release of a toxic or infectious agent. The negotiations continued once such references were dropped. Additionally, it was agreed that deliberate biological events would be implicitly incorporated through a broad definition of ‘disease’ without referring to its source (2011, 4). Nonetheless, countries agreed to incorporate biological attacks in the decision instrument of the new IHR (2005) for the assessment and notification of events that may constitute a public health emergency of international concern (PHEIC). See: http://apps.who.int/gb/ghs/pdf/IHR_IGWG2_ID4-en.pdf. For a detailed explanation of the IHR revision process, the changes contained in the (2005) IHR and its impact on global health security see: David P. Fidler, “From International Sanitary Conventions to Global Health Security: The New International Health Regulations”. *Chinese Journal of International Law* (2005), Vol. 4, No. 2, 325-392.

the literature on transgovernmental networks, legalization and rational institutional design by intertwining and applying some of their theories and hypotheses to the biosecurity issue-area. With this in mind, I address one concern of Hemmer and Katzenstein, who considered that the rationalist central claim, i.e. that institutions arise when states foresee self-interested benefits from working together, remains in need of further testing and refinement (2002, 576). Simultaneously, I address Parsons' (2007) critique concerning "rationalist theorists who trumpet their explicitness but are less explicit than most others about what causes what" (4). I also echo the words of Duffield (2003) who criticized the Rational Design project led by Koremenos (2001) by not selecting an empirical case related to health². Finally, I agree with Keohane (2001) when stating, "we are obliged to try to explain how effective institutions that serve human interests can be designed and maintained" (1). Consequently, in this study, my aim is to explain the conditions under which TGNs arise and are more apt than IGOs for dealing with biosecurity threats.

If the rationalist-inspired hypotheses provide sufficient evidence in support of my argument, this will show that we can apply them to the literature on global health governance. Among others, this may prove to be helpful for both scholars and government officials seeking to design more effective institutional arrangements in a rapidly changing and poorly understood domain (Bow & Zaiotti 2020; Shyrokykh *et al* 2019; Ravi *et al* 2019; Hoffman & Silverberg 2018; Gostin 2015; Fineberg 2014; Fidler & Gostin 2008, 2; Avery 2010, 3; Kickbusch, Hein & Silberschmidt 2010, 2; Nuzzo & Gronvall 2011, 1)

As for the "real world" relevance, the research question helps us to compare and better understand two different kinds of international organizations dealing with biosecurity threats (i.e. TGNs & IGOs). Understanding these organizations is important because biosecurity threats can have significant impacts on political, social and economic life. Evidence of this were the Anthrax mail attacks against the U.S. in 2001, the fallout from SARS in 2003, the 2009 A(H1N1) influenza pandemic, the Ebola Virus Disease (EVD) epidemic in West Africa (2014-2016) or the Zika virus outbreak in the western hemisphere (2016). More recently, the WHO declared that under the IHR (2005) the Ebola Virus outbreak in the Democratic

² I'm addressing the critique by Duffield because I partially based my theoretical framework in the variables and conjectures suggested by Koremenos and her colleagues.

Republic of Congo (DRC) and the new Coronavirus (Covid-19) in Wuhan, China constituted a PHEIC. Hence, to avoid the failures of the 2009 influenza pandemic the Emergency Committee for EVD in the DRC called on the international community to not closing borders or placing any restrictions on travel or trade³.

In this respect, the 2009 influenza pandemic and the Ebola outbreak in Western Africa revealed several institutional shortcomings/challenges (Ravi *et al* 2019; Hoffman & Silverberg 2018; Grépin, 2015; Gostin 2015; Bastug & Bodur 2015; Dallatomasina *et al* 2015; Obina *et al* 2015; Fineberg 2014; Heymann 2015; Vetter *et al* 2016; Mac Neil 2012; Enserink & Cohen 2009). Concerning the former, the Review Committee on the functioning of the new IHR, identified the IHR 2005 as insufficient, citing:⁴“vulnerabilities in global, national and local public-health capacities, limitations of scientific knowledge, difficulties in decision-making under conditions of uncertainty, complexities in international cooperation and challenges in communication among experts, policy-makers and the public” (Review Committee on the Functioning of the IHR (2005) 2011, 6).

As for the Ebola epidemic, the independent panel of experts convened by the WHO and whose assessment was conceived as a learning exercise concluded that the Ebola crisis exposed not only organizational failings in the functioning of the WHO, but also demonstrated shortcomings in the application of the IHR (2005). The panel even noted that “independent and courageous decision making by the Director General Margaret Chan and the WHO Secretariat was absent in the early months of the Ebola crises”. What is more, the panel went beyond and asserted that the “Ebola outbreak might have looked very different had the 2011 recommendations of the Review Committee on the functioning of the IHR

³ See WHO “Statement on the meeting of the International Health Regulations (2005) Emergency Committee for Ebola Virus Disease in the Democratic Republic of the Congo on 17 July 2019”.
<https://www.who.int/ihr/procedures/statement-emergency-committee-ebola-drc-july-2019.pdf>

⁴ In May 1995, the World Health Assembly (WHA) requested the Director-General of the World Health Organization (WHO) to start a major review of the 1969 International Health Regulations. Negotiations lasted exactly ten years, and worldwide implementation was finally reached in June 2007. The IHR (2005) have two main functions: first, “to establish a regime for routine public-health protection and provide for the ongoing management of disease threats both within countries and at their borders”; second, “to provide a framework for coordinated and proportionate responses to significant and urgent disease threats, ranging from national public-health events to events of regional or global public-health significance”. (Review Committee on the Functioning of the IHR (2005) 2011, 30–31).

(2005) in relation to the pandemic been fully implemented (Report of the Ebola Interim Assessment Panel, 2015).

OUTLINE OF THE DISSERTATION.

The structure of the study is as follows; to frame the research question I start by describing the two network approaches that scholars have thus far applied to international politics. First, I concentrate on the actor-centred approach because of its relevance for analysing transgovernmental networks (TGNs). Then, to better comprehend these particular networks, I characterize TGNs as a whole. To identify the research gap, I examine some of the most representative positions concerning the role and the features of TGNs and Intergovernmental Organizations⁵ (IGOs) in dealing with biosecurity threats and thus contributing to or hampering Global Health Governance.

In chapter 2, based on the insights from rational choice, network theories and legalization, I construct the theoretical framework that enabled me to determine the conditions under which TGNs can be more effective. As I first step, I identify the independent and dependent variables. The independent variables are the factors affecting international cooperation. We can group them as problems (distributional or enforcement-related), uncertainty (about behaviour, the state of the world and others' preferences), and others, such as the number of actors and the asymmetries among them (including differences in capabilities). The dependent variable is the institutional form resulting from the combination of previous factors, i.e. either a TGN or an IGO linked to an international treaty. After identifying the variables, I explain the conditions under which governments are more likely to select a TGN. We can categorize these conditions into two groups according to the cause influencing outcomes: external (e.g. distributional problems, uncertainty) or domestic (i.e. coalition building, high sovereignty costs & domestic opposition). Finally, I explain two rival hypotheses related to norms, identities and generalized trust that I derived from the constructivist camp.

⁵ I used the terms “institution”, “organization” and “institutional arrangement” interchangeably.

In Chapter 3, I explain and justify the research design and the strategy I used to collect and analyse the data. The strategy consisted in a mixture of methods, case study, elite interviews, online questionnaire, descriptive statistics and qualitative content analysis. I start by identifying the challenges in conducting empirical research on biosecurity. Derived of these challenges, I justify the election of the case study as the most apt method for conducting research in this area. Then, I define this method and based on the insights of George and Bennett (2004), I lay down two of its advantages for inductively deriving new hypotheses and examining in detail the operation of causal mechanisms. Finally, I explain how I selected the nine cases (i.e. four IGOs and five TGNs⁶), designed the questionnaire, recruited the subjects and collected the data.

In Chapter 4, I present through descriptive statistics and qualitative content analysis the research findings. In light of the questionnaire questions, I start by analysing the results of both the elite interviews and the online survey. I followed the questionnaire order to structure the analysis and as way of answering the main research question (i.e. when are TGNs more effective than IGOs for dealing with biosecurity threats). Prior to analysing the conditions under which TGNs arise, I reflect on the data collection and the characteristics of respondents (e.g. nationality, position, etc.). This is important for validating the methods I chose and for establishing the scope and limitations of the findings. After that, I present and discuss the respondents' perceptions concerning the strengths and weaknesses of the TGNs and IGOs I selected. Later, I analyse the respondents' assessments concerning effectiveness, influence and capabilities of both institutional arrangements. The identification of institutional strengths and weaknesses and the analysis of these assessments are important for understanding the factors that policy makers deem important when creating or modifying international organizations. Finally, based on respondents' perceptions and assessments, I suggest the conditions under which we can expect TGNs to be more effective than IGOs.

⁶ The four IGOs I analyzed and compared against each other and against the TGNs are the World Health Organization (WHO), the Pan-American Health Organization (PAHO), the Community of Portuguese Language Countries (CPLP) and the South American Institute of Government in Health of the Union of South American Nations (ISAGS-UNASUR). On the other hand, the TGNs I analyzed are the Global Health Security Initiative (GHSI), The North American Coordinating Body for Pandemic Influenza (NACOBPI), the Health Working Group of the Asia Pacific Economic Cooperation (APEC-HWG), the BRICS Health Network and the Foreign Policy and Global Health Initiative (FPGHI).

In Chapter 5, I bring together the evidence presented in previous chapter and link it to the seven conditions/hypotheses of my theoretical framework and to the two rival hypotheses derived from Constructivism. In other words, I discuss the key findings of Chapter 4 in light of rational choice, network theories and the concept of legalization. I start by reflecting on strategies to link theory with evidence in Political Science. Then, I apply some of these strategies to connect the evidence related to each of the conditions proposed in Chapter 2 to the arguments of representative scholars, including constructivists. This enables me to support or refute some of their main arguments.

In the conclusions, I summarize the main findings of the study and discuss academic and policy implications. Finally, I offer an outlook for further research by suggesting five ways in which we can expand this investigation while mitigating some of its limitations.

CHAPTER ONE: LOCATING THE PROBLEM.

1.1. APPROACHES TO THE STUDY OF NETWORKS

Thus far, IR scholars have applied two approaches to network-analysis: *networks-as-structures* and *networks-as-actors*. According to Miles Kahler, the first “takes networks as structures that influence the behaviour of their members, and, through them, produce consequential network effects” (Kahler 2009a, 4). This approach comprises a broad definition of networks, focusing on their structural attributes and assessing the effects of network structure. On the other hand, the network-as-actor approach differentiates between networks and other forms of organization such as markets or hierarchies. According to this approach, networks are usually forms of consciously coordinated action whose goal is to change international outcomes and national policies. As opposed to the networks-as-structure approach, the membership boundaries in the networks-as-actors approach are clear and not determined by simple interaction over time. Furthermore, in contrast to the structural approach, the network-as-actor perspective incorporates links. Agents create these links and define them by exchange. The agents or nodes⁷ of these networked actors may be government agencies (TGNs, such as the ones analysed here), human rights activists, terrorist organizations, drug cartels, or other international actors (Kahler 2009a, 6).

In the network-as-actors approach, estimating the power of networks as international actors undermines standard views of capabilities. Policy networks (e.g. TGNs) succeed as actors if they can promote and sustain collective action on the part of their constituent agents. This success is usually dependent on two features of networked organizations: scalability and adaptability. Scalability occurs when TGNs are able to grow rapidly at relatively low cost without altering the fundamental form of the organization. Equally important is the ability to exclude troublesome prospective members who might otherwise force their way into an IGO. Likewise, the relatively “loose coupling” that characterizes TGNs also enables members of these networks to opt out in particular instances without endangering the larger collaborative endeavour. Adaptability of organizational form over the life cycle of a network is another

⁷ I use Agents, nodes, members and actors interchangeably.

key dimension of successful collective action. It occurs when networked organizations are able to incorporate elements of hierarchy and centralization into their networked structure. They can become more or less “networked” as political demands shift or their environments change. Thus, scalability and organizational adaptation over time result in more effective collective action by networks in specific environments (Kahler 2009a, 14–16).

Thus, from the network-as-actors perspective, a *network* is “any collection of actors greater or equal to two ($N \geq 2$) that pursue repeated, enduring exchange relations with one another and, at the same time, lack a legitimate organizational authority to arbitrate and resolve disputes that may arise during the exchange”. In other words, unlike markets, network relations are enduring, and in contrast to hierarchies, recognized authority to settle disputes does not reside with any member of the network (Podolny 1998, 59).

Contrary to the networks-as-actors approach, we could locate “policy networks” in the network-as-structure approach at a point along a continuum beyond or between “policy markets” and “policy hierarchies”. According to Kenis and Schneider, legislation could be an example of a “policy market”, because it could be regarded as a “good” which can be supplied by the government or parliament to groups that compete among themselves to obtain the favourable legislation. In other words, legislation would be “sold” by the legislature and “bought” by the beneficiaries. Payment would be represented by votes, campaign contributions, etc.

At the other extreme of this continuum, we find “policy hierarchies” as ideal types of bureaucratic policymaking. These kinds of hierarchies have chains of principal-agent relationships such as the electoral hierarchy from the electors to the parliament and the executive. Likewise, we could find these kinds of relationships within the chain of the parliament, i.e. policies formulated within the parliament and implemented by the executive. Therefore, from this perspective, a “policy network” is a specific structural arrangement in policy making which reflects a changed relationship between state and society, or as a “hybrid structure of political governance”. These ‘policy networks’ are mechanisms of political resource mobilization, which comprise a relatively stable set of mostly private and public actors. The ‘policy network’ is thus defined by its actors, their linkages - which serve as communication channels for the exchange of information, expertise, trust, etc. - and by its

boundary - which arises from a process of mutual recognition contingent on functional relevance and structural embeddedness - (Kennis & Schneider 1991, 40–42).

Unlike the networks-as-structure approach, which heavily relies on Social Network Analysis (SNA) for conducting empirical research, the network-as-actors' perspective lacks a common methodology. Its empirical methods have been diverse and predominantly qualitative. In that respect, the first step when applying the network-as-actors approach is to identify the network as a network and the second is to assess its organizational advantages and disadvantages in promoting collective goals (Kahler 2009a, 6).

Since my aim here is to analyze transgovernmental networks with clearly stipulated boundaries, members and goals, I will use the network-as-actors approach provided by Kahler, and consequently will employ qualitative methods for collecting and analysing the data (See Chapter 3). Moreover, due to its compatibility with this approach, I will adopt Podolny's definition of networks. Hence, I regard TGNs in the biosecurity domain as networks of consciously coordinated action, which are composed of at least two members, lack a legitimate authority to resolve and arbitrate coordination problems, and seek to change international outcomes and national policies.

1.2. STATE OF THE ART

1.2.1. TRANSGOVERNMENTAL NETWORKS

TGNs are proliferating fast, but as stated earlier, they are not new (Bow & Zaiotti, 2020; Shyrokykh *et al.* 2019; Calcara 2017; Alcañiz 2016; Craik, & VanNijnatten, 2015; Freyburg, 2015; Legrand, 2015; Bach & Newman 2010; Hollis, 2010; Lipson, 2006; Slaughter 2004b, 159; Raustiala 2002, 4; Zaring 1998, 282). Specialized international organizations such as the International Postal Union (1874) and the WHO (1945) have long brought together sub-state officials (Eilstrup-Sangiovanni 2009, 194). Scholars too have long analyzed this phenomenon. As early as 1974, Keohane and Nye defined *transgovernmental relations* as sets of direct interactions between sub-units of different governments that are not controlled or closely guided by the policies of the cabinets or chief executives of those governments (CoGs) (Keohane & Nye 1974, 43). As Eberlein and Newman (2008), I build on this definition, and in so doing I restrict myself to interactions among substate public officials, thus leaving apart the definitions of policy networks which consider the interactions of public and private actors (Börzel 1998; van Waarden 1992).

According to Raustiala foreign ministries and CoGs can and do step in when issues become “hot”, or when for political reasons, low-level networking needs to be brought to the fore and “packed” for political consumption, however much of the cooperative activity is left to substantive agencies which have ample room for operating (2002, 24). For Slaughter this kind of interaction reveals how the State disaggregates into its separate, functionally distinct organs. She argues that these organs, including courts and even legislatures, are constructing a dense web of relations that constitutes a new transgovernmental order which is quickly becoming the most widespread and effective mode of international governance (Slaughter 1997, 184).

In their influential work, Keohane and Nye distinguished between two kinds of cooperative transgovernmental behaviour: transgovernmental policy coordination and transgovernmental coalition building. The first refers to activities designed to facilitate smooth implementation or adjustment of policy, whereas the second occurs when sub-units of a government ally with like-minded agencies from other governments against officials of their own administrative structures (Keohane & Nye 1974, 44).

Intergovernmental cooperation, in contrast, refers to diplomatic relations between unitary states headed by chiefs of government or foreign affairs ministries and concluded in multilateral treaties, which are frequently linked with international organizations. Therefore, the main differences between Transgovernmental networks and Intergovernmental organizations relate to membership (conception and representation of the state), structure (degree of centralization and level of hierarchy) and degree of formality (legalization, obligation and irreversibility) (Eilstrup-Sangiovanni 2009, 197–9). See Table 1.

Table 1. Main features of TGNs and IGOs.

Variable	TGNs	IGOs
1. Membership	Substate agencies / Officials	Unitary states
2. Structure	Decentralized / Flat	Centralized / Hierarchical
3. Political visibility	Low	High
4. Legalization	Low	High
5. Obligation	Low	High
6. Irreversibility	Low	High
7. Unit relations	Trust-based	Rule-based
8. Scope	Narrow	Broad
9. Decision-mode	Consensus only	Consensus or Qualified Majority Vote
10. Support for implementation / compliance	Low (self-enforced policies / voluntary compliance)	High

Source: Eilstrup-Sangiovanni 2009, 201.

1.2.2. TYPOLOGIES OF TGNs

Depending on the different contexts where TGNs arise and operate, Slaughter identifies three different types and two subtypes of transnational regulatory networks. The first type relates to networks of national regulators that emerge within the context of an established IGO (e.g. the PUMA of the OECD, see table 2). Second are those networks of national regulators that develop within the framework of an executive agreement (e.g. the G20, G5, etc). Third, “spontaneous” government networks integrate national regulators who voluntarily come

together to deal with common problems (e.g. the Basle Committee [BCBS] or the Eurogroup)⁸.

The first subtype of “spontaneous” networks are those networks that institutionalize themselves as transgovernmental regulatory organizations. The members of these TGNs are domestic agencies or even sub-national agencies such as provincial regulators. They usually operate with a minimum of physical and legal infrastructure, and most of them lack a foundational treaty. Their agreements are not legally binding, and there are usually no enforcement or implementation mechanisms. Finally, the second subtype of “spontaneous” TGNs comprises agreements between domestic regulatory agencies of two or more states which may evolve into multilateral arrangements. These agreements contain principles that can be implemented by the regulator themselves without getting previous consent from national legislators. The three types of TGNs are interconnected in various ways. Sometimes they are hard to disentangle from the more hierarchical IGOs (e.g. the so-called Eurogroup is enmeshed with the E.U. Economic and Financial Affairs Council). In other occasions, TGNs compete directly with current or envisioned IGOs (Slaughter 2003, 1048–1053).

Since I seek to determine when they are the best option to deal with a certain kind of problem, it is important to differentiate the conditions under which they arise. Therefore, in this study I will compare three biosecurity TGNs of the second type, that is, institutional arrangements agreed by chiefs of government against one TGN of the third type, i.e. a “spontaneous” TGN and one TGN of the first type, i.e. a network that emerged within an established IGO. The second type networks are the North American Coordinating Body for Avian and Human Pandemic Influenza (NACOBPI), the BRICS Health Network and the Foreign Policy and Global Health Initiative (FPGHI), whereas the Global Health Security Initiative (GHSI) integrated by the G7 and Mexico represents a spontaneous network of the first subtype. On the other hand, the APEC Health Working Group represents the latter, i.e. a network that emerged within an established IGO, which is the Asia Pacific Economic Forum⁹.

⁸ Kahler does not distinguish between TGNs of the second and the third type; rather he divides networks into two categories: networks that emerge from state membership in IGOs and TGNs in general (2009a, 17).

⁹ See other intergovernmental organizations: <https://www.un.org/Depts/los/Links/IGO-links.htm>

What then is new about transgovernmental networks? According to Eilstrup Sangiovanni, the new aspects seem to be scale, scope and the strength of their ties (2009, 195). TGNs are rapidly increasing in all areas including finance, intelligence sharing activities, immigration, global environment, agriculture and security (see table 2) (Bow & Zaiotti 2020; Alcañiz, 2016; Akleson and Yosef, 2014; Legrand, 2015; Cross, 2013; Christiansen & Neuhold, 2013; Börzel, 2010; Slaughter 2004b; Raustiala 2002; Zaring 1998; Bermann 2000; Kahler 2009b; Hoffman 2010). In the latter case, there has been a rapid increase in expert groups and task forces among the G7/G8, which have focused on nonproliferation, nuclear safety, biosecurity and counterterrorism such as the GHSI¹⁰.

Table 2: Examples of TGNs by policy field.

Policy field								
Actors	Biosecurity /food safety	Terrorism	Non-proliferation	Finance	Organized Crime	Environment	Economics and trade	Intelligence sharing activities
G8		CTAG	HLGNP NPEG					
EU	EUCERD	Berne Group		Eurogroup		UCPM		Berne Group, Budapest Club, Eurosint Forum, Intcen
North America	NACOBPI				Merida Initiative	EEN		SPP, Merida Initiative
G7/G7+	GHSI	GHSI Lyon/Roma Group	GPWMD		Lyon/Roma Group			
APEC	APEC HWG	APEC CTTF		*		*	*	
OECD				PUMA FATF- GAFI		*		
G5/BRICS	BRICS Health Network			*		*	*	
G20	*	*		*		*	*	
Anglo sphere ¹¹	FSQG			Tri- Treasury Conference			Vancouver Group, SNBFC	TCP (The Five Eyes)
Others	FPGHI PIC/S	GICNT	MTCR,PSI, AG, NSG, CTR/ MPC&A	FSF BCBS		INECE SAICM	ICPEN ILAC	

Source: Own elaboration.

Note: The table is not exhaustive. For the meaning of the acronyms, see the list of abbreviations.

¹⁰ Other examples include the Lyon/Rome Group on Terrorism and Organized Crime, the Counter-Terrorism Expert Group, the G8 Non-proliferation Experts Group, the Nuclear Safety and Security Group, the G8 Global Partnership against the spread of WMDs and the Global Initiative to Combat Nuclear Terrorism (GICNT).

¹¹ In his analysis of TGNs in the *Anglosphere*, Legrand (2015) groups under that concept following English-speaking countries: The United States, Canada, the United Kingdom, Australia, New Zealand and Ireland.

TGNs range from highly institutionalized organizations such as the BCBS, the annual G7 or BRICS summits of leaders to more informal, undemocratic and even secretive clubs/initiatives (Eilstrup-Sangiovanni 2009, 198, 211) such as the Eurogroup (Puetter 2006), the Lyon/Roma Club (Scherrer 2009), the GHSI (Kickbusch, Hein & Silberschmidt 2010, 11) or the Merida Initiative (Bow & Zaiotti, 2020)¹². Owing to their flexibility, speed and low sovereignty costs, some scholars anticipate that TGNs will be the preferred channel for international cooperation by performing many global governance functions (legislation, administration, and adjudication) but without necessitating a more formalized structure (Slaughter 1997; Raustiala 2002; Slaughter 2004b; Slaughter 2004a; Krahmann 2005; Kahler 2009b; Lipson 2006; Shyrokykh *et al*, 2019; Börzel, 2010). The biosecurity realm is by no means an exception (Youde, 2018; Harmer & Buse, 2014; Kirton *et al*, 2014; Harmer *et al*, 2013; Gagnon & Labonté, 2013; Watt, Gómez & McKee, 2013; Kirton & Mannell 2007; Fidler & Gostin 2008; Hoffman 2010; Hein *et al*, 2009). In the next section, I examine some of the most representative positions concerning the role of TGNs and the WHO in dealing with biosecurity threats. I concentrate on the institutional design and the effectiveness of these organizations.

1.2.3. GLOBAL HEALTH GOVERNANCE (GHG) AND TGNs

After every major PHEIC, experts voice their concerns and suggest a series of changes to correct what went wrong (Phelan, Katz, Gostin, 2020; Peeri *et al* 2020; Hoffman & Silverberg 2018). However, disagreement persist among scholars on how to reform the global health governance architecture and whom to appoint as global coordinator. For instance, Ravi, Snyder & Rivers (2019) assessed the programs, initiatives and institutions established in the aftermath of the 2014-16 EVD epidemic and concluded that despite advances in public health preparedness and response, there are still critical gaps in global detection capabilities, programmatic financing and lack of transparency. They also detected that high-income and Western countries financed the majority of the initiatives they identified in their review with the exception of Africa CDC, WHO Global Emergency Workforce and the WHO R&D Blueprint. Furthermore, they found that although many lessons-learned reports and papers

¹² For other examples of TGNs see: <https://www.oecd.org/gov/regulatory-policy/irc7.htm>

indicated a need, actors working on GHG launched few new programs. That is particularly the case of the programs focused on the detection phase, the main exception being the REDISSE initiative launched by the WB. This is not a minor issue taking into account the difficulty for detecting and diagnosing the EVD in the initial months of the outbreak (Ravi et al, 2019). A parallel finding of their research is the multiplicity of actors founding the new initiatives and hence contributing to GHG. Actors include national governments (e.g. Germany, Australia, etc.) and IGOs (e.g. the WHO, the WB, UNICEF, etc.), but also supranational organizations (e.g. the African Union or the European Union), NGOs (e.g. Gates Foundation) and research centres (e.g. Harvard, Institute Pasteur, etc.) (Ravi et al, 2019). This shows that the GHG landscape looks increasingly complex, which raises questions concerning how to modify institutions and who should coordinate global response in the face of a PHEIC.

Since the IHR 2005 does not entitle the WHO with special powers or financing in the event of a PHEIC, Phelan, Katz & Gostin, (2020) suggest reforming the regulations “to give traction to an emergency declaration” (2). Despite the WHO budgetary restrictions, they deem its faculty for declaring a PHEIC as “a powerful signal to the international community for launching a surge public health response, galvanizing political action and mobilizing funding” (2). Moreover, “when declaring a PHEIC, the director-general can make influential, albeit legally nonbinding, recommendations” (2). Thus, the authors consider that declaring a PHEIC would be a critical opportunity for the WHO to take the lead by setting norms, devising a global strategy, and upholding principles articulated by the membership in the IHR.

Authors such as Kirton and Mannell, claim that “the old WHO has proven inadequate in addressing the major health challenges and crises of a rapidly globalizing, post-Cold War, post 9/11 world”. They posit that the WHO failure is evidenced by the rapid spread of HIV/AIDS, the re-emergence of old diseases, the eruption of bioterrorism, the assault from severe acute respiratory syndrome (SARS) and the threat of an avian influenza pandemic (Kirton & Mannell 2007, 115–17). According to Fidler, these factors, amplified by accelerating processes of globalization, prompted the revision of the International Health Regulations (hereinafter IHR) in 1995. It became evident that new international policy and

legal frameworks were required to provide more robust and sustained public health responses from the local to the global level (Fidler 2005, 342).

In this regard, various scholars argue that the G8 has thus far addressed some of those issues, and by doing this, it is either contributing to global health governance or emerging as the potential “global health governor” or as the “global health governor of last resort” (Cooper, Kirton & Schrecker 2007; Price-Smith 2001; Price-Smith 2002; Bayne 2000; Hajnal 2002).

Nonetheless, most of the scholars who have regarded the G8 as an emerging centre of global health governance and thus as a WHO’ substitute have focused on issues related to the effectiveness of their initiatives or on the group’s compliance with its commitments (Hodges 1999; Hillmer 2002; Fratianni 2007; Bayne 2000; Kirton 2001; Kirton & Kokotsis 2005; Kirton & Mannell 2007). Few however, have dealt with the institutional design or the normative dimensions of the emerging global health security architecture (Aginam 2007; Schrecker, Labonte & Sanders 2007; Labonte 2007; Ollila 2005; Kickbusch, Hein & Silberschmidt 2010). Kickbusch *et al.* for example argue that the global health network requires a “superstructural node” which could coordinate all the representatives of the different health- related organizations. They regard the WHO as the only actor who could legitimately occupy that position and propose accordingly strengthening the World Health Assembly by creating a “C Committee”. Despite recognizing the importance of “club models” such as the G8 or eventually the G20, these authors disqualify them as legitimate alternatives for governing global health (Kickbusch, Hein & Silberschmidt 2010, 12).

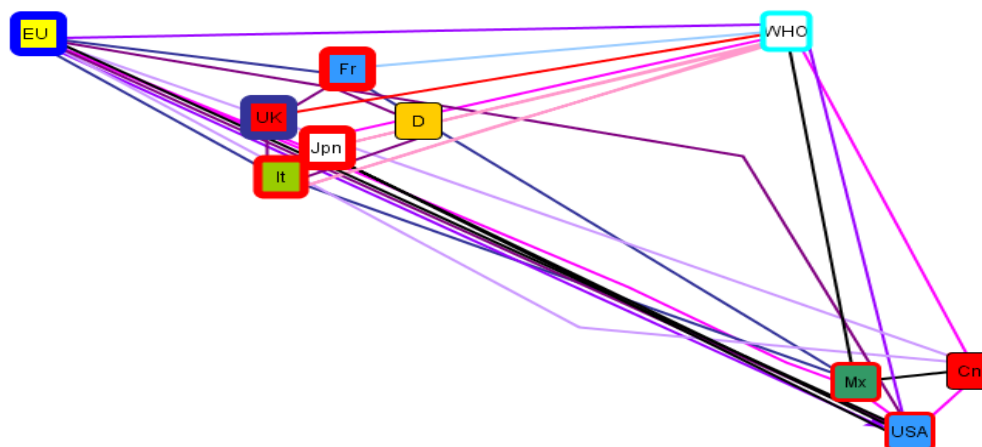
In contrast, scholars such as Hoffman (2010), Fidler and Gostin (2008) posit that “the WHO lacks the authority and resources commensurate with its vast responsibilities” and that “it is unable to coordinate all global communicable disease control activities”. Furthermore, they describe it as “bureaucratic”, “complex” and “outdated”. Although some authors acknowledge certain improvements brought by the new IHR, such as an expansion of its scope—regarding the number of diseases and the variety of events subject to regulation—they also identify several shortcomings. Among them, they underline the lack of enforcement and verification mechanisms, the weak implementation measures, and the failure to specify how

members are in fact supposed to coordinate their strategies (Hoffman 2010, 514; Nuzzo & Gronvall 2011, 4).

Based on this, Hoffman for instance argues, “the existing global health security architecture is in transition and that the elements may be in place for a new global health security power to emerge” (2010, 514). Cooper, Fidler and others claim that a group of powerful actors such as the G8, the GHSI (see network 1) or the G20 could provide new solutions for governing global health security, and may have the capacity to assume leadership in this area through ‘networked governance’ (Cooper, Kirton & Schrecker 2007; Fidler & Gostin 2008; Hoffman 2010; Chand et al. 2010) .

Kahler defines *networked governance* in a three folded way: a) Governance through networks that emerge from state membership in IGOs; b) Governance by TGNs, and c) Governance that includes private actors and NGO networks in particular issue areas (Kahler 2009a, 17). In this study, I will concentrate on the second kind of networked governance, i.e. governance by TGNs to keep up with Keohane and Nye’s (1974) arguments concerning transgovernmentalism. Network 1 illustrates this kind of networked governance and shows the links between different nodes represented by state actors (i.e. France [Fr], United Kingdom [UK], Germany [D], Japan, [Jpn], Italy [It], Mexico [Mx], Canada [Cn] and the United States of America [USA]. Although the World Health Organization (WHO) and the European Union (EU) are also members of the GHSI, they serve as observers and technical advisors.

Network 1 Members of the GHSI.



Source: Own elaboration with Visone software.

Governance by TGNs (as the one displayed in Network 1) or what Hoffman calls a “concert of powers” could be more effective than the WHO in making the necessarily difficult decisions and coercing others into following them (2010, 518). In a similar vein, Fidler and Gostin argue that an effective biosecurity policy needs to involve globalized forms of governance. They define *biosecurity* as a society’s collective responsibility to safeguard the population from dangers presented by pathogenic microbes, whether intentionally released as in the case of biological weapons or biological terrorist attacks or naturally occurring, as with infectious diseases such as influenza in its various kinds (2008, 4-5).

The IHR 2005 define these sorts of dangers in a broad and ambiguous way, however the scope of regulation is fundamentally the same (Fidler 2005, 365; Nuzzo and Gronvall 2011, 4; Review Committee on the Functioning of the IHR (2005) 2011, 31)¹³. As explained in the IHR 2005, a “public health emergency of international concern” (PHEIC) refers to an extraordinary event, including those of unknown causes or sources, which constitutes a public health risk to other states through the international spread of disease, and which requires a coordinated international response (WHA 2005, 9, 43). Therefore, I equate the PHEICs with biosecurity threats¹⁴.

Fidler and Gostin posit that “security and public health can no longer view the world through the state-centric lenses of national governments and intergovernmental coordination”. Moreover, they argue that governance mechanisms need to reflect the roles that non-state actors play in world politics. Otherwise, they warn, it will not be possible to achieve and maintain biosecurity in a sustainable way (Fidler & Gostin 2008, 3). With this

¹³ One of the key issues debated during the negotiations of the IHR 2005 related to the convenience of explicitly mentioning biosecurity threats. The question then discussed was: “Should the Regulations explicitly include chemical and radiological events and events involving deliberate and accidental release?” (Review Committee on the Functioning of the IHR (2005) 2011, 31).

Nuzzo and Gronvall point out that during these negotiations there was a deadlock because various countries objected the inclusion in the text of any precise reference to a deliberate release of a toxic or infectious agent. The negotiations continued once such references were dropped. Additionally, it was agreed that deliberate biological events would be implicitly incorporated through a broad definition of ‘disease’ without making reference to its source (Nuzzo and Gronvall 2011, 4).

¹⁴ Although the decision mechanism of the IHR 2005 consider different kinds of threats, both naturally occurring and deliberate, I’m aware that, the IHR Emergency Committee is the only entity responsible for declaring a PHEIC. Consequently, there may biosecurity threats such as the 2011 E. Coli O104:H4 outbreak in Germany that may not merit to be categorized as a PHEIC.

in mind, these authors advocate the creation of a “global biosecurity concert” as a mechanism to improve biosecurity and strengthening global governance in the areas of biological weapons and public health. Despite recognizing the limitations of the GHSI in terms of its membership and activities, they regard it as an important element of the “global biosecurity concert” that could be replicated and instrumented in other regions of the world (Fidler & Gostin 2008, 252). In a similar vein, Avery suggests that the North American Plan for Avian and Pandemic Influenza (NAPAPI) could serve as a successful model for other regions and for strengthening the global strategy of the WHO (Avery 2010, 17). But what are the conditions - if any- that make these TGNs effective? When is it better to select TGNs over IGOs?

Although important in its own right, we cannot reduce the governance of global health to questions concerning its effectiveness. It is also critical to deal with other issues, such as the representativeness, legitimacy, transparency, and accountability of the transgovernmental actors pursuing global health security. Otherwise, as Hoffman himself acknowledged, global health security runs the risk of becoming subjugated to the national security interests of a few states (2010, 518). An example can be found during the 2009 pandemic when Great Britain and Japan pushed the WHO to delay the declaration of pandemic. Yet, it should be emphasized that despite being a shortcoming, this study only deals with the first aspect (i.e. effectiveness of TGNs), whereas in the case of the last four, they constitute avenues for future research¹⁵.

To summarize, despite the arguments in their favor, the dynamics of TGNs remain inadequately understood. This is particularly true for biosecurity TGNs¹⁶. Moreover, theoretical and empirical research on security TGNs has not expanded at the same speed (Eilstrup-Sangiovanni 2009, 195). Avery for example claims that both in the historical and the contemporary context the subject of “emergency health security coordination” between

¹⁵ For a discussion of normative aspects of TGNs see Slaughter 2000; Picciotto 2000; Slaughter 2003; van Kersbergen and van Waarden 2004; Held 2004; Lipson 2006; Blazejewski 2008; Freyburg 2015.

¹⁶ Other examples of biosecurity TGNs include the North American Coordinating Body for Avian and Pandemic Influenza (NACOBPI), the APEC Emerging Infectious Disease Network (EINet), and the European Union Network for the epidemiological surveillance and control of communicable diseases in the Community.

the North American partners has received scant attention from scholars (Avery 2010, 3). Thus far, studies have centred predominantly on areas of low politics such as financial regulation, but not on high politics. Hence, we lack a complete understanding of why TGNs develop, how they function across different policy areas and under what circumstances we can expect governments to choose them (Eilstrup-Sangiovanni 2009, 195). Therefore, by not considering the conditions under which policy makers are more likely to choose a certain institutional arrangement we run the risk of prescribing the 'wrong medicine' for the 'wrong patient'.

I need to point out that my aim is not to explain why TGNs arise, and how they operate in different policy areas. Instead, I seek to enhance our general understanding of the functioning of TGNs by conducting empirical research in an area increasingly seen as linked to national security (Youde 2018; Fidler 2005; Fidler & Gostin 2008; Hoffman 2010; Avery 2010; Review Committee on the Functioning of the IHR (2005) 2011). Although some may object this categorization of health, I argue *inter alia* that the presence of ministers of interior in certain biosecurity TGNs (e.g. in the NACOBPI), and the fact that biological weapons or other biological agents can be used to commit terrorist attacks turns this otherwise low politics' area into one related to high politics.

In the following chapter, I start by introducing the theoretical framework with a more detailed explanation of its variables. I then conclude by deriving six working hypotheses (conditions under which TGNs are likely to be chosen) from rational-inspired assumptions and propose one hypothesis based on the insights and particularities of the biosecurity field. Finally, to complement the picture and to stimulate the inter paradigm debate in International Relations; I briefly discussed two rival explanations derived from constructivism.

CHAPTER TWO: THEORETICAL FRAMEWORK.

2.1. RATIONAL CHOICE, TRANSGOVERNMENTALISM, NETWORKS AND LEGALIZATION

As presented in chapter one, networks are not new but are increasingly ubiquitous and influential. It is no surprise that they are becoming the preferred channel not only for governments willing to cooperate and strengthen global governance, but also for NGOs, transnational companies, individuals and even criminal groups – the so called dark networks¹⁷-seeking to achieve or modify outcomes. In this chapter, I seek to construct an explanatory account of transgovernmentalism in the biosecurity field.

Drawing on the literature of legalization, rational choice, and network studies, I develop a theoretical framework to establish the conditions under which we can expect governments to choose a TGN instead of an IGO for effectively dealing with biosecurity threats. The theoretical framework consists of seven hypotheses, which represent external and domestic conditions that would prompt governments to select a TGN. I formulate the first five hypotheses based on the insights of rational choice, network theories and legalization. I add a sixth hypothesis/condition from the insights and the specificities of the biosecurity field. The seventh hypothesis, which addresses domestic factors, builds on the assumptions of transgovernmentalism laid out by Keohane and Nye in his classic study of transgovernmental relations (1974). Finally, to stimulate the theoretical debate within International Relations, I offer two possible rival explanations derived from constructivism.

The reason to build a theoretical framework is to determine the most relevant factors behind a government's decision to opt for a certain institutional arrangement when dealing with epidemics or biological terrorism. Among others, it is important to know the kind of factors (ideological, institutional, rational, domestic, external, etc.) and their relevance, but also the sort of problems (e.g. uncertainty, distributional, etc.) affecting a government's choice for designing better institutions. As recently witnessed with the COVID-19 outbreak,

¹⁷ For more on criminal networks see: Michael Kenney "Turning to the 'dark side: Coordination, Exchange, and Learning in Criminal Networks"; Miles Kahler "Collective Action and Clandestine Networks: The Case of al Qaeda" in *Networked Politics. Agency, Power and Governance* (ed. By Miles Kahler), Cornell University Press, 2009.

governments face all sorts of challenges and need to cooperate with various actors if they want to effectively safeguard their citizens and limit the expansion of the threat. The operationalization of the theoretical framework through the empirical work (i.e. elite interviews and on-line surveys) will enable me to answer my main research question, i.e. when are TGNs the best option to deal with biosecurity threats? By answering this question, policy makers can avail themselves of more elements for designing, modifying, or joining a certain organization in the biosecurity field. This is not a minor issue taking into account the long process for modifying the International Health Regulations or the great deal of lessons-learned case studies, workshops and official reports issued after every PHEIC¹⁸

I depart from four broad assumptions that underlie the hypotheses framing this research. First, states act self-interestedly and thus deliberately choose and design international institutions to further their own goals. Second, the value of expected gains from cooperation is strong enough to support an institutional arrangement. Third, establishing and participating in international organizations is costly; and finally, states are risk-averse when creating or modifying international institutions (Koremenos, Lipson & Snidal 2001, 781-2). Following the definition by Koremenos *et al.*, I broadly define international institutions as explicit arrangements, negotiated among international actors, which prescribe, proscribe, and/or authorize behavior ¹⁹(2001, 762).

To substantiate these assumptions my argument is twofold: First, when confronted with biosecurity threats a governments' choice is restricted to IGOs and TGNs²⁰; second, governments will opt for a TGN because they regard it as a superior institutional

¹⁸ See for example: Obinna Oleribe et al., "Ebola Virus Disease Epidemic in West Africa: Lessons Learned and Issues Arising from West African Countries," *Clinical Medicine* 15, 1 (2015): 54–57; Aliye BAŞTUĞ and Hürrem BODUR, "Ebola Viral Disease: What should be done to combat the epidemic in 2014?," *Turkish Journal of Medical Sciences* 45, no. 1 (2015): 1–5; Harvey. Fineberg, "Pandemic Preparedness and Response—lessons from the H1N1 Influenza of 2009," *New England Journal of Medicine* 370, 14 (2014): 1335–42; L. Agyepong, "A Systems View and Lessons from the Ongoing Ebola Virus Disease Outbreak in West Africa," *Ghana Medical Journal* 48, 3 (2014): 168–72; Sarathi Kalra et al., "The Emergence of Ebola as a Global Health Security Threat: From 'lessons Learned' to Coordinated Multilateral Containment Efforts," *Journal of Global Infectious Diseases* 6, 4 (2014): 164.

¹⁹ Although, I'm aware this definition is controversial for not including other important international institutional forms such as 'tacit bargains' and 'implicit guidelines', I chose it because it encompasses all the organizations I'm analyzing, i.e. IGOs and TGNs.

²⁰ This implies for example that governments would not consider other institutional arrangements such as NGOs or Public Private Partnerships.

arrangement. In other words, governments choose or design a TGN because they regard it as more effective for dealing with the threat posed by pathogenic microbes regardless of their source (i.e. naturally occurring or man-made, as in the case of biological terrorism).

To know how biosecurity TGNs operate, when they form, and why they include some states and not others, I draw on the insights of functional regime theory (Keohane and Nye 1974; Keohane 1984), rational design theory (Koremenos, *et al.*, 2001, 761-799), as well as on the literature on networks (Slaughter 1997, 2003, Podolny & Page 1998; Raustiala 2002; Kahler 2009, Eilstrup-Sangiovanni 2009, 205-10) and legalization (Lipson 1991; Abbot & Snidal 2000, Abbot *et al* 2000). Koremenos *et al.* argue that many institutional arrangements are best understood through “rational design” among multiple participants. According to them states use diplomacy and conferences to select institutional features to further their individual and collective goals. They do so by creating new institutions and modifying existing ones. The difficulty of creating or modifying institutions is evidence that institutional design is deliberate (e.g. the evolution of the GATT into the WTO). Most institutions evolve as members learn, new difficulties arise and international structures change. What is more, even institutional evolution involves deliberate choices made in response to changing circumstances (2001, 767).

Prior outcomes and evolutionary forces provide the conditions for institutional development. As institutions evolve, rational design choices can arise in two ways. First, members may adjust institutions gradually, by making purposeful decisions contingent on the new circumstances, by adopting features from other institutions that work well, or by designing explicit institutions to strengthen informal cooperation. Second, institutional arrangements may change as states and other actors chose among them over time. Furthermore, Koremenos *et al.* contend that “even institutions that are not highly formalized and arise through informal and evolutionary processes may embody significant rational design principles”. According to them, states favor certain institutions because they regard them as more convenient for dealing with new conditions or new problems and downplay or withdraw from those that are not (Koremenos, Lipson, and Snidal 2001, *idem*).

In contrast to the view held by scholars such as Raustiala (2002, 6), who claim that TGNs are “supplementary” to international treaties²¹, I adhere to the position that under certain conditions international actors purposely choose TGNs or “soft forms of legalization”²² because they regard them as superior institutional arrangements (Abbott and Snidal 2000, 423; Eilstrup-Sangiovanni Forthcoming, 11). Although TGNs and IGOs sometimes complement each other, either because they operate within the same issue-area and/or work together to enhance international cooperation (e.g. the WHO with both the GHSI & the BRICS Health Network), Eilstrup-Sangiovanni suggests conceptualizing these arrangements as ‘functional substitutes’ as a way of determining when a certain arrangement is likely to prevail (Forthcoming, 12). “Substitutabilities, complementarities, and conflicts arise not only in the design of individual institutions but also in relationships among them. Just as individual features of institutions can complement each other, so too can different institutions, e.g. through vertical nesting” (Koremenos *et al.*, 2001, 796).

Authors such as Eilstrup-Sangiovanni (2009, 205), Slaughter (2004b, 4, 7), and Pollack (2005, 911–12) argue that in the security domain, CoGs can elect to form or prevent the formation of TGNs and set parameters for their activities. Although I mostly adhere to this view, I also argue that in the biosecurity domain, sub state officials (e.g. Ministers of Health) may occasionally select/design TGNs. Slaughter herself recognizes that depending on the issue-area sub state officials frequently play a role before the creation of the institution (Slaughter 2003, 1049). This means that in some cases, I would not expect to observe an act of delegation. Thus, keeping with Slaughter’s typology of TGNs, I consider the North American Coordinating Body for Pandemic Influenza (NACOBPI) as a TGN within the

²¹ For similar positions see Lipson 1991, 533; Alvarez 2001, 212; Eberlein and Newman 2008. Although Lipson considers that states can choose between formal and informal agreements, he implies that “they may also complement each other as elements of more inclusive bargains”.

²² Abbot and Snidal posit “the realm of ‘soft law’ begins once legal arrangements are weakened along one or more dimensions of obligation, precision and delegation. This ‘softening’ can occur in varying degrees along each dimension and in different combinations across dimensions”. Hence, the term ‘soft law’ encompasses this wide range of deviations, while distinguishing itself from ‘hard law’, and from entirely political agreements in which legalization is generally absent (Abbott and Snidal 2000, 422). On the other hand, they define ‘hard law’ as: “legally binding obligations that are precise, and that delegate authority for interpreting and implementing the law” (Abbott and Snidal 2000, 421).

framework of an executive agreement, i.e. of the second type, but would categorize the GHSI as a ‘spontaneous’ TGN of the first subtype, same as the BRICS Health Network (see p. 7).

I argue that one of the reasons why sub state officials may select a TGN is to build coalitions with like-minded peers from other governments against elements of their own administrative structures (Keohane and Nye 1974, 44; Slaughter 2003, 1054). Avery for example points out that Canadian officials were aware that three U.S. departments, i.e. Agriculture, Health and State, were supportive of the North American Plan for Avian and Pandemic Influenza (NAPAPI) - the cornerstone of the NACOBPI -, whereas the Department of Homeland Security was against it. According to Marc Ostfield²³, this opposition was counteracted by the determination of the White House “to knock heads together to obtain a coherent policy” (Avery 2010, 9, 23). This raises the question: If states have a wide range of choices and they prefer different cooperative outcomes (Koremenos *et al.* 2001, 765), which cooperative outcome should they choose when dealing with biosecurity threats?

To answer this question, Eilstrup-Sangiovanni suggests combining the insights of functional regime theory with a specific theory of networks. By doing so, we can account for the specificities and the advantages of TGNs that have been largely overlooked by international regime theorists, who have long focused on cooperation among unitary states (2009, 196). The main assumption of functional regime theory is that institutions exist to perform specific functions; thus, it is essential to show the function an institution serves in order to explain its creation (Keohane 1984, 80–2). According to Abbot and Snidal, the specific forms of soft law chosen by states - in their varying combinations of obligation, precision and delegation - reflect the particular problems they are trying to solve (Abbott and Snidal 2000, 423). Hence, by uncovering the function of nine international institutions²⁴ in the biosecurity domain we can explain how these organizations work; why leaders select one institutional form over the other, and consequently, we can determine the conditions under which it is better to opt for a particular institutional arrangement.

²³ Senior Advisor “Bioterrorism, Biodefense and Health Security”, of the US Department of State. Interview conducted by Donald Howard Avery in Washington D.C., April 28, 2007.

²⁴ The nine case studies are the GHSI, the NACOBPI, PAHO, the BRICS Health Network, the WHO, the CPLP, the FPGHI, the APEC Health Working Group & the ISAGS-UNASUR.

To apply this kind of functional argument, Keohane advises establishing good reasons for assuming a causal relationship between the functions that an institution performs and its existence. Otherwise, he warns, we run the risk of wrongly extrapolating that institutions arose “because of the functions they must have served, when they in fact appeared for purely adventitious reasons”. To avoid this fallacy, Keohane recommends showing that “the actors being investigated are rational, and that the institutions and the social practices to be explained were designed to fulfil anticipated functions”. In this manner, he claims, “effects can explain causes” (Keohane 1984, 81). Eilstrup-Sangiovanni, who follows this logic, posits that investigating the proliferation of TGNs in an issue-area such as security - where formal hierarchical cooperation is to be expected - can contribute to clarify important issues regarding government networking (Eilstrup-Sangiovanni 2009, 197, 204).

2.2. INDEPENDENT AND DEPENDENT VARIABLES

To explain variation in institutional design, as well as to derive the working hypotheses I drew on some of the factors that affect cooperation laid down by Koremenos *et al.* (2001), and on the theoretical framework suggested by Eilstrup-Sangiovanni (Eilstrup-Sangiovanni 2009, 205–10; Eilstrup-Sangiovanni Forthcoming, 10). Additionally, I drew on the variables that influence which forms of soft law - i.e. which combinations of obligation, precision and delegation – are likely to be chosen under certain circumstances (Abbott & Snidal 2000, 423). Finally, I derived condition number 6 from the second type of transgovernmental cooperative behavior defined by Keohane and Nye (Keohane & Nye 1974, 44; Slaughter 2003, 1054), and condition number 5 from some insights within the biosecurity domain (Fidler & Gostin 2008, 231).

2.2.1. INDEPENDENT VARIABLES (I.V.)

The factors or I.V. mentioned by Koremenos *et al.* can be categorized into various kinds of **cooperation problems** (distributional or enforcement-related), **uncertainty** (about behaviour, the state of the world and others’ preferences), and **others**, such as the number of actors and the asymmetries among them (including differences in capabilities). “Distribution problems” arise when more than one cooperative agreement is possible. Its magnitude is contingent on how each actor compares their preferred alternative to other actors’ preferred alternatives. “Enforcement problems” concerns the strength of individual actors’ incentives

to defect on a given agreement or set of rules. This kind of problem occurs when actors find unilateral non-cooperation so tempting that they sacrifice long-term cooperation. In other words, enforcement problems emerge either if incentives to defect are greater than the “shadow of the future”, or if interactions between the actors are less frequent (2001, 776). Since future interactions enable the actors to reward and punish each other (Heide & Miner 1992, 267).

However, I do not expect to observe enforcement problems in TGNs, or in other forms of soft law because of the “generalized trust” that exists among their members (Scharpf 1997, 137–138; Podolny 1998, 60–62; Rathbun 2011, 247–248)²⁵. As pointed by Scharpf, “membership in a network allows access to a larger number of potential partners of trustworthy interactions and thus increases the value of social capital” (Scharpf 1997, 138). Transgovernmentalists contend that regulatory agreements between states are “pledges of good faith” that are self-enforcing because each state will be better able to enforce its national law by implementing the agreement provided that the other members of the network do likewise (Slaughter 1997, 192; Raustiala 2002, 24).

Self-enforcement means that an agreement remains in force because at any given moment each actor believes it gains more by preserving the agreement than by terminating it. This calculation includes all expected benefits and costs, appropriately discounted to give their present value (Lipson 1991, 511). Although there are incentives to “violate” “obligations” common interests predominate (Raustiala 2002, 24). Whenever there are incentives for non-compliance with international commitments, states will opt instead for hard legalization in the form of institutions, procedures as well as normative and reputational arguments to materially reduce the costs of enforcement (Abbot & Snidal 2000, 430-4). In other words, if States are aware of their rivals’ disposition to defect, I would expect them to select an IGO rather than a TGN to reduce enforcement’ costs and limit the options of their counterparts.

²⁵ According to Podolny and Page, “the network forms of organization can be characterized by a distinct ethic or value orientation on the part of exchange partners”. They underline that in this kind of relationships, there exists a “spirit of goodwill”, namely a commitment to use “voice” rather than “exit” to solve conflicts, as well as a high level of mutual trust (Podolny 1998, 60).

Uncertainty in a broad sense refers to the extent to which actors lack complete information **about the state of the world** or about others' behaviour or others' preferences. In the case of the former, states do not possess knowledge about the consequence of their own actions, the actions of other states, or the action of international institutions. These kinds of knowledge could be scientific, technical, political or economic. **"Uncertainty about behaviour"** means that states may be unsure about the actions taken by others, whereas in the case of **"uncertainty about preferences"**, states may be unsure about what their counterparts really want. Nonetheless, I neither expect to see these kinds of uncertainty in TGNs. Since TGNs are based in trust and frequent contacts, and because its members have relatively homogeneous values and interest, I assume that information would not be a problem. Finally, the independent variable **"number"** designates the relevant actors who are potentially admissible to join the organization, either because their actions affect others or vice versa. "Number" also includes asymmetrical distribution of actors' **capabilities**. (Koremenos et al. 2001, 773-9).

2.2.2. DEPENDENT VARIABLES (D.V.)

My choice of dependent variables is to a great extent informed by the rational design project (Koremenos *et al*, 2001), the three dimensions of legalization laid out by Abbot and Snidal (2000) and the institutional characteristics selected by Eilstrup-Sangiovanni in her study of TGNs and multilateral treaties in the area of non-proliferation (Eilstrup-Sangiovanni Forthcoming, 10). In order to conceptualize the D.V., I combined the five institutional dimensions emphasized by Koremenos *et al*. in the rational design project (2001) with Abbot and Snidal's dimensions of legalization (2000). The reason to combine both dimensions is to echo the concerns raised by John Duffield (2003) regarding the dependent variables of the Rational Design project. Although he recognized that the five dimensions of institutional variation laid out by Koremenos *et al*. are useful for "distinguishing the most important institutional features and producing a framework that is both manageable in size and susceptible to empirical testing", he considered that the three dimensions of legalization "find no direct parallels in the rational design project" (415).

According to Koremenos, there are five dimensions within which institutions may vary: membership rules, scope of issues covered, centralization of tasks, rules for controlling

the institution, and flexibility of arrangements (see table 3). Some of the advantages of using these dimensions or “problems of institutional design” are their significance, i.e., the fact that they are usually the focus of both negotiators and academics; their measurability, as they enable us to compare different institutions; and finally, their applicability to all kinds of institutional arrangements (2001, 763).

Although these dimensions can help us to analyse and compare different institutional arrangements, they do not tell us much about the nature and the depth of the commitments subscribed by the states, nor whether third actors are for example granted any authority to enforce compliance or to arbitrate disputes that may arise between the members. For that reason, I included three additional dimensions subsumed under the concept of **legalization** [i.e. obligation (O), precision (P) and delegation (D)]. This will enable us to situate TGNs and IGOs along a multidimensional continuum. As stated by Abbot and Snidal (2000) legalization refers to the varying presence or absence of these dimensions in the institutional arrangement in question. Thus, institutions may vary: a) from one end where the three dimensions are maximized to hard legalization where all three (or at least O and D) are high. b) Through multiple forms of “soft” legalization involving different combinations of O,P and D. c) to the complete absence of legalization where most of the TGNs would likely be located (402).

“**Membership**” refers to the actors who belong to an institution, but also to those who are excluded. In contrast to the independent variable number, membership is an endogenous design choice made in the course of establishing, modifying, and/or operating the institution. It encompasses the rules governing who is a member and, if applicable, different classes of membership. There are different kinds of membership: it can be exclusive and restrictive (e.g. regional, like the OAS) or inclusive by design (e.g. universal, as in the case of the U.N.) The second dependent variable, “**scope**”, relates to the range of issues covered by an institution. The scope can be broad or narrow. Unrelated issues may often be linked to facilitate agreement and/or compliance. “**Centralization**” refers to the concentration and/or distribution of institutional tasks, i.e., it takes into account whether a focal entity performs the main tasks, such as a secretariat or a group of actors. The term is broadly understood here to include centralization for disseminating information, reducing bargaining and transaction costs, and for enhancing enforcement. “**Control**” refers to the

way collective decisions are made, such as voting arrangements or to the actors who exert influence within the institution. **“Flexibility”** describes the institutional rules and procedures that enable institutions to deal with unanticipated circumstances or shocks, or face new demands from domestic coalitions. Flexibility can be adaptive and transformative (Koremenos et al. 2001, 770-7).

“Obligation” means that states are legally bound by rules or commitments. In other words, the behaviour of the members is subject to and carefully supervised by the general rules, procedures and discourse of international law and sometimes even domestic law. **“Precision”** means that rules unequivocally define the behaviour they require, authorize or proscribe. Finally, **“delegation”** implies that third parties have been granted the mandate to implement, interpret and apply the rules, or to resolve any conflicts derived of cooperation. Sometimes it even includes the authority to establish new rules (Abbott & Snidal, 2000, 401).

We can explain institutional variation by combining these independent and dependent variables, which Koremenos *et al.* (2001) called: “conjectures about rational design” (780,782) and Eilstrup-Sangiovanni (2009) referred as “conditions for networked cooperation” (205). Each of these “conjectures” addresses the expected effect of a change in a particular independent variable on one of the dependent variables, such as the level of uncertainty about preferences regarding membership. In this case, if states are uncertain about what their counterparts really want, they may decide to restrict more the membership of the organization (Koremenos *et al.* 2001, 784).

Table 3. Institutional dimensions (D.V.)

Institutional dimension	Questions to determine the kind of institutional arrangement governments will choose (TGN/IGO)
Membership	Who is included/excluded?
Scope	Which issues are covered?
Centralization	How centralized are the main tasks?
Control	Who exerts control within the institution?
Flexibility	How are changing circumstances accommodated?
Obligation	Are there any binding rules/commitments?
Precision	How precise are the rules that authorize or prescribe behaviour?
Delegation	Are there any third parties who were granted authority to implement and interpret the rules and/or to resolve any disputes that may arise?

Source: Author, based on: Koremenos *et al.* 2001, p.1052. Rational design: Looking back to move forward; Abbot *et al.* 2000, p. 401-402. The Concept of Legalization.

To build my definition of TGNs but also my conditions, I drew on these variables as well as on the literature on networks (Podolny 1998, 59; Kahler 2009b; Eilstrup-Sangiovanni, 2009, 205), and legalization (Abbott et al. 2000, 406–7). Thus, I conceptualize TGNs as highly flexible institutional arrangements of consciously coordinated action with a limited scope, a restricted membership of at least three members, a consensus-based mode, a low degree of centralization, obligation, precision and delegation²⁶, and whose main objective is to change international outcomes and national policies²⁷. Because of this, I would expect governments to select between these kinds of institutional arrangements and IGOs, which in varying degrees represent the opposite features. Hence, the dependent variable is either an IGO or a TGN.

A final caveat: Since I seek to determine the conditions under which it is better to choose a TGN, it is not my purpose to test any of the following conditions, but rather to use them as departing point to frame the research. Otherwise stated, the main aim of this study is to identify new variables, hypotheses, causal mechanisms, or causal paths i.e. heuristic (George and Bennett 2005, 75).

2.3. CONDITIONS UNDER WHICH IT IS BETTER TO OPT FOR A TGN.

Thus, we may hypothesize that governments *are likely to select a TGN for dealing with biosecurity threats*:

C1: when they expect distributional problems and thus aim to reduce bargaining costs.

C2: when the other prospective members are strongly committed and capable and wish to exclude spoilers from cooperation.

C3: when they share interests²⁸ and values with other governments and when the group is small (i.e. from two to ten members).

²⁶ Abbot, Keohane, Moravcsik, Slaughter and Snidal categorized the G7 as form of international legalization of kind VIII, meaning the lowest possible degrees of *obligation*, *precision* and *delegation* (Abbott et al. 2000, 406).

²⁷ I considered the GHSI, the NACOBPI, the BRICS Health Network, the APEC Health Working Group and the Foreign Policy and Global Health Initiative as TGNs because they meet the three main characteristics that differentiate them from IGOs, i.e. membership, structure and degree of legalization (Eilstrup-Sangiovanni 2009, 198).

²⁸ I use the words interests and preferences interchangeably.

C4: when they are uncertain regarding the “state of the world”, and hence doubt about the future implications of agreements.

C5: when speed is a priority and time horizons are short.

C6: when they aim to reconceptualize their responsibilities and interests with respect to biosecurity threats.

C7: a) when governments anticipate high sovereignty costs and expect domestic opposition to an international agreement; **C7: b)** When sub-state officials wish to build coalitions with like-minded peers from other governments against elements within their own administrative structures.

2.3.1. CONDITION 1: DISTRIBUTIONAL PROBLEMS.

Governments are more likely to choose a TGN when they expect distributional problems from cooperation. Koremenos et al. posit, “States may reduce distributional problems, and bargaining costs, by adopting a more flexible agreement structure” (Koremenos, Lipson & Snidal 2001, 794). A distribution problem occurs when governments have to select one outcome from a range of known possible outcomes. In other words, governments are more likely to choose a TGN when more than one cooperative agreement is possible. As a rule, where the distributional implications of a choice are small - such as when the “shadow of the future”²⁹ is short - bargaining costs will be proportionately small. In contrast, where the distributional implications are large - e.g., when the “shadow of the future” is long - bargaining costs will likely be large (Koremenos et al. 2001, 775).

Nonetheless, network relations can reduce the risk of opportunism by extending the “shadow of the future”, and by increasing the visibility of transactions. Thus, the existence of a network will ultimately determine the interactions that take place among its members in various ways: by enabling some interactions that would not have else arisen; by making some of them more likely than others; and by altering the **outcomes** of some in favour of one or another of the members (Scharpf 1997, 137). According to Abbott and Snidal, **security concerns** magnify the **distributional problems** associated to any agreement, particularly

²⁹ As stated by Koremenos *et al.* the “**shadow of the future**” implies that the value of future gains is strong enough to support a cooperative arrangement (2001, 781).

those of great magnitude or involving **great uncertainty**, as I claim is the case with the biosecurity issue area. However, **soft forms of legalization** can help mitigating these costs. For example, States can choose escape clauses, imprecise commitments or “political” forms of delegation that allow them to keep control if unfavourable circumstances arise (2000, 435). **TGNs may as well reduce domestic pressure** by obscuring distributive effects (Eilstrup-Sangiovanni 2009, 209).

Although **distribution problems** interact with the other independent variables, Koremenos et al., recommend setting them apart (Koremenos, Lipson & Snidal 2001, 775). Unlike Sangiovanni in her theoretical framework, I decided to include this variable to echo the critique of Robert Gilpin, who argues that transgovernmentalism is silent concerning relative gains and distributive questions that arise in almost every serious international discussion of substantive issues (Lipson 2006, 197). In this respect, Hoffman posits that certain distributional consequences are likely to emerge (in the new global health security regime) as the health security interests of the developed countries increasingly converge with the developing countries’ social and economic goals (Hoffman 2010, 516). Koremenos et al. argue in contrast that in some cases **heterogeneity** promotes distributional differences and conflicts, such as when less-developed countries join a group of developed countries³⁰ (Koremenos, Lipson & Snidal 2001, 785). Hence, due to their heterogeneous compositions, I would expect this to happen in the GHSI, the BRICS Health Network, the APEC Health Working Group and the NACOBPI, but to a higher extent in the latter, where differences between the U.S. Canada and Mexico are more acute.

2.3.2. CONDITION 2: COMMITMENT, CAPABILITIES AND THE EXCLUSION OF SPOILERS.

TGNs are more likely to form among strongly committed and capable states that wish to exclude **spoilers** from cooperation. In this point, Abbot and Snidal hold however exactly the opposite view. These authors argue that states should strive for hard legalization when they aim to limit participation to actors strongly committed to an agreement. They argue as well that states should select soft law when there is a high degree of divergence in terms of their

³⁰ This might be the case with the GHSI, which is integrated by the G7 and Mexico.

capacities (Abbott & Snidal 2000, 431,445). Nonetheless, in contrast to IGOs, which often strive for universality, TGNs enable a few committed states to initiate an agreement without consulting the others (Eilstrup-Sangiovanni 2009, 209). Consequently, I posit that by setting the rules for membership, members can prevent the admission of spoilers. The opposite would also apply, i.e. by not setting any rules for membership; members may even be in a better position to neglect requests for membership. By limiting an initiative to a small group of highly influential states, “insiders” **can set standards** that “outsiders” **are later compelled to accept**, which Raustiala calls “regulatory export” (Raustiala 2002, 7; Slaughter 1997, 192).

This is particularly the case when the initial group includes a majority of powerful states in an issue-area. Non-members may find themselves forced to accept the rules set by the group, not as a result of their binding nature but because networked members are able to deny them important privileges unless they comply (Eilstrup-Sangiovanni 2009, 209–10). As stated by Kahler, the “ill-defined membership rules” of TGNs confer them advantages in comparison to IGOs. For example, TGNs can easily incorporate new members and issues at a relatively low cost without altering the basic form of the organization (scalability), and second, they can exclude “troublesome prospective members who might (otherwise) force their way into an IGO” (Kahler 2009a, 15).

In this respect, although the GHSI ministers declared during the Ottawa meeting in 2001 that they “welcome other Health Ministers who stand ready to join the initiative”, this exclusive club has not expanded its membership. Hence, in contrast to what some claim (Kirton & Mannell 2005, 16) the GHSI - unlike the G8 - is not open to external participants. Nevertheless, we know that there have been exchanges of information among the GHSI members and other countries or international organizations, such as EU members and the WHO. However, we do not know for sure why some countries, notably Russia, have not yet joined the network³¹. Consequently, the question arises: who and under which criteria decides who is “in” and who is “out”?

³¹ Face to face exploratory interview with a former senior official who participated in several of the Global Health Security Action Group’ meetings (GHSAG), and in the GHSI’ ministerial meetings.

2.3.3. CONDITION 3: SMALL SIZE & HOMOGENOUS INTERESTS AND VALUES.

Another condition influencing governments to select a TGN is small group size and relatively homogenous interests and values, which lessen the need for central arbitration and sanctioning. According to Eilstrup-Sangiovanni, (2009) we should expect governments to favour TGNs for two reasons. First, small groups are more likely to benefit from the speed and flexibility associated with network cooperation. Second, networks are more likely among small homogeneous groups due to credibility issues, since cheating among such groups is less likely and because effective peer-to-peer monitoring is easier to achieve among small numbers. Eilstrup-Sangiovanni (2009) describes ‘homogeneous groups’ as those who have ‘harmonious preferences’ in terms of interests and values (205). Slaughter (1997) also contends that judges participating in judicial TGNs share values and interests, which are acknowledged and reinforced through their interaction (186-189). Abbott and Snidal (2000) hold however, a contrary view. They argue that actors with different interests and values should choose soft law because it would help them to reach a compromise. Accordingly, the lack of common values and interest would not only be a distinctive criterion influencing actors to opt for a soft law arrangement, but also a way to reconcile differences (423).

As a way of illustration, on the GHSI web page, states that, the initiative “was envisaged as an informal group to fill a gap for *like-minded* countries to address health issues of the day, such as global health security”. Hence, we may wonder whether the interests and values of the *like-minded* partners of the G7+Mexico are indeed homogenous. How much do the interests of the participants really converge? Are the partners as *likeminded* as they claim?³² Garret and Alavian point out that at the 2005 Gleneagles G8 summit, it became evident that the interests of the G5 members led by Mexico were quite different from those of the then G8 (2010, 4).

³² The GHSI members are all ‘strategic partners’ and are linked to each other through various trade, political and military agreements. ‘Strategic partnership’ seems to have become the preferred buzzword for states ascribing a higher and more comprehensive status to a relationship. ‘Strategic partnerships’ are commonly associated with ‘shared values, perceptions and visions’ among countries, regions or a combination of both which aim to converge interests and ultimately positions in multilateral fora and/or on global issues. The ‘strategic partnership’ status is regarded as the ‘natural’ next step in a bilateral relationship which is considered to be increasingly important, convergent and overarching (in terms of areas, arenas and actors involved) for the states/regions under consideration.

TGNs depend on expectations of generalized reciprocity. Thus, like other networks - even criminal networks- they usually rely on higher levels of trust than other institutional arrangements (Eilstrup-Sangiovanni 2009, 200). Kahler (2009) for instance argues that experience of the Afghan resistance, as well as combat experience served as catalyzers for creating solid personal links and producing high levels of trust conducive to the formation of Al Qaeda (114). What is more, networks are particularly apt for circumstances in which there is a need for efficient reliable information. In that respect, the most useful information is the one you obtain from someone with whom you have dealt before and found to be reliable. Indeed, you trust more information that comes from someone well known. In those circumstances, networks are especially suit for exchanging commodities whose value is not easy to measure. Scholars in Social Sciences concur that actors can enhance reciprocity by taking a long-term perspective (Powell 1990, 304-305).

In game theoretical terms, that implies having repeated games or a long shadow of the future (see condition 1). Consequently, “security and stability encourage the search for new ways of accomplishing tasks, promote learning and the exchange of information and engender trust” (Powell 1990, 305). Hence, “cooperation emerges out of mutual interest and behavior is based on standards that no one individual can determine alone. Trust is thereby generated”. In this form, “trust reduces complex realities far more quickly and economically, than prediction, authority or bargaining” (Powell 1990, 305). Since I’m dealing with a network and not with another institutional arrangement (i.e. a hierarchical and formal), I will keep with the trust-related arguments of Eilstrup-Sangiovanni (2009), Slaughter (1997), Powell (1990) and Kahler (2009) and challenge the arguments of Abbott and Snidal (2000) presented above.

2.3.4. CONDITION 4: UNCERTAINTY

Governments are more likely to opt for a TGN when they are uncertain regarding the “state of the world” as they would then hesitate about the longer-term implications of agreements. According to Koremenos *et al.*, “uncertainty is the linchpin of traditional security problems” (2001, 773). Eilstrup-Sangiovanni argues that there may be situations in which states’ interests are uncertain due either to inadequate information about the situation at hand or doubts about the likely outcomes of different courses of action”. Uncertainty about the “state

of the world” refers specifically to states’ lack of knowledge about the consequences of their own actions or those of other states. According to Eilstrup-Sangiovanni, this kind of uncertainty favours more flexible arrangements. Under uncertainty, actors will pursue institutional flexibility as a way of protecting themselves against unanticipated costs or adverse distributional consequences (2009, 207–8).

One of the benefits of networks is its adaptability to unanticipated environmental changes. By encouraging greater communication than the one provided by the market, networks contribute to enhancing coordination when changes cannot be fully comprehended or conveyed through price signals. Furthermore, since the boundaries of the networks are in general easier to modify than the ones of hierarchies, it is also easier to alter the composition of the network to respond to those changes (Podolny 1998, 65–6).

As noted earlier, the 2009 influenza pandemic exposed some limitations of the IHR (2005), and consequently of the WHO for making decisions under conditions of uncertainty. Nonetheless, it seems that the combined work of different institutional arrangements including TGNs (the NACOBPI and the GHSI) and IGOs (the Pan American Health Organization [PAHO] and the WHO) contributed to more effective detection and assessment of the risks posed by the new virus (Review Committee on the Functioning of the IHR (2005) 2011, 72). According to Avery, available evidence suggests that the North American Plan for Avian and Pandemic Influenza (NAPAPI) was reasonably effective during the pandemic (Avery 2010, 13–6). He considers that the NAPAPI profited from existing health security programs, especially from the GHSI while strengthening the global strategy of the WHO (Avery 2010, 17).

2.3.5. CONDITION 5: SPEED AND SHORT TIME HORIZONS.

Governments are more likely to favour TGNs when speed is a priority and time horizons are short. TGNs are generally faster to set up than IGOs (Raustiala 2002, 24; Eilstrup-Sangiovanni Forthcoming, 17). Consequently, “reliance on TGNs should shorten the time between when a problem is identified and some form of collective action can be taken”. (Eilstrup-Sangiovanni 2009, 206–7). Slaughter contends that the network form of TGNs is ideal for providing the speed and flexibility required for functioning effectively in the

information age (Slaughter 1997, 193; Slaughter 2004b, 162). In a similar vein, Lipson argues that “less formal” instruments will be chosen when security issues must be resolved quickly or quietly to avoid serious conflict. Since these kinds of instruments do not require elaborate ratification they could rapidly be concluded and implemented (1991, 500–1). I posit this is particularly the case, in complex, rapidly changing circumstances such as the ones prevailing in the biosecurity domain where speed is clearly an advantage.

Fidler, points out that the inapplicability of the old IHR to address most emerging and re-emerging infectious diseases indicated that the techniques incorporated into the WHO constitution aiming to revise and update the IHR rapidly proved to be more innovative on paper than in practice. As quoted by Fidler, the WHO legal Counsel expressed the view that “using binding regulations to combat disease threats was unrealistic because such regulations cannot be adopted quickly enough to meet the health requirements of the moment” (Fidler 2005, 340).

2.3.6. CONDITION 6: RECONCEPTUALIZATION OF RESPONSIBILITIES & INTERESTS

Governments are more likely to select a TGN to reconceptualise their responsibilities and interests with respect to biosecurity threats. Fidler and Gostin argue that the reconceptualization of state responsibilities and interests in biosecurity make states hesitant to accept binding schemes of international governance as envisioned by the Biological Weapons Convention (BWC) protocol or various proposals for new treaties. They claim that “partnering arrangements” enable states to engage in cooperation without contracting the high transaction costs of negotiating and implementing formally binding rules. Due to the prevailing disagreement about which biosecurity policies are more appropriate, “flexible, cooperative relationships have advantages (*vis-à-vis* treaties) in allowing states to navigate uncertainties present in the new worlds of biological weapons and public health governance” (2008, 231).

Although I am aware, I could have subsumed this condition to condition 3, I preferred to split it in two for two reasons. First, to elucidate whether the reconceptualization of responsibilities and interests in the biosecurity field is different to the one occurring in other

issue-areas (i.e. to empirically prove Fiddler and Gostin's argument), and second to evaluate separately the condition laid out by Eilstrup-Sangiovanni concerning small group size and harmonious preferences (see condition 3 above). In any case, to determine the relevance of each of these variables (similar interests, values, small group size, etc), I further disaggregated conditions 3 and 6 when conducting the elite interviews (see questionnaire and Chapter 4).

2.3.7. CONDITION 7A: HIGH SOVEREIGNTY COSTS & DOMESTIC OPPOSITION.³³

Governments are more likely to favour TGNs rather than treaties linked to an IGO when they anticipate high sovereignty costs and expect key domestic groups (e.g. legislatures, interest groups, and the general public) to oppose an international agreement. TGNs are likely to enable governments to evade various domestic constraints to a greater extent than IGOs for various reasons. First, cooperation through TGNs reduces the significance of public debate. Second, TGNs may reduce incentives for domestic groups to mobilize and pressure their governments to adopt specific policies that favour their interests. Finally, the narrow technical scope of many TGNs can be used by their members as a pretext for claiming special scientific and technical expertise; as a consequence, their activities may be less exposed to scrutiny or intrusion by other agencies. (Eilstrup-Sangiovanni 2009, 208–9; Lipson 1991, 535; Slaughter 2003, 1056; Raustiala 2002, 24).

Abbot and Snidal argue in contrast that executive officials should seek hard legalization, (e.g. an international treaty or a specialized legal institution) when their counterparts hold similar preferences but other elites within those states have different preferences (2000, 431). These authors claim nonetheless that hard legalization imposes high sovereignty costs. This is particularly the case in areas related to national security. Under “sovereignty costs”, I understand the costs associated to obtaining inferior outcomes, losing authority, or when there is a diminution of sovereignty. By way of illustration, great sovereignty costs occur when states accept external authority over significant decisions, or when international arrangements interfere with the relations between a state and its citizens or its territory. However, states can circumvent sovereignty costs by subscribing non-binding

³³ For his helpful comments, I am grateful to Michael Zürn who suggested me to include the domestic variable.

or ambiguous arrangements or by choosing not to delegate extensive powers. Frequently, states protect themselves by adopting less precise rules and weaker legal institutions. Soft law provides means to lessen sovereignty costs by expanding the range of available institutional arrangements. For example, weak forms of delegation such as consultation arrangements can limit sovereignty costs while coupling legal obligations with political mechanisms of control and defence (2000, 437–0).

2.3.7.1. CONDITION 7B: COALITION BUILDING (POWER POLITICS).

Sub-officials are more likely to choose a networked form of cooperation when they wish to build coalitions with like-minded peers from other governments against elements in their own administrative structures (Keohane & Nye 1974, 44; Pollack & Shaffer 2001, 287, 295; Slaughter 2003, 1054–6). As indicated in the theoretical framework, I distinguish between two kinds of cooperative transgovernmental behavior: transgovernmental policy coordination and transgovernmental coalition building. The former is the main outcome of the TGN, whereas the latter could be regarded as an additional explanation of why sub-state officials select these kinds of institutional arrangements. Although I recognize that both kinds of transgovernmental coordination are analytically distinct processes they combine with each other at the margin (Keohane & Nye 1974, 44).

Keohane and Nye claimed, “transgovernmental policy coordination shades over into transgovernmental coalition building when sub-units of different governments jointly use resources to influence governmental decisions”. In order to increase their chances of success, sub-state officials will attempt to incorporate their counterparts into their own decision-making processes. When such coalitions succeed, the outcomes will be different than in the absence of the coalition (1974, 46–7).

Transgovernmental coalitions are more likely to arise when the following conditions are present. First, when there are broad and intensive contacts among sub-state officials; second, when the degree of executive control is low; and finally, when there is a severe conflict of interests within governments. However, they are not enough to guarantee the formation of the coalition. In other words, they are necessary but not sufficient conditions. For coalitions to be feasible, networked actors with common interests also need to combine their resources effectively. This implies that the political resources of actors outside a

government must be attractive for some actors within it. Such resources comprise funds, prestige, information and consent (Keohane & Nye 1974, 48–9).

2.4. RIVAL EXPLANATIONS³⁴: NORMS, IDENTITIES, AND GENERALIZED TRUST.

Although, it is not my purpose to test any of above conditions, I echo Lakatos (1976) argument that “Tests are –at least- three cornered fights between rival theories and experiment and [that] some of the most interesting experiments result *prima facie* in confirmation rather than falsification” (181). With this in mind, what would be the alternatives to the hypothesis that States rationally select institutions? According to Alexander Wendt, one alternative is that states choose institutional designs based on the “logic of appropriateness”. In other words, instead of considering costs and benefits, States base their decision on normative considerations. They do what is regarded as normatively appropriate. As actors become socialized to norms, they incorporate them to their identity, and that identity in turn creates a collective interest in norms as ends *per se*. Consequently, actors follow norms not because it is in their self-interest, but because it is the right thing to do in society (2001, 1024–5).

Wendt argues that “there are at least three ways in which normative logics might be rivals to rational explanations of institutional design. One is by supplying desiderata for institutions that make little sense on consequentialist grounds, such as a norm of universal membership or a norm of democratic control. Another one is “by taking design options that might be instrumentally attractive off the table as ‘normative prohibitions’”. Finally, logics of appropriateness can affect the modalities used to design institutions, which as an outcome may be historically specific. In this respect, he claims that the attainment of a certain level of collective identity might be a prerequisite for the rational design of institutions (2001, 1025–7).

Of course, as Wendt discussed it in “The Rational Science of Institutional Design” (2001), it could be possible to frame the institutional design as a “two-step” process in which actors first attain a certain level of collective identity through the adaptation of norms and

³⁴ As I will explain later, it is also possible to frame the explanations as complements, but it would imply relinquishing the attempt to uncover what would falsify the rational explanation.

then rationally design institutions. In other words, the first step would consist in “defining the game”, in which norms might be important; then the second step would imply “solving the game”, in which the logic of consequences would prevail. In this form, the logic of appropriateness would not be a rival but a complement. Although this strategy has advantages, such as isolating the causes underlined by rational-design theory, it also has two important drawbacks. First, “since given ends can always be reinterpreted as means to higher ends, it may be possible to build a more ocean-going rational theory that explains the preferences and beliefs constituting design games as themselves rational choices in deeper games”. Second, “by turning potential rivals into complements, the two-step frame makes it harder to see what would falsify the rational explanation” (1027-8). Thus, following Wendt’s advice and consistent with the antagonistic character of both logics within IR scholarship, I opted for framing the explanations in terms of rivalry rather than a rigid two-step process. I’m convinced this is a more fruitful way of seeing the shadows and lights of each approach.

Another rival explanation is offered by Brian Rathbun. In contrast to Koremenos *et al.* Rathbun argues that it is trust and not distrust that leads states to cooperate and to construct international organizations. He suggests that generalized trust is reflected in the design of institutions. Furthermore, Rathbun contends that “strategic trust has great difficulty in explaining significant forms of international cooperation such as ‘qualitative multilateralism, in which states make binding commitments to take certain types of actions before they know the particulars of any given case’”. Additionally he argues that generalized trust serves as a form of “anarchical social capital”, which contributes to create a basic system of rules and order in international relations (2011, 244–5).

Rathbun claims that the rationalist accounts of international cooperation and institutional design have great limitations. Particularly when it comes to explaining diffuse reciprocity in which exchange occurs over a longer period of time. He contends that security organizations should be more effective when they ask their members to make legally binding commitments that limit their future discretion in specific cases. Thus, whereas strategic trust follows from specific reciprocity, diffuse reciprocity over time follows from generalized trust. Furthermore, he argues that rationalism cannot explain why decision makers in the

same position with the same information would make different choices in situations of security cooperation.

Rathbun argues that “generalized trusters” will be more willing to make commitments to binding security guarantees and authoritative conflict resolution procedures than “non-trusters”. Finally, “non-trusters” will prefer unilateralism or limited cooperation with a smaller number of other states who have a demonstrated record of trustworthiness, shared identity, and/or closely overlapping interests. Consequently, he hypothesizes that “generalized trusters” will favor less flexible agreements than “non-trusters” (2011, 247–54).

2.5. THE WAY FORWARD

As shown in the theoretical framework we still lack convincing answers as to why states sometimes select IGOs as opposed to TGNs for their international agreements. Disagreement persists among scholars over two issues. First, we do not know under what conditions it is better to opt for a TGN to deal with biosecurity threats. Second, when (re)designing an institutional arrangement in the biosecurity domain what should we look at? What are the institutional features that we should include?

The 2009 influenza pandemic revealed not only some of the institutional limitations of the WHO but also some strong points of transgovernmental networks and interinstitutional collaboration. As previously stated, it seems that the combined work of different institutional arrangements including TGNs (the NACOBPI and the GHSI) and IGOs (e.g. the PAHO) contributed to the more effective detection and assessment of the risk posed by the new virus. What are the lessons we can draw from this experience? Echoing the work of Fidler and Gostin, should we design a “global biosecurity concert” based on regional TGNs collaborating with the WHO as a mechanism to improve biosecurity? Alternatively, should we simply replicate the North American Plan for Avian and Pandemic Influenza as Avery suggests?

In this respect, can a TGN among many Asian countries with different values, capabilities and interests be as effective as one in North America? What would be the most effective institutional design to accommodate highly heterogeneous countries? Chapters 4 & 5 shall provide some empirical evidence to the argument that states deliberately select TGNs

because they regard them as superior institutional arrangements. By doing so, we should be in a better position to determine the conditions under which TGNs are the best option to deal with biosecurity threats.

The next chapters will draw upon each of above theoretical insights at various points. In Chapter 3, I will explain the research strategy I employed for collecting and analyzing the data. I start by addressing the challenges when conducting empirical research on biosecurity. I then define and justify the case study method, and stress two of its advantages for inductively identifying new variables, hypotheses and causal mechanisms. I move on to justify subject recruitment, questionnaire design and selection of cases. Furthermore, I explain the different methods to collect and analyze the data. Finally, as with the case study method, I underline the strengths, weaknesses and limitations of each of the other methods employed.

Since I argue that the option of selecting a certain institutional design is circumscribed to two organizations (i.e. intergovernmental organizations and transgovernmental networks), it becomes necessary to briefly describe some of the IGOs operating in the biosecurity-issue area. This will allow me in Chapter 4 to assess, on the one hand, which variables play a more fundamental role in explaining the origin of transgovernmental networks in the biosecurity field and, on the other to answer when TGNs can be complementary to IGOs, and under what conditions we can expect them to prevail.

CHAPTER THREE: RESEARCH DESIGN AND METHODS.

3.1 CHALLENGES IN CONDUCTING EMPIRICAL RESEARCH ON BIOSECURITY/PUBLIC HEALTH EMERGENCIES OF INTERNATIONAL CONCERN

As stated in Chapter 1, the definition of Biosecurity I chose, deals with the dangers presented by pathogenic microbes irrespective of its source. However, it is important to clarify that not all organizations and countries agree on that definition (nor on the securitization of health), thus leaving behind the threat posed by biological weapons or delegating it to national security agencies/organizations. Consequently, there are transgovernmental networks and intergovernmental organizations, which deal with infectious diseases such as Zika, yellow fever, Ebola virus, etc. but not with biological terrorist attacks (e.g. UNASUR, BRICS Health Network). Nonetheless, since the WHO included both in its 2005 IHR and grouped them under the same term (Public Health Emergencies of International Concern³⁵), I decided to formulate questions that tackle both kinds of threats and ask the same questions to all respondents regardless of their nationality or membership to a certain organization.

This decision is by no means exempt from complications. When conducting empirical research on biosecurity and specifically on biological terrorism Senior Civil Servants are often reluctant to share information due to its sensitive nature for national security. Furthermore, due to its level of technical expertise, possible dual use applications and overlapping with different agencies, it is quite common to be directed to a third party/agency. As it happens when conducting research on terrorism, transnational crime and any dual use research of concern (DURC)³⁶ information is scarce, therefore the most plausible research strategy is to conduct a qualitative case study.

³⁵ According to the IHR (2005), a: “Public health emergency of international concern” (PHEIC) refers to an extraordinary event, including those of unknown causes or sources, which constitutes a public health risk to other states through the international spread of disease, and which requires a coordinated international response (WHA 2005, 9, 43).

³⁶ The US National Institutes of Health Science define Dual Use Research of Concern (DURC) as: “life sciences research that, based on current understanding, can be reasonably anticipated to provide knowledge, information, products, or technologies that could be directly misapplied to pose a significant threat with broad potential consequences to public health and safety, agricultural crops and other plants, animals, the environment, materiel, or national security”. See: <https://osp.od.nih.gov/biotechnology/dual-use-research-of-concern/>

3.2 CASE STUDY METHOD

As stated in chapter two, the main aim of this study is to inductively identify new variables, hypotheses, causal mechanisms, or causal paths. In other words, it is a heuristic case study, one of the different kinds of theory-building research objectives identified by Lijphart, Eckstein, George and Bennett (2005, 74-75). I define a case as an instance of a class of events i.e. a phenomenon of scientific interest, such as social revolutions³⁷, types of governmental regimes or economic systems that the researcher selects to study with the aim of developing theories concerning the causes of similarities or differences among instances of that class of events (George and Bennett 2004, 17-18). In this study, the cases are international organizations (five TGNs and four IGOs) operating in the biosecurity field.

Due to the growing consensus that the strongest means of drawing inferences from case studies is the use of a combination of within-case analysis and cross-case comparisons, I followed the definition of case study methods by George and Bennett, who include both in a single research program (2004, 18). Thus, I regard case studies “as the subset of qualitative methods that aspires to cumulative and progressive generalizations about social life and seeks to develop and apply clear standards for judging whether some generalizations fit the social world better than others” (2004, 19).

Among others, case study methods are particularly valuable for testing hypotheses and theory development. In comparison to quantitative methods, case study methods offer four strong advantages. First, they offer potential for achieving high conceptual validity; second, they have strong procedures for generating new hypotheses (Gerring 2007, 38; George and Bennett 2004, 20-21); third, they enable a close examination of the hypothesized role of causal mechanisms in the context of individual cases and fourth, are apt for addressing causal complexity (George and Bennett 2004, 19). For their relevance to the present study, I explain in more detail advantages number two and three.

³⁷ For a pioneering study on the usage of the comparative method to investigate social revolutions, see “States and Social Revolutions. A comparative analysis of France, Russia and China” by Theda Skocpol (1979).

3.2.1. ADVANTAGE NUMBER TWO OF THE CASE STUDY METHOD: GENERATION OF NEW HYPOTHESES

Through the study of deviant or outlier cases and in the course of fieldwork –e.g. face-to-face interviews, archival research, etc.–, the case study method has powerful advantages in the heuristic identification of new variables and hypotheses. For instance, when the researcher asks “‘were you thinking X when you did Y,’ and gets the answer, ‘No, I was thinking Z,’ then if the researcher had not thought of Z as a causally relevant variable, she may have a new variable demanding to be heard” (George and Bennett 2004, 20).

If we pose one question concerning “individuals or documents but get an entirely different answer, we may move to develop new theories that can be tested through previously unexamined evidence” (George and Bennett 2004, 21). Statistical methods can of course identify deviant cases that may lead to new hypotheses, however per se they lack any clear means of actually identifying new hypotheses. This applies to all studies using current databases or that modify them only to a certain extent or without resorting to primary sources. Excepting that, statistical researchers conduct their own archival work, interviews, or face-to-face surveys with open-ended questions aiming to measure the values of the variables in their model; they have no inductive means of easily identifying left-out variables. Deductive theorizing can as well identify new variables, but excepting exclusively deductive theories, inductive field research methods usually lie behind every newly identified variable (George and Bennett 2004).

3.2.2. ADVANTAGE NUMBER THREE OF THE CASE STUDY METHOD: EASE TO EXAMINE IN DETAIL THE OPERATION OF CAUSAL MECHANISMS IN INDIVIDUAL CASES

Even within a single case, it is possible to look at a large number of intervening variables and inductively observe any unexpected aspects of the operation of a particular causal mechanism. Likewise, researchers can identify what conditions present in a case activate the causal mechanism. On the other hand, statistical studies necessarily omit many contextual and intervening variables by not considering all contextual factors with the exception of those codified in the variables selected for measurement or used for constituting a population of cases (George and Bennett 2004).

Due to its particular nature between high and low politics, transgovernmental networks in the biosecurity field may constitute deviant cases within the transgovernmental networks classification. Since the aim of this research is to identify the conditions under which TGNs are more effective than IGOs, it may also shed light on the precise conditions that activate the causal mechanism, i.e. contribute to the surge of more effective institutional arrangements, regardless of whether they are transgovernmental or intergovernmental.

Since I'm interested in networks as forms of coordinated action whose aim is to change international outcomes and national policies, and not in the relational structures within the network, I will not employ the methodology of SNA, but a combination of qualitative methods (i.e. case study, elite interviews and content analysis). As stated in Chapter one, the network-as-actors' perspective lacks a common methodology. Consequently, its empirical methods have been diverse and mostly qualitative. In that respect, when applying the network-as-actors approach, Kahler (2009a) advises to first identify the network as a network, and second to assess its organizational advantages and disadvantages in promoting collective goals (6).

3.3. OTHER METHODS AND RESEARCH TOOLS.

In addition to qualitative methods, this research employed descriptive statistics. To collect the empirical data, which served to determine the conditions under which it is better to opt for a TGN, I designed an on-line questionnaire and conducted face-to-face, telephone and Skype semi-structured interviews with the participants and organizers of the transgovernmental and intergovernmental Senior and Ministerial meetings. Concerning the participants, I interviewed Ministers, Deputy Ministers, Ambassadors and other Senior Civil Servants ascribed to the Ministries of Health, Foreign Affairs and Defence. In the case of the meeting's organizers, I mostly talked to General Directors of International Relations ascribed to the Ministries of Health or to high-ranking bureaucrats (e.g. Secretaries) who are staff members of various IGOs working in the public health field such as the Pan-American Health Organization, the IGAGS-UNASUR, the Andean Health Organization, and the Amazon Cooperation Treaty Organization

To increase the explanatory power of the theoretical framework, and consequently to enhance the prescriptive application of the findings, I interviewed health specialists working in health-related research institutes (e.g. *Fundação Oswaldo Cruz*), universities (e.g. Toronto University), and pharmaceuticals (e.g. Lilly). Due to the technical nature of the field, the level of specialization and the rotation within the health sector, it made sense to talk to those who in the past held key positions in a Ministry of Health, IGO or both, but now conduct research or work for the private sector. Consequently, I had to design one questionnaire, which were able to accommodate and sort the viewpoints of both, i.e. health specialists and senior civil servants.

3.4 SUBJECT RECRUITMENT AND DATA COLLECTION.

Taking into account the difficulties of conducting research in various locations and in such sensitive field, I gave my respondents several alternatives, including establishing a face-to-face, a telephone or a Skype interview. I also offered them the possibility of filling in an on-line questionnaire but only a few preferred this option. In all cases, I sent an e-mail or a tweet message³⁸ to potential respondents explaining the research purpose and goals, what their participation required and included a hyperlink to the on-line questionnaire. If the civil servant or the health specialist agreed to participate in the research, she could simply click on the hyperlink and start answering the questionnaire in English, French, German, Spanish, Portuguese or Japanese. Most of the respondents decided however to answer in English and to a lesser extent in Spanish and Portuguese.

I conducted the face-to-face interviews in various cities of four countries i.e. Brazil, Canada, Mexico and the United States, and in two phases: from January, until April of 2012 and from November 2017, until June 2018. Despite their agendas, most of the respondents agreed on a face-to-face interview, which in the majority of cases took place in their offices (ministries, IGO headquarters, research institutes, universities, etc.). Depending on them, I interviewed them in English, Spanish and Portuguese. The Skype and the telephone interviews presented various technical challenges (e.g. dropped calls, delays, and poor-

³⁸ See Annex 2 and 3, e-mail and tweet (respectively) sent to the potential respondents.

quality audio and video) and limitations, hence were not as effective in eliciting information. Concerning the latter, it was more difficult for establishing rapport through telephone or Skype audio interviews. However, it was easier to build rapport when conducting Skype video interviews, but even in those instances, it was not as effective as when having the opportunity to hold a face-to-face interview.

Nonetheless, Skype proved to be a valuable tool for transcending geographical boundaries, saving financial resources and avoiding logistic problems such as finding a suitable location to conduct the interview. Thanks to that, I was able to interview partners in places such as Singapore, Peru, Colombia, Italy or Uruguay, thus increasing the geographical range of the sample. As for the telephone interview (or Skype interviews without video), the absence of non-verbal cues including gestures, body language, etc. sometimes prompted a lower degree of rapport with the respondents and hence, shorter conversations. Regardless of these limitations, Skype and telephone interviews can help as a complementary data collection tool for qualitative researchers aiming to improve their research designs.

I conducted the face-to-face interviews in Ottawa, Toronto, Washington and Mexico City for the first stage of the research, and in Rio de Janeiro and Brasilia for the second stage. I selected the interview partners according to the lists of participants included in the ministerial statements/memoranda of the different organizations and by snowball sampling (at the end of an interview, I asked my respondents to suggest possible interview partners). Concerning the health specialists, I requested interviews to some of the individuals surveyed by the Review Committee on the Functioning of the IHR (2005) and to relevant scholars working in the same field. I decided to analyse the participants' responses according to the methodologies of qualitative content analysis and descriptive statistics enabled by Zoho platform³⁹.

The aim of conducting semi-structured interviews with open-ended questions was to elicit information about the working methods of the TGNs, and the participant's perceptions and motivations. Some of the advantages of conducting semi-structured interviews are that they can provide detail, depth and an insider's perspective about what is relevant while

³⁹ See: <https://home.zoho.com/home>

simultaneously allowing testing of hypothesis (Berry 2002, 681; Leech 2009, 665). As argued by Wasserman and Faust, this proves to be important, for example, for expressing patterns of regularities in relationships among the members of the different TGNs (2007, 3), and particularly, for explaining the way in which an actor exerts influence over another actor, or for understanding policy learning. Likewise, as argued by Van Evera, the insights of actors or observers who take part in the meetings or provide the technical information contribute to inferring new hypotheses (Van Evera 1997, 26).

Since elites prefer to articulate their views and because I aimed to give respondents maximum flexibility, I opted for open-ended questions when conducting a face-to-face interview (Aberbach & Rockman 2002, 673). Another reason to select an open-ended approach rather than one using only close-ended questions hinges upon the limited amount of previous research (Avery 2010, 3). The more that a subject of concern is known, the easier it is to define the questions and the response options with clarity, in other words to use close-ended questions. The decision to use mostly open-ended questions comes unfortunately at the cost of analytical rigor. However, it is more valuable to answer the initial research questions in the most reliable way than to rigorously analyse data which is less reliable (Aberbach & Rockman 2002, 674). In spite of its deficiencies, interviewing is often the best tool to elicit information about the motivations of the actors, the role of agency in the events of interest and for establishing how the actors arrive at their opinions, and for determining how subjective factors influence political decision-making (Gerring 2008, 686; Gerring 2007, 45).

To preserve the identity of my interviewees, I anonymized their answers in the following way: I labelled responses depending on whether the interviewee participated in an international meeting or helped to organize it. I assigned a *P* for participants and an *O* for organizers. The former comprise ministers, vice-ministers or health senior civil servants ascribed either to the Ministry of Health (MoH), Ministry of Foreign Affairs (MoFA) or to a health-related IGO (e.g. PAHO). While the latter (i.e. *O*) were mainly International Relations General Directors ascribed to their country MoH. Besides specifying the ministry of affiliation (i.e. MoFA or MoH), role (i.e. *P* or *O*) I assigned all respondents a consecutive number (1,2,3...). Finally, I represented experts not ascribed to government organizations

with an *E* and also assigned them a consecutive number. Thus, I registered respondent statements in the following way: **Anonymous interviewee, P1 MoH** (i.e. participant 1 ascribed to the Ministry of Health).

To mitigate some of the deficiencies of interviews, I also conducted an analysis of relevant documents (TGNs ministerial statements, action plans and WHO reports of the Review Committee on the functioning of the IHR) to make inferences about the antecedents, characteristics and effects of a communication (Harris 1996, 458-67). To complement and to evaluate the primary sources, as well as to understand the public context in which health policy makers operate (George & Bennett 2005, 97), I examined contemporary public sources such as the daily Health Security Headlines issued by the Center for Health Security ascribed to Johns Hopkins University.

Finally, for visualizing the network interactions between and within the different institutional arrangements, I used one social network analysis program called Visone (e.g. see network 1 on p. 14). However, I need to clarify, that my aim was not to quantitatively analyse the transgovernmental networks with the help of this program, rather to graphically represent the interactions that take place within and between different TGNs for a better understanding of their nature, scope and potentialities.

3.5. QUESTIONNAIRE DESIGN

I designed and hosted the questionnaire on Zoho platform⁴⁰. Zoho is a web-based online office suite containing word processing, spreadsheets, presentations, databases, note taking, etc. As part of its services, Zoho enables designing and distributing surveys via e-mail. As a first step, I drafted a preliminary version of the questionnaire, which I then submitted to three researchers who checked the content and the structure of it. Once they sent me their observations, I simplified the layout and adjusted some questions. As part of the restructuring, I reduced the number of questions and with the help of Zoho, I translated the questionnaire into Portuguese, French, German, Spanish and Japanese. This enabled me to

⁴⁰ See appendix 4 and online questionnaire on:
<https://survey.zoho.com/survey/newui#/preview/314970000000002007?portalid=655920406&zsgid=hSCumC>

offer my potential respondents the opportunity to answer the survey in the language of their preference. At last, to check the functionality of Zoho platform, I asked the same researchers to conduct a pilot testing.

Responses were securely stored, classified and analysed on the same platform, accessible only by the researcher through a password. The questionnaire included 18 open-ended and closed-ended questions of which, four were open-ended, three purely close-ended and the remaining eleven were multiple choice, Likert- type scales and rank order questions. These mix methods questions served two purposes: one the one hand, they enabled the respondent to add information she felt may have been missed in the structure of the question or provided any other information she deemed necessary, and on the other, they allowed me to estimate the degree of influence/importance and effectiveness of the selected organizations. Likewise, the eleven questions served to detect the strengths, weaknesses and degree of flexibility of TGNs and IGOs working in the biosecurity field. I included the open-ended questions such as question number four⁴¹ for identifying causal mechanisms and knowing under what conditions TGNs can surge.

Due to the limited resources and the impossibility of conducting face-to-face interviews in all the countries and continents where the selected biosecurity TGNs operate, I decided to use Zoho platform as a tool for increasing respondent rate, reaching distant locations, organizing responses and analyzing data through basic statistical analysis (e.g. frequency and basic central tendencies). Since I only analyzed and compared against each other five instances of transgovernmentalism, which do not aim to account for the whole phenomena, I decided not to use the sophisticated statistical analysis usually employed in quantitative methods. Consequently, it is not the goal of this research to achieve a statistically significant test of any of the hypotheses/conditions presented in chapter two, rather, as previously stated, to identify new variables and contribute to theory building.

⁴¹ **Question number 4:** TGNs vs IGOs in the biosecurity field, is it a matter of choice? Why? If there is a choice, who takes the decision on behalf of your government?

3.6. SELECTION OF CASES

This research consists of nine case studies, which I compared against each other, i.e. five Transgovernmental Networks (TGNs) and four Intergovernmental Organizations (IGOs). The members of the analysed TGNs include countries from the global south, but also from the developed world and spread the five continents. The studied cases/instances are the Global Health Security Initiative (GHSI), the North American Coordinating Body for Pandemic Influenza (NACOBPI), the BRICS Health Network, the APEC Health Working Group and the Foreign Policy and Global Health Initiative (FPGHI). I refer to these organizations as positive cases, whereas I treat IGOs as negative or control cases.

The GHSI⁴² is integrated by the G7 and Mexico, whereas the NACOBPI is only integrated by the United States, Mexico and Canada, however as revealed in the interviews there is a high degree of communication and coordination between members of both networks. On the other hand, the BRICS Health Network is composed of Brazil, Russia, India, China and South Africa; while the APEC Health Working Group is integrated by the 21 economies of Asia-Pacific; and last, the FPGHI' membership comprises Brazil, Indonesia, Norway, Senegal, South Africa, Thailand & France.

Concerning the intergovernmental organizations, the cases I analysed are the Panamerican Health Organization (PAHO), the World Health Organization (WHO), the South American Institute of Governance in Health (ISAGS) ascribed to the UNASUR and the Community of Portuguese Language Countries (CPLP). I regard the first case as typical and the second one as influential, whereas I selected the third, the fourth and the fifth networks because of geographical diversity. Finally, the four latter cases are formal and hierarchical IGO's. They were included as a means for showing variation in the dependent variable i.e. organization type (membership, scope, centralization, control, flexibility, obligation and precision), but also as a contrast –as suggested by Skocpol in *States and Social Revolutions*- to underline the similarities between the five TGNs. In sum, following Skocpol & Sommers (1980:185), I included negative or control cases as a means for contributing to

⁴² Representatives from the European Union Commission and the WHO also integrate the GHSI. However, they act as technical advisers and liaison officers with their respective organizations.

validate the study central argument (i.e. that governments select TGNs because they regard them as more apt for dealing with biosecurity threats).

The main reasons to opt for the case study format are to fact check, to consult multiple sources, to overcome biases affecting the secondary literature, and to shed light on causal mechanisms that often remain obscure in cross-case analysis (Gerring 2007, 59, 73). Therein, it is important to clarify that the present research does not analyse in depth all TGNs operating in the biosecurity field. Likewise, “it does not study a ‘random’ sample from the entire universe of possible cases”. Indeed, as underlined by Skocpol, comparative analysis yields better results when applied to a set of a few cases that share certain basic features. Consequently, she advises researchers to carefully select the cases and make explicit the criteria for grouping them (1979, 40).

The selected cases are all instances of what Fidler and Gostin call “international biosecurity cooperation” (2008, 4). In other words, they deal with the dangers presented by pathogenic microbes whether intentionally released, as in the cases of the WHO and the GHSI or naturally occurring as in the case of all organizations. Nonetheless, the GHSI and the NACOBPI vary in two important institutional dimensions: scope and membership.

Whereas the GHSI has a broader scope, because it deals with different forms of terrorism (biological, chemical, radiological and nuclear) and influenza pandemics (e.g. AH1N1 & H5N1), the NACOBPI only tackles the latter. In contrast, the NACOBPI exhibits more variation in terms of membership than the more homogeneous GHSI. The membership of the former includes senior officials from different ministries/agencies such as Interior and Foreign Affairs (see table 4). If deemed necessary, representatives from other ministries can always join discussions, whereas in the latter, it is usually restricted to Senior Officials and Ministers/Commissioners of Health⁴³.

⁴³ See terms of reference of the North American Plan for Avian and Pandemic Influenza (NAPAPI), http://www.montebello2007.gc.ca/doc/pandemic_en.pdf; and GHSI background section, <http://www.ghsi.ca/english/background.asp>

Table 4. Membership of the NACOBPI.

Canada	United States of America	Mexico
Department of Foreign Affairs and International Trade	U.S. Department of State	Secretariat of Foreign Affairs
Public Safety Canada		General Health Council
Public Health Agency of Canada	U.S. Department of Health and Human Services	Secretariat of Health
Health Canada		National Committee for Health Security
	U.S. Department of Homeland Security	Secretariat of Governance
Canadian Food Inspection Agency	U.S. Department of Agriculture	Secretariat of Agriculture and Rural Development
	U.S. Department of Defence	
	U.S. Department of Transportation	

Source: Author, based on the North American Plan for Animal and Pandemic Influenza (NAPAPI).⁴⁴

As in other TGNs in the security domain, I am expecting to see the same senior officials attending the meetings of the different TGNs (see network 1) dealing with biosecurity threats (Lipson 2006, 187). Therefore, I assume that the frequent meetings would contribute not only to increase transgovernmental contacts, and to develop transgovernmental coalitions based on common or complementary interests (Keohane & Nye 1974, 50–52), but also to achieve a higher degree of effectiveness⁴⁵ (*Ibid*, 47).

The GHSI, the NACOBPI, the BRICS Health Network, the FPGHI and the APEC Health Working Group are TGNs because they meet the three main characteristics that differentiate them from IGOs, i.e. membership, structure and degree of legalization (Eilstrup-Sangiovanni 2009, 198). The NACOBPI is an example of regional TGN. The reason to include this TGN is to discover what variance the hypotheses can predict across time and space (Van Evera 1997, 35), and to better evaluate the theory by way of collecting data in as

⁴⁴ Cfr. <https://www.publicsafety.gc.ca/cnt/rsrscs/pblctns/nml-pndmc-nflnz/index-en.aspx#a2.1>

⁴⁵ Skype interview with a former health senior official who participated in several meetings of the GHSI, the NACOBPI and the APEC Health Working Group, interview conducted 06/04/2012.

many diverse contexts as possible (King *et al.* 1994, 24). The NACOBPI may also prove to be an influential case, i.e. the case that despite casting doubt about the theory may help us to prove it or to reconceptualise it (Gerring 2008, 657).

As in the case of the BRICS Health Network, the NACOBPI appears to meet all conditions suggested by the theory with the exception of condition number two related to the commitment and the capacities of the involved states (Avery 2010, 8-9)⁴⁶. As evidenced during the Influenza pandemic when Mexico's health system had to rely on the Canadian National Microbiology Laboratory in Winnipeg to decode genetic makeup of AH1NI flu virus⁴⁷. We could similarly apply the same argument to South Africa, which according to some interviewees would be the less capable partner within the BRICS Health Network.

Network number two shows all TGNs analysed in chapter four. Likewise, it displays the links between some of the more influential TGN members (i.e. more connected) as well as the links among different networks. For instance, the United States, Canada and Mexico belong to the GHSI, the NACOBPI and the APEC Health Working Group, whereas China and Russia are members of the BRICS Health Network and the APEC Health Working Group. Both Brazil and South Africa belong to the BRICS Health Network and the Foreign Policy and Global Health Initiative. Of all networks, the GHSI and the NACOBPI are perhaps the most integrated and the ones that collaborate the most, as exemplified during the A(H1N1) Influenza pandemic.

Lastly, it is important to clarify that the linkages between the various TGNs represent not necessarily a tie but the multiple memberships certain States/economies have (e.g., France, represented by a dark blue rhombus bordered in red is linked to the GHSI and the FPGHI). The GHSI serves as a typical case of a TGN since it exemplifies a representative set of values of this kind of organizations (Gerring 2007, 91). To be specific, it meets all of the mentioned criteria. With regard to the membership, the actors representing the state are neither head of states nor ministers of foreign affairs but high- and mid-level officials from the ministry of Health. Regarding the structure of the GHSI, it has lateral ties, a decentralized

⁴⁶ According to Donald Howard Avery, who in 2007 conducted elite interviews in Canada, the U.S. and Mexico, the medical capabilities of the latter were very limited, especially in comparison to the ones of its partners.

⁴⁷ See <https://reliefweb.int/report/canada/public-health-agency-canadas-national-microbiology-laboratory-winnipeg-first-decode>

decision-making and lacks a legitimate organizational authority to settle disputes among its members. In terms of the degree of legalization, cooperation within the GHSI tends to be informal and non-binding. In other words, there is no treaty or ratified charter behind this TGN, and is characterized by its low visibility. Hence, the GHSI would be contingent on the willingness, reciprocal trust and capacities of its members (Eilstrup-Sangiovanni 2009, 198-201).

Another reason to select the GHSI pertains to the need of validating one of Koremenos (2000) rational choice arguments i.e. that in some cases heterogeneity promotes distributional differences and conflicts, such as when less-developed countries join a group of developed countries. In the case under question, I aim to determine whether the inclusion of Mexico in an already established club of homogenous countries (i.e. the G7) provoked distributional differences and conflicts.

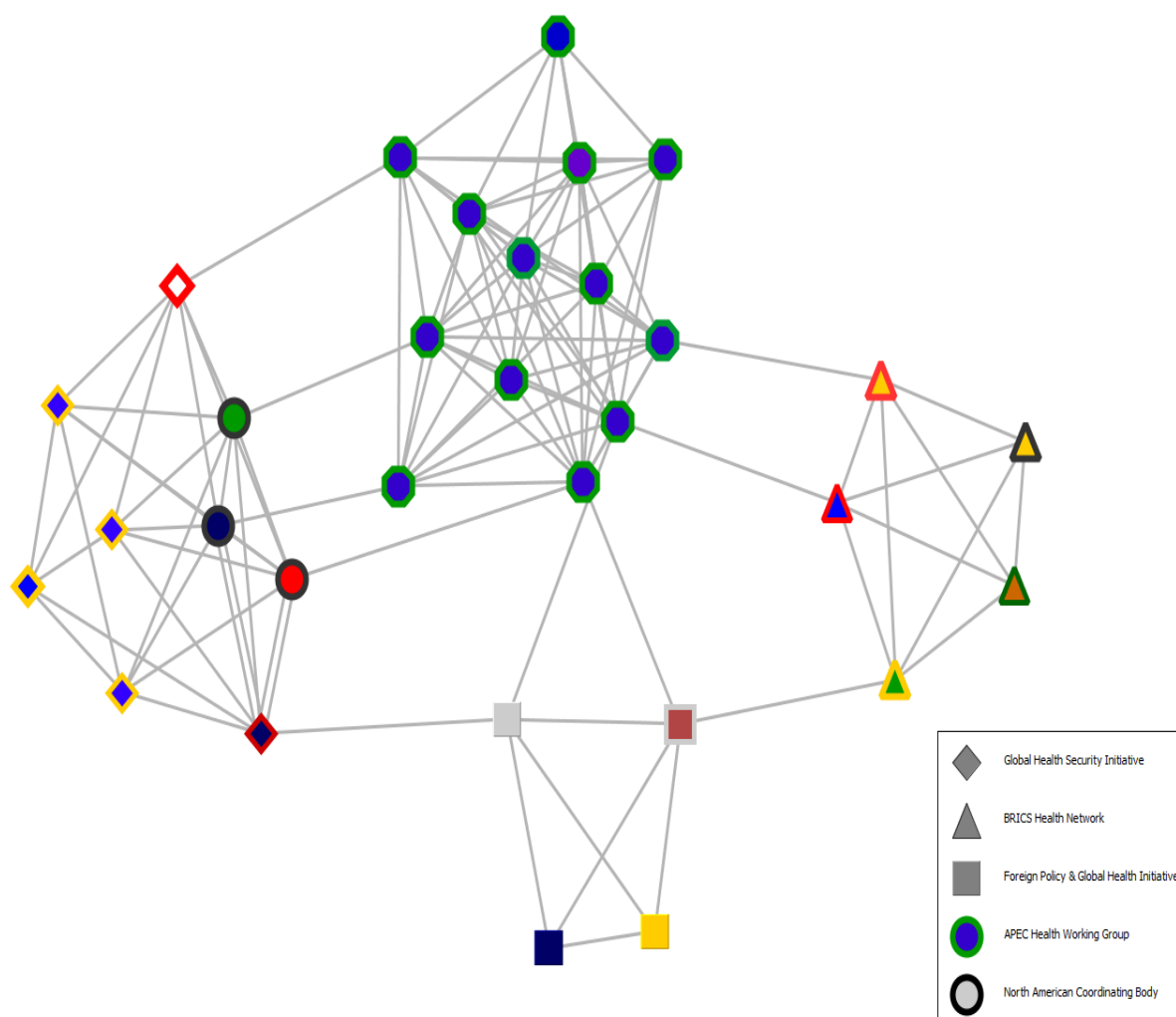
The GHSI was allegedly “not intended to replace, overlap or duplicate existing fora or networks” (GHSI). However, it is not clear which “gap” the initiative intended to fill. Moreover, it is not self-evident why the GHSI members chose to create a TGN to address biosecurity threats, instead of only strengthening collaboration with the WHO from within. As set forth in the IHR 2005, as well as in its constitution, the WHO is mandated to coordinate its activities with other international organizations/bodies to ensure application of adequate measures for the protection of public health and to strengthen the global public health response to the international spread of disease (WHA 2005, p.9, pa.6). This includes diseases such as Smallpox, human Influenza, SARS, Cholera, Ebola, but also events of unknown causes or sources such as biological terrorist attacks (WHA 2005, p. 50).

Otherwise stated, if the WHO is responsible for achieving global health governance⁴⁸, and if the new IHRs are already addressing the same threats as the GHSI, why did the members of the G7 decide to preserve a TGN whose objectives are the same? Is it because they regard the network-form as a more effective institutional arrangement for dealing with biosecurity threats? The answers to these and other questions concerning the effectiveness of

⁴⁸ As set forth in the WHO constitution, the WHO is the only organization in global health that it is mandated to “act as the directing and coordinating authority on international health work”. Constitution of the WHO 45th Edition, October 2006 available at http://www.who.int/governance/eb/who_constitution_en.pdf

both, TGNs and IGOs, as well as their potential for complementing each other will be the subject of the empirical chapters, i.e. four and five.

Network number two: Biosecurity TGNs.



Source: Own elaboration with Visone software

CHAPTER FOUR: RESEARCH RESULTS

4.1. DATA COLLECTION AND CHARACTERISTICS OF RESPONDENTS

Before establishing when is better to cooperate under a certain institutional arrangement, i.e. when is better to design a specific organization and why, I'll start by presenting and analysing the results of the elite interviews I conducted (face-to-face, telephone and via Skype), as well as the answers I got via Zoho. To facilitate and organize the analysis and the comparison, I transcribed and up-loaded all answers I got from the face-to-face, telephone and Skype interviews on Zoho platform. That enabled me to process the data, calculate the basic statistic measures and design the graphs. It is important to clarify that not all interview partners answered all questions, nonetheless that is clearly indicated in the analysis of each of the answers.

Overall, I sent 82 e-mails to the same amount of people requesting either a face-to-face, a Skype or a telephone interview. As a tool for increasing respondent rate, I included a link to the questionnaire at the bottom of the e-mail. Of the 82 requests (without considering phone calls, tweets and follow-up e-mails), half of the potential interview partners responded affirmatively. To my surprise, some of them answered via Twitter, including a couple of former vice-ministers and a current Health Minister from two NAFTA countries. Therefore, I strongly suggest doing a first attempt via that social network. In total, I conducted 19 face-to-face interviews in Brazil, Canada, Mexico and the United States, eight Skype interviews and one phone interview. It is important to note that in four of the face-to-face interviews participated more than one person (two Canadians in one of them, two Brazilians in another, one Brazilian and one Uruguayan in a third interview, and three Americans in the fourth one). On the other hand, two Health Senior Civil Servants from Mexico jointly responded in one Skype interview.

Of the 41 subjects, six interviewees directly answered the on-line questionnaire. Furthermore, there were interviewees who answered the on-line questionnaire and besides decided to give me either a face-to-face or a Skype interview to provide more information. Four of them answered the on-line questionnaire and gave me a face-to-face interview, whereas three interview partners answered it and granted me a Skype interview. The Skype

interviewees were located in Colombia, Italy, Mexico, Peru, Singapore, the United States and Uruguay. Finally, I grouped the answers of the 41 subjects in 34 surveys on Zoho, which is the actual number of interviews I conducted and the questionnaires I received.

Broken down by nationalities, the interviewees come from 12 different countries (see graph 4.1.1.). Of which, Mexico (10), Brazil (9), Canada (5) and the United States (5) account for more than 70 percent of the total. The majority of those who either granted me an interview or answered the on-line questionnaire were health specialists, i.e. ministers, vice-ministers, senior civil servants or international bureaucrats ascribed to intergovernmental organizations such as the WHO, PAHO, UNASUR-ISAGS, the Andean Health Organization (the *Hipólito Unánue* Agreement) and the Amazon Cooperation Treaty Organization (70.59%). The rest of the interviewees are linked either to the ministries of Foreign Affairs of Mexico or Brazil, (23.53%) or to the academia (5.88%).

Graph 4.1.1. Nationality of interviewees



Source: Author.

4.2. CURRENT OR FORMER POSITION RELATED TO GLOBAL HEALTH GOVERNANCE/BIOSECURITY (Q2).

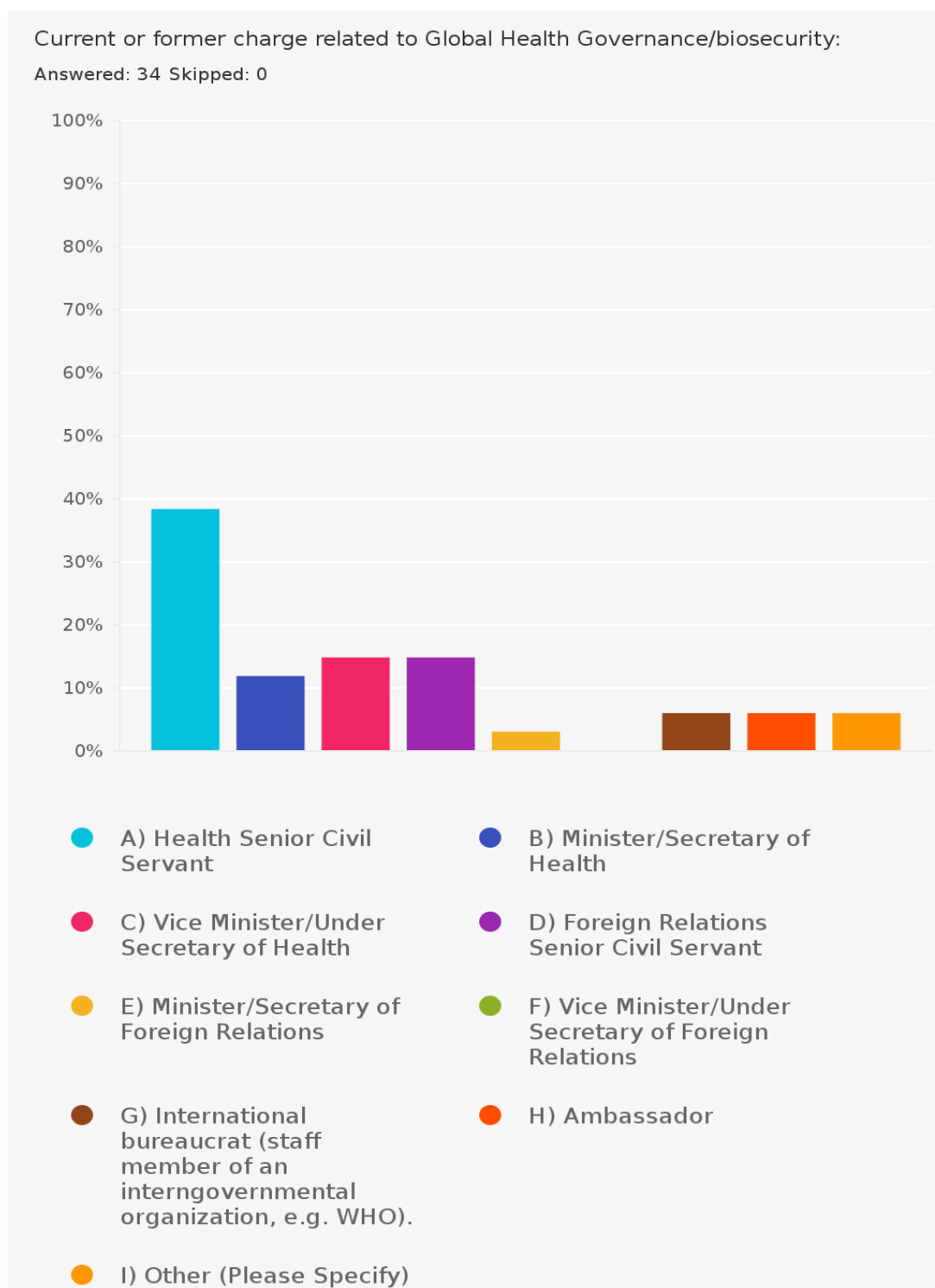
The interviewees reflect to a greater or lesser extent the high level of technical expertise and mobility within the biosecurity issue area, i.e. some of them have already performed different roles in various sorts of organizations (IGOs, governments, research institutes and pharmaceuticals). For instance, two former health ministers of two South American countries occupy nowadays the leading position in two regional IGOs dealing with health. Their cases are not the only ones and the mobility goes likewise the other way around, i.e. from a certain IGO to a national government.

Furthermore, there are interviewees who occupied a position within the ministry of Health but now work as researchers for a National Institute of Health (that is the case of four interviewees). As well, one interviewee occupied a position at a National Institute of Health and recently became a vice minister in the ministry of Health of a Latin American country (see graph 4.2.2.). As we can expect, there are those who occupied a high-ranking governmental position, then joined an important company to finally returning to the government. That is the case of a current health minister of the GHSI. Finally yet importantly, the same representatives of the state frequently attend the meetings of different TGNs and IGOs, hence they have the opportunity to know each other and forge strong ties.

Of the 41 interviewees, nine have occupied the position of International Relations General Director (GD) at the ministry of health in Argentina, Canada, Chile, Colombia, Italy, Mexico, the United States and Uruguay. Among other duties, International Relations GDs are in charge of organizing the meetings of senior officials and health ministers thus integrate the agendas, know how the different institutional arrangements operate and have access to all relevant information.

Since GDs are not the ones that make the final decisions, it made sense to integrate the viewpoints of the ones who –according to Keohane transgovernmentalism- are representing the state and hence are deciding on its behalf: Ministers and vice ministers of ministries other than the Minister of Foreign Affairs. In this study, the former account for 11.76% of all interviewees (i.e. four people) while the latter account for 14.71% (i.e. five people). As seen in graph 4.2.2 all respondents (34) answered question number 2.

Graph 4.2.2. Current or former position related to Global Health Governance/biosecurity.



Source: Author, using Zoho software.

Considering that health, foreign affairs and to a lesser extent defence are interconnected in the biosecurity realm, I included the answers of two ambassadors, one former minister of Foreign Relations and Defence and five foreign relations senior civil servants (see table 4.2.2.1).

Table 4.2.2.1 Current or former charge related to Global Health Governance/biosecurity.

Choices	Response percent	Response count
(1) A) Health Senior Civil Servant	38.24%	13
(2) B) Minister/Secretary of Health	11.76%	4
(3) C) Vice Minister/Under Secretary of Health	14.71%	5
(4) D) Foreign Relations Senior Civil Servant	14.71%	5
(5) E) Minister/Secretary of Foreign Relations	2.94%	1
(6) F) Vice Minister/Under Secretary of Foreign Relations	0.00%	0
(7) G) International bureaucrat (staff member of an intergovernmental organization, e.g. WHO).	5.88%	2
(8) H) Ambassador	5.88%	2
I) Other (Please Specify)	5.88%	2

1. [Professor and researcher](#)

2. [Researcher](#)

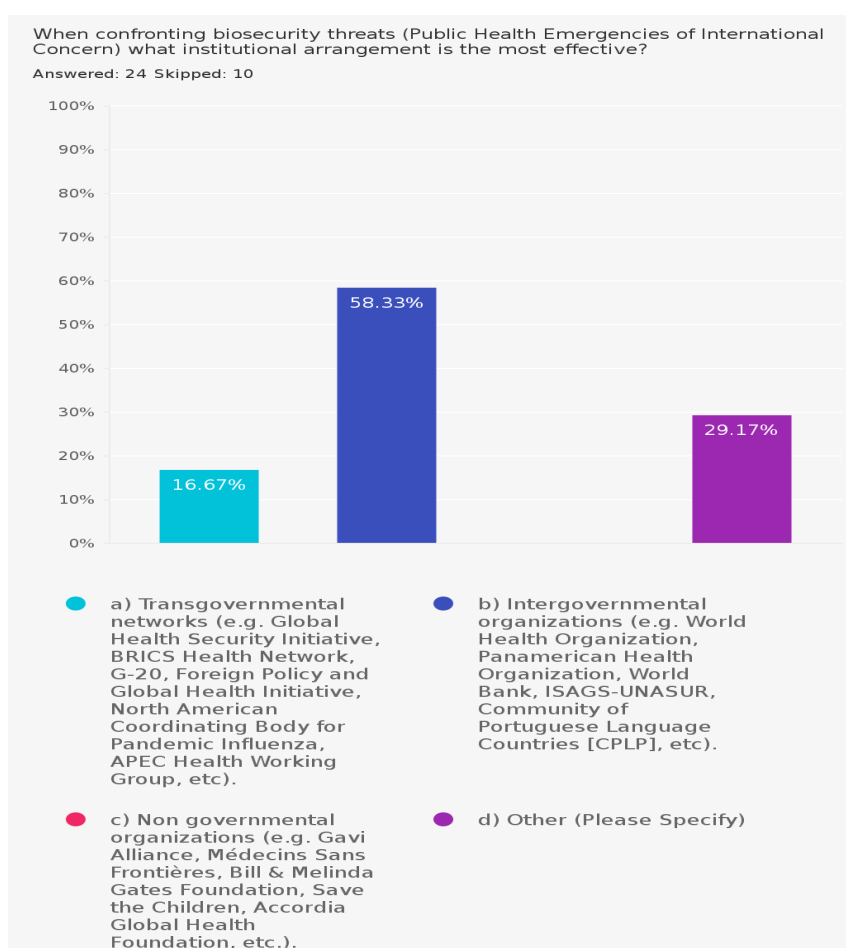
Mean	Median	Standard deviation	Variance
3.21	2.5	2.57	6.59

Source: Author, using Zoho software.

4.3. WHEN CONFRONTING PHEIC WHAT INSTITUTIONAL ARRANGEMENT IS THE MOST EFFECTIVE? (Q3).

I designed the Questionnaire with the aim of accommodating diverse voices, particularly after the WHO's severely criticized leadership during the 2014-2015 Ebola outbreak in western Africa. Therefore, in Question number three I expanded the range of possible options (IGOs and TGNs) to include a third answer related to NGOs operating in the health issue area. One of the NGOs that I suggested as alternative was *Médecins Sans Frontières*, which according to many accounts played a fundamental role in the management of the Ebola outbreak. As a way of avoiding confusion with the names of the organizations, I included examples of all sorts of institutional arrangements (See graph 4.3.1).

Graph 4.3.1. When confronting PHEIC what arrangement is the most effective?



Source: Author, using Zoho software.

As can be observed in table 4.3.2., almost the sixty percent of respondents (14 out of 24 who answered the question) considered that IGOs are more effective for dealing with PHEIC. Despite majoritarian support for the workings of organizations such as the WHO, the World Bank, UNASUR, etc. there are also voices who call for either a coordination between different organizations (29.17% of respondents) or who suggest TGNs such as the GHSI or the BRICS Health Network are more effective than IGOs (16.67%). However, what is striking is that just one out of the 25 interviewees regarded NGOs as an integral part of a coordinated answer to PHEIC. Finally, it is worth mentioning that as claimed by scholars such as Raustiala, some of the interviewees regard IGOs and TGNs as complementary (see comments in table 4.3.2).

Table 4.3.2. When confronting PHEIC what arrangement is the most effective?

Choices	Response percent	Response count
a) Transgovernmental networks (e.g. Global Health Security Initiative, BRICS Health Network, G-20, Foreign Policy and Global Health Initiative, North American Coordinating Body for Pandemic Influenza, APEC Health Working Group, etc).	16.67%	4
b) Intergovernmental organizations (e.g. World Health Organization, Panamerican Health Organization, World Bank, ISAGS-UNASUR, Community of Portuguese Language Countries [CPLP], etc).	58.33%	14
c) Non governmental organizations (e.g. Gavi Alliance, Médecins Sans Frontières, Bill & Melinda Gates Foundation, Save the Children, Accordia Global Health Foundation, etc.).	0.00%	0
d) Other (Please Specify)	29.17%	7

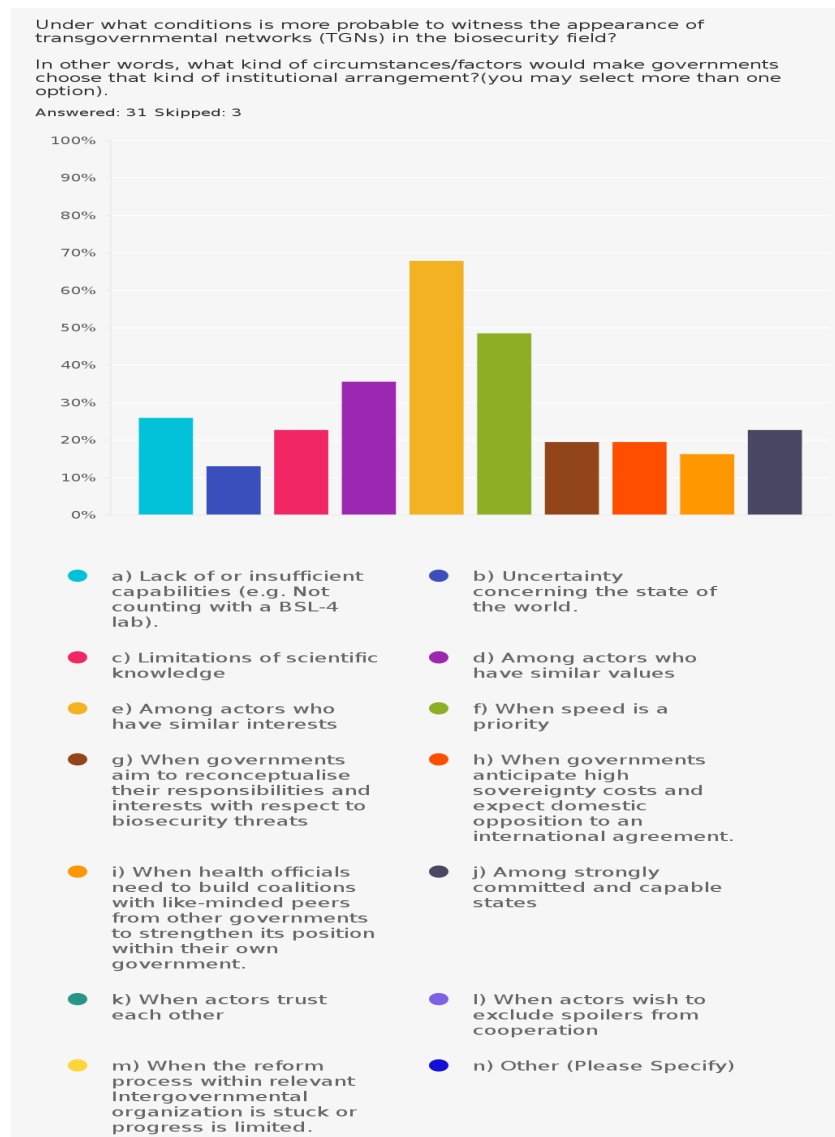
1. There needs to be a coordination of regulatory centers for emergencies with collaborating centers, IGOs and specific work offices of PAHO, WHO and OSHAS.
2. It is necessary to articulate national and international efforts with health-related NGOs working in the field. There needs to be a coordination within the three governmental levels and between the different government agencies.
3. Each of them plays a role
4. It depends on the topic, the circumstances, the context and the moment
5. They are complementary.
6. IGOs y RTGs
7. It depends on the impact. TGNs are good for issues of bilateral interest and IGO for multidimensional issues which are global and regional IGOs for policies which will have impact regionally.

Source: Author, using Zoho software.

4.4. UNDER WHAT CONDITIONS IS MORE PROBABLE TO WITNESS THE APPEARANCE OF TGNs IN THE BIOSECURITY FIELD (Q5).

To know when TGNs are the best option to deal with biosecurity threats we must first find out what factors give them rise. For that purpose, I posed four questions (Q4, Q5, Q15, and Q17) which I located at the beginning and at the end of the questionnaire. Despite the obvious differences among them (see appendix 3), the four pointed in the same direction and served as follow-Up questions. In this section, I present the results to question five and reserve a more detailed analysis for Chapter 5, where I link the theory with the evidence and answer the main study question.

Graph 4.4.1. Conditions under which is more probable to witness the appearance of TGNs in the biosecurity field.



Source: Author, using Zoho software.

Question 5 was answered by 31 respondents and skipped only by three, hence it offers a high degree of reliability (see graph 4.4.1). As table 4.4.2 illustrates, 21 respondents (67.74%) regard similar interests as the most important factor to select a TGN. In line with other studies focused on TGNs, 15 respondents (48.39%) point to speed as a second important factor that would be behind the appearance of TGNs. On the other hand, similar values also play a role for 11 respondents (35.48%). This is by no means a minor issue. Networks are like-minded clubs where similar or homogeneous values enable cooperation.

Table 4.4.2. Conditions under which is more probable to witness the appearance of TGNs in the biosecurity field.

Choices	Response percent	Response count
a) Lack of or insufficient capabilities (e.g. Not counting with a BSL-4 lab).	25.81%	8
b) Uncertainty concerning the state of the world.	12.90%	4
c) Limitations of scientific knowledge	22.58%	7
d) Among actors who have similar values	35.48%	11
e) Among actors who have similar interests	67.74%	21
f) When speed is a priority	48.39%	15
g) When governments aim to reconceptualise their responsibilities and interests with respect to biosecurity threats	19.35%	6
h) When governments anticipate high sovereignty costs and expect domestic opposition to an international agreement.	19.35%	6
i) When health officials need to build coalitions with like-minded peers from other governments to strengthen its position within their own government.	16.13%	5
j) Among strongly committed and capable states	22.58%	7
k) When actors trust each other	32.26%	10
l) When actors wish to exclude spoilers from cooperation	3.23%	1
m) When the reform process within relevant Intergovernmental organization is stuck or progress is limited.	12.90%	4
n) Other (Please Specify)	61.29%	19

Source: Author, using Zoho software.

Three additional factors are worth mentioning: Lack of insufficient capabilities (a), limitations of scientific knowledge (c) and trust (k). The first two relate to the specificities of the biosecurity field. For example, not counting with a BSL-4 laboratory, as it was Mexico's case during the Influenza pandemic, would prompt governments to cooperate with countries perceived as (more) capable and not with those who are not. On the other hand, limitations of scientific knowledge as actually experienced at the outset of the AH1N1 Influenza outbreak, the Anthrax terrorist attacks or the Zika epidemic in South America would push governments to cooperate with those who have better information.

According to a European Health Vice Minister the need to expand scientific knowledge was the reason why his country decided to join the GHSI (Skype anonymous interview, P1 MoH). Limitations of scientific knowledge when dealing with the new strain of influenza also drove the Mexican government to seek support in its North American partners. Indeed, it was thanks to personal contacts and previous agreements contained in the NAPAPI that Mexican epidemiologists resorted to his colleagues in Winnipeg and Atlanta to find out whether they were dealing with a new virus. Finally, according to the literature on TGNs, trust is one of those important prerequisites for selecting the network form. The answer: "when actors trust each other" was selected by 10 respondents, representing 32.26% of the total. This should come as no surprise, if we bear in mind that TGNs are selective clubs, which unlike IGOs can and do restrict membership. Evidence of this is the fact that the GHSI (the G7+Mexico) never admitted Russia (despite being an old chump of the G8) but Mexico. According to various respondents, -for reasons that I will analyze in the following chapter-, members of the TGN distrust Russia.

Mention apart deserve the other answers respondents gave. In addition to the factors I suggested (a-m), 19 respondents (61.29%) considered there are other reasons why governments decide to select a TGN. The factor they mentioned the most was geography/geopolitical reasons/common borders. Nine out of 19 agreed that geography was an important reason for the creation of TGNs such as the NACOBPI, the APEC Health Working Group or the GHSI. Other reasons why governments select TGNs are like-mindedness, shared understandings and challenges, need of having free and direct conversations with peers, to have more liberty when deciding, sovereignty concerns, to

escape public scrutiny/to have secrecy, to evade bureaucratic hurdles associated with IGOs, etc. Additionally, some of these respondents regard the need for reforming institutions or influencing global governance as reasons to opt for the network form (to confront all answers provided by the 19 respondents see table 4.4.3). To a higher or lesser extent, all these reasons have been cited as reasons to prefer TGNs (Eilstrup-Sangiovanni 2009; Slaughter 1997, 2003; Kahler 2009; Krahmann 2005; Lipson 2006; Eberlein and Newman 2008; Puetter 2006; Cozine 2010; Blazejewski 2008).

Table 4.4.3. Other factors that would make governments select TGNs in the biosecurity area.

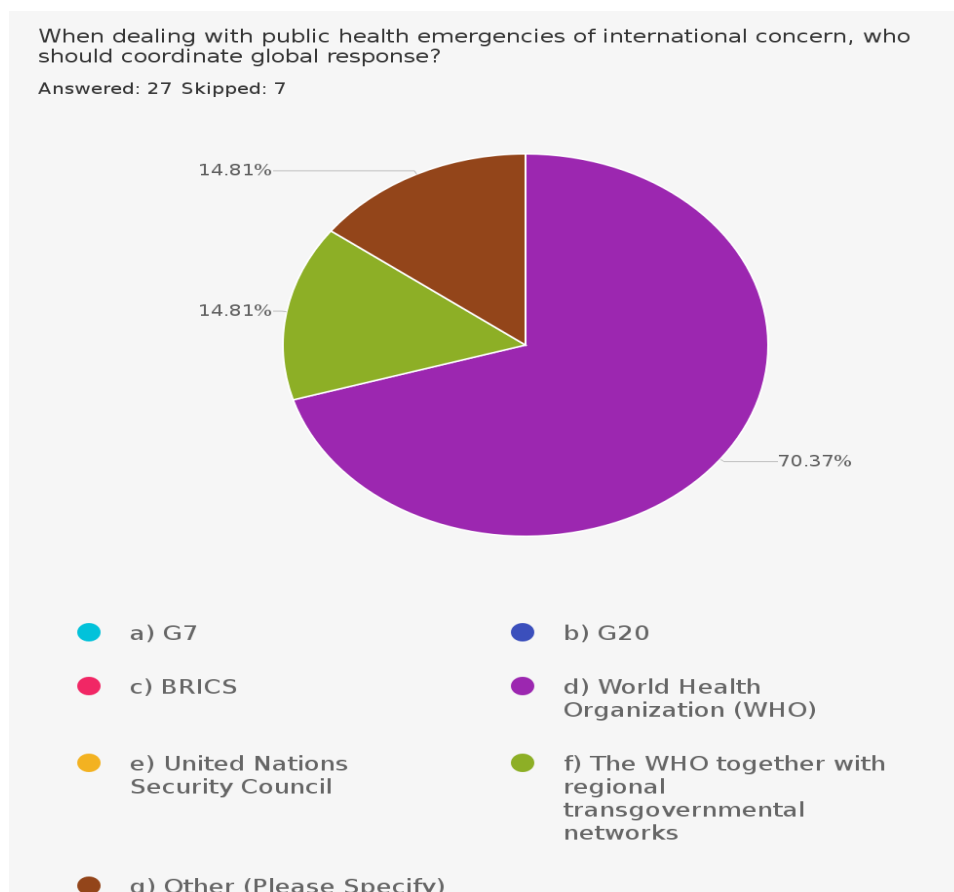
1. Geographical proximity
2. By specific needs in specific subjects
3. Need to strengthen some position, requirement or initiative to reach the presidents themselves and international and regional organizations
4. Geography (common border with the USA); Dissatisfaction with intergovernmental mechanisms (the WHO is a heavy and non-agile mechanism)
5. Uncertainty depends on the type of event; when there is the need of a quick connection; historical institutional experiences; sovereignty concerns; urgency of a matter; secrecy; level of anxiety
6. Number of actors; the IGO is bureaucratic; complications of international politics; in the face of a serious, significant and potential deadly threat; geography.
7. To guard against public scrutiny; when fighting biological or chemical terrorism; between like-minded countries
8. When there is a political disposition to occupy more spaces in international governance; when there is a common goal; when you want to reform the institutions
9. Need for a more agile response, communication and technical response
10. Need to have coordination in a certain topic; need to have more freedom to discuss, for example which ways to follow, what policies to undertake
11. Geopolitical concerns (common border)
12. Geography; Economic interests; Urgency; when there is transparency among members; among members who have worked together for a long time (history course of action).
13. complexity
14. To interact directly with your peers; to have more liberty when deciding
15. Governance structures
16. topic of common interest, common borders, leaderships who share the same ideology (UNASUR)
17. Geographic proximity (NAPAPI); a threat triggers an organizational form (avian influenza [NAPAPI] and biological terrorism (GHSI) threat risk assesment; like-minded; not to count with a specific fora for bioterrorism
18. Geography (to share a border); when the IGO is bureaucratic; risk perception; technicality of the issue in question; a specific threat (e.g. 9/11 terrorist attacks)
19. need to talk freely and directly to colleagues; likemindness, shared understandings and challenges; Geography (needs of neighbors/partners); need of having direct conversations on issues of bilateral interest; economic reasons for regional TGNs

Source: Author, using Zoho software.

4.5. WHEN DEALING WITH PUBLIC HEALTH EMERGENCIES OF INTERNATIONAL CONCERN, WHO SHOULD COORDINATE GLOBAL RESPONSE? (Q6).

Twenty-seven respondents answered question 6 and 7 skipped it (see graph 4.5.1). The question offered them several alternatives, which comprised both IGOs and TGNs, but also let room for a combination of actors. One of such alternatives was letter f, which suggested a collaboration between the WHO, and regional transgovernmental networks as argued by Fidler & Gostin (2008) and Avery (2010). Due to the particularities in the institutional handling of the Ebola epidemic, I decided to include a controversial alternative (i.e. letter e. - the UN. Security Council). Although nobody selected this alternative, it enabled me to know more in detail the respondents' attitudes towards what some called the securitization of health. To accommodate the voices of those who would favor a different constellation of actors, including NGOs, I added letter g and asked my respondents to specify the actors.

Graph 4.5.1. When dealing with PHEIC, who should coordinate global response?



Source: Author, using Zoho software.

The TGNs I selected as options for this question (i.e. the G7, the G20 and the BRICS Health Network) are the most active in global health governance, but also the ones who according to various scholars could become the alternative to the WHO (see Chapter 1, 1.3.3). In other words, these scholars consider that TGNs such as the G7/G8 could become the “global health governor” or the “global health governor of last resort” (Cooper, Kirton & Schrecker 2007; Price-Smith 2001; Price-Smith 2002; Bayne 2000; Hajnal 2002).

Despite long-lasting critiques to the work of the WHO, 70.37% of respondents (19 people) considered this IGO should continue coordinating global response when facing PHEIC such as the 2019 Ebola epidemic in the Democratic Republic of Congo (see table 4.5.2). Nonetheless, it is important to note that almost one third of interviewees (29.62%) favoured a different institutional design. Half of them (14.81%) suggested the WHO together with regional TGNs should coordinate global response, whereas the other half favoured other options such as the WHO concurrently with the U.N. Security Council (one respondent), the sub regional offices of the WHO in combination with regional TGNs (one respondent) or, a horizontal coordination among various actors (one respondent).

Table 4.5.2. When dealing with PHEIC, who should coordinate global response?

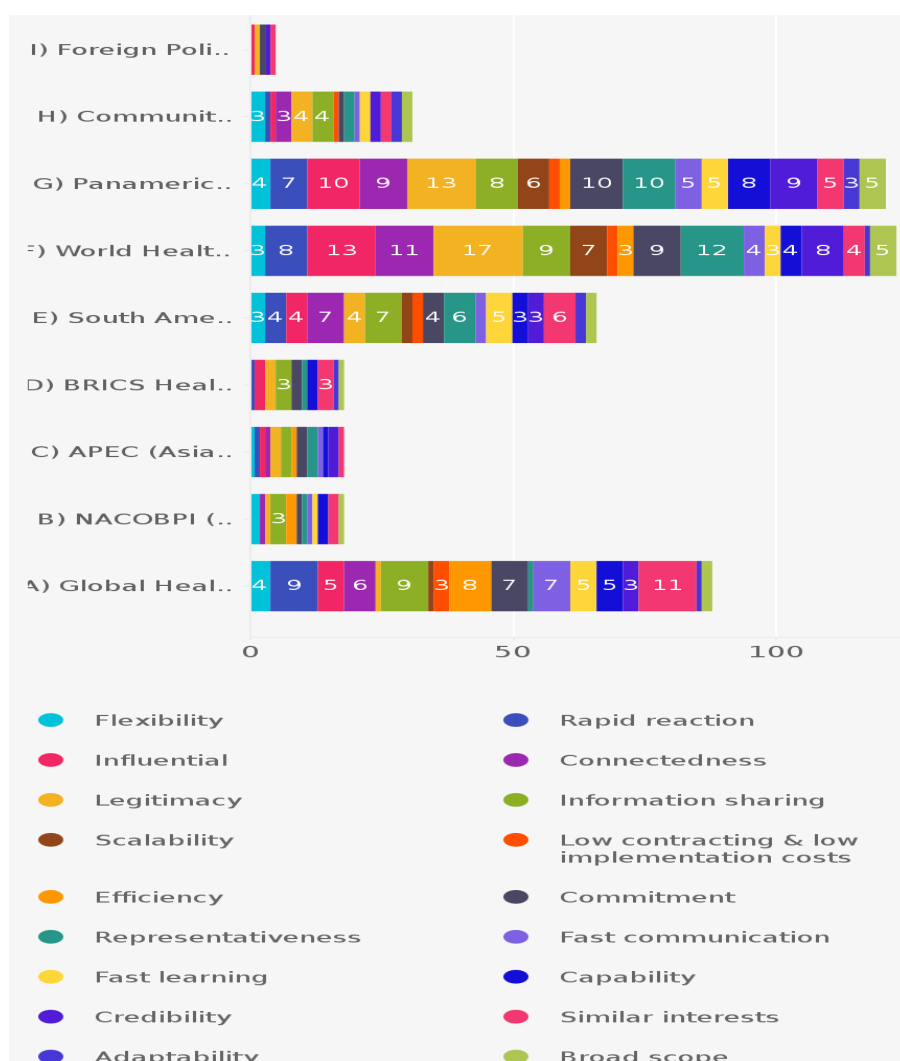
Choices	Response percent	Response count
a) G7	0.00%	0
b) G20	0.00%	0
c) BRICS	0.00%	0
d) World Health Organization (WHO)	70.37%	19
e) United Nations Security Council	0.00%	0
f) The WHO together with regional transgovernmental networks	14.81%	4
g) Other (Please Specify)	14.81%	4

Source: Author, using Zoho software.

4.6. WHAT WOULD BE THE INTITUTIONAL STRENGHTS OF FOLLOWING ORGANIZATIONS (Q7).

The aim of this question was to contrast what the literature on networks and rational design regard as institutional strengths with the actual perceptions of respondents. Thus, I asked them to assess strengths while comparing organizations. I listed 18 institutional strengths (flexibility, efficiency, legitimacy, etc.) that could apply in various degrees to TGNs and IGOs. This question is helpful because it enables us to not only grade and compare against each other the different organizations, but also to detect what matter most for policy makers and hence, it gives us clues on how to better design or modify organizations (see graph 4.6.1).

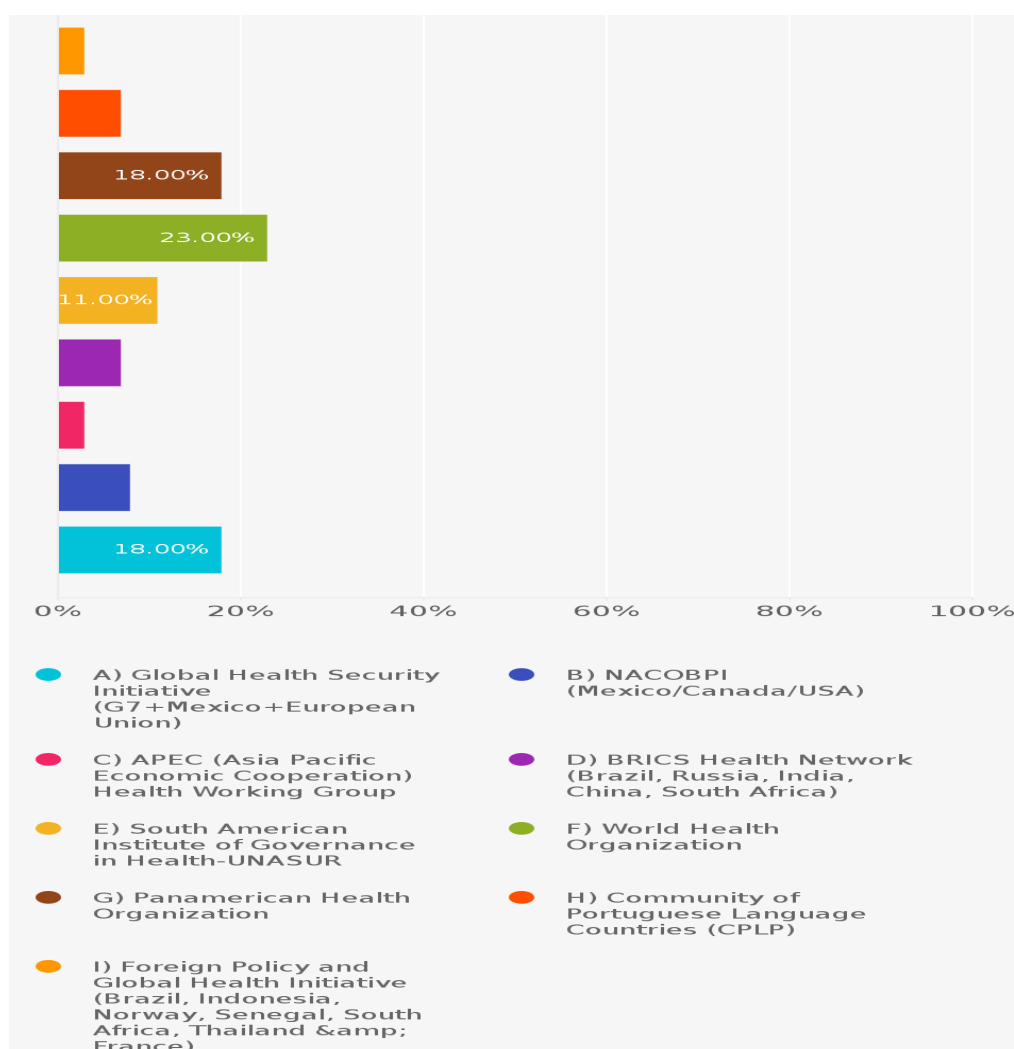
Graph 4.6.1. What would be the institutional strengths of following organizations?



Source: Author, using Zoho software.

Although thirty-three respondents answered question six not all of them decided to rate all organizations. This is partly explained by the fact that I expressly asked them to grade only those they were familiar with or those whose country were a member. Consequently, four out of nine organizations (i.e. the WHO, the PAHO, the GHSI and the UNASUR respectively) got the majority of the assessments (see graph 4.6.2)⁴⁹. The result is not surprising taking into account that with the exception of one European, all respondents come from the Americas, thus are members of PAHO and either the GHSI or the UNASUR.

Graph 4.6.2. Most assessed organizations.



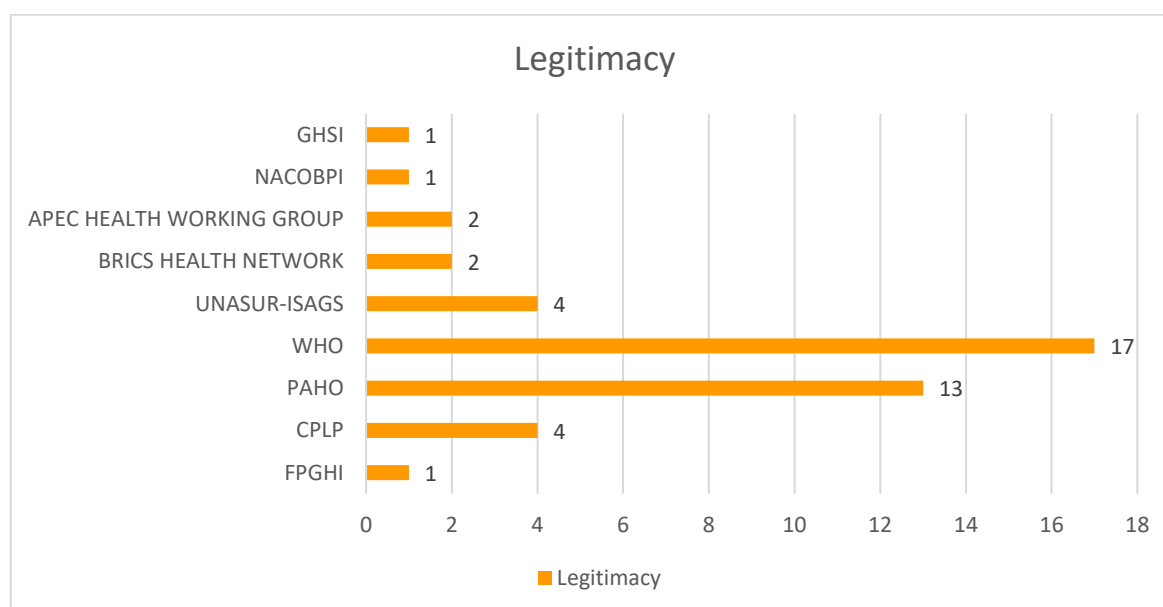
Source: Author, using Zoho software.

⁴⁹ For the sake of clarity, I derived graphs 4.6.2, 4.6.3, 4.6.4 & 4.6.5 from graph 4.6.1.

Said in other words, twenty respondents rated the WHO (23%, as shown in graph 4.6.2), sixteen the GHSI (18%), sixteen the PAHO (18%) and ten the ISAGS-UNASUR (11%). Six respondents (7%) assessed the BRICS Health Network and the CPLP, whereas seven assessed the NACOBPI (8%). The less rated organizations were the FPGHI and the APEC Health Working Group. Only three respondents agreed to assess these two TGNs (3%). Some of the reasons why respondents did not assess them was because their countries did not belong to any of two or because they had very few knowledge as to them and did not want to risk an opinion (this is particularly the case with the FPGHI).

As Graph 4.6.1 indicates, institutional strengths vary from organization to organization (A-I), but also when comparing TGNs (represented with letters A-D & I) with IGOs (E-H). As a way of illustration, seventeen respondents (out of 33) considered that the major strength of the WHO is legitimacy, whereas only one respondent regarded the GHSI as legitimate. This is by no means exclusive of these two organizations, -which by the way were the most evaluated-; we can observe the same trend with the rest of them. In other words, respondents assessed the four IGOs (i.e. WHO, PAHO, CPLP, UNASUR) as more legitimate than the five TGNs (i.e. GHSI, BRICS, APEC, NACOPBI & FPGHI). See graph below.

Graph 4.6.3. Number of respondents who assessed following organizations as legitimate.

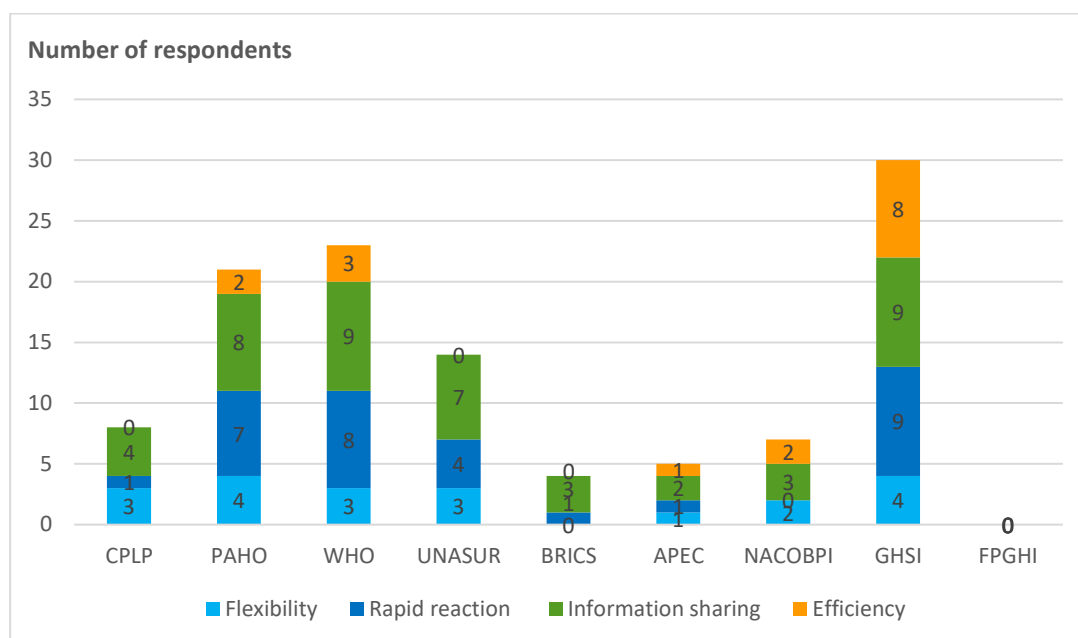


Source: Author's own.

Respondents perceive IGOs as more legitimate than TGNs due in part to its membership. In other words, they value representativeness. Unlike TGNs, which resemble selective clubs, IGOs strive for universal membership. Without a doubt, that is the case of the four IGOs analyzed here. They either comprise all countries of the world (WHO), of a certain geographic region (the Americas in the case of PAHO or South America concerning the UNASUR) or of a cultural community (the CPLP). In contrast, TGNs reserve the right to refuse admission as well as the right to verify –a common- identity as in the case of the GHSI, which defines itself as an “informal international partnership among like-minded countries”⁵⁰. As we will analyze in the following chapter, respondents also linked legitimacy to voting arrangements, and hence with democracy, being this one of the most criticized aspects of TGNs.

According to the literature, TGNs –and networks in general- react rapidly, are flexible, efficient, and good at exchanging information. This seems to be also the case for the GHSI. Nonetheless, the two major IGOs also got plenty of mentions (See graph 4.6.4.).

Graph 4.6.4. Which organizations are more flexible, rapid, efficient and better at exchanging information?

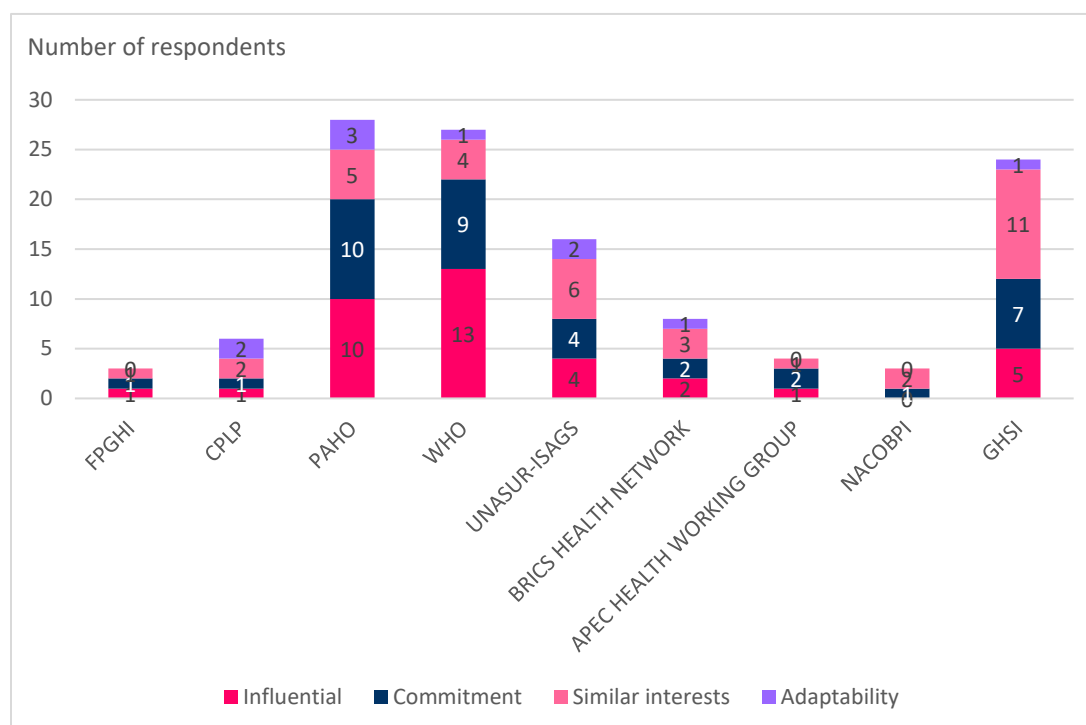


Source: Author's own.

⁵⁰ See <http://www.ghsi.ca/english/index.asp>

In contrast to the WHO, which was assessed by twenty respondents, the GHSI with two less (18, same as PAHO) got more mentions in three out of the four strengths displayed in graph 4.6.4 (i.e. efficiency eight; rapid reaction nine and flexibility four) and the same amount in the fourth one (information sharing nine). For its part, three respondents considered the WHO is efficient, eight that it reacts rapidly, three that is flexible, and nine that is good at sharing information. Although PAHO would be a better parallel to the GHSI due to the equal amount of mentions that it got, only matched it in one strength, i.e. flexibility with four mentions. It is important to note that not even one respondent considered the CPLP, the UNASUR, the BRICS and the FPGHI to be efficient. Finally, respondents deemed that the FPGHI lacks of the four strengths (see graph 4.6.4). A priori, these results would confirm the arguments of some scholars who suggested the GHSI –or previously the G7- could be a model for other regions (Fidler & Gostin 2008; Avery 2010; Kirton). Likewise, this evidence could pave the way for improving the design of the organizations that received few mentions.

Graph 4.6.5. Which organizations share similar interests, are more influential, committed and adaptable?



Source: Author's own.

As graph 4.6.5 shows, respondents regard the WHO as the most influential of all organizations dealing with PHEIC. In contrast with the FPGHI, the CPLP or the APEC Health Working Group, which only got one mention, the WHO received thirteen. Within the same camp, PAHO obtained ten mentions while UNASUR got four. Among TGNs, the only one that excels is the GHSI with five. When it comes to commitment, PAHO leads the group and receives one more mention than the WHO (i.e. nine). When compared with TGNs, PAHO receives three more mentions than the best assessed, the GHSI (i.e. seven).

A similar situation occurs concerning adaptability, PAHO receives more mentions than the rest of the organizations (three vs two mentions of the CPLP and the UNASUR). It is important to highlight that in contrast to what network theories would predict respondents regard IGOs in the biosecurity field as more adaptable than TGNs. Conversely, when it comes to holding similar interests, the organization that stands out is a TGN. Indeed, according to eleven respondents, members of the GHSI share similar interests, whereas only four interviewees considered this the case with the WHO. Within IGOs, the best-ranked organization was the UNASUR, receiving six mentions followed by PAHO, getting five.

4.6.1. OTHER STRENGTHS

Apart from the strengths included in the questionnaire, a Health Vice Minister from Mexico cited others, such as the size, the homogeneity, the level of expertise and the trust among members of the GHSI. According to him, the GHSI “is a trust-based organization; has a wide margin of freedom to discuss in a safe environment; is integrated by individuals who are real experts in the field of public health and health security involving the three levels of governmental hierarchy in an up-to-bottom, bottom-to-top fashion” (Skype anonymous interview, P2 MoH). He considered that this approach “helps preserving live discussions firmly rooted on science and technical knowledge rather than politically constraint formality”. Finally, the fact that “the group of countries is small and homogeneous helps maintaining dynamism” (P2 MoH).

A Health Minister from the U.S. highlighted as strengths of the GHSI, “the fast decision making and the coordination”, as well as “the credibility because the WHO and the European Union Commission are involved” (Phone anonymous interviewee, P3 MoH). On

the other hand, a former Health Senior Civil Servant from Canada who also worked for PAHO agreed with Mexico's Vice Minister (face-to-face anonymous interview, P4 MoH) that there is "a lot of freedom, particularly in the meetings of the senior officers in which there were more questions and discussion" [than in the Ministerial]. He also cited the "informality" as one strength of this organization.

Another participant from Mexico (Phone anonymous interview, O1 MoH) added, "GHSI meetings and videoconferences are effective, agile and in-depth. Everything is agreed quickly". According to her, an enabling factor is the fact that "everybody speaks five languages". Besides, she pointed out "there is constant feedback". Agility and in-depth discussions in her view are comparative advantages in comparison to other organizations working in the same field. A colleague of her added, "The ease with which we reach agreement is the most important strength of the GHSI" (Phone anonymous interview, O2 MoH). Furthermore, a former US vice minister stated, "the GHSI allowed these kind of relationships to build among the top ministerial staff that, on the other hand, allowed information to flow when it needed to in times of crises". In line with other respondents, he considered that "sometimes TGNs (i.e. small organizations) are more nimble and can get the information for policy makers faster" (Face-to-face anonymous interview, P5 MoH).

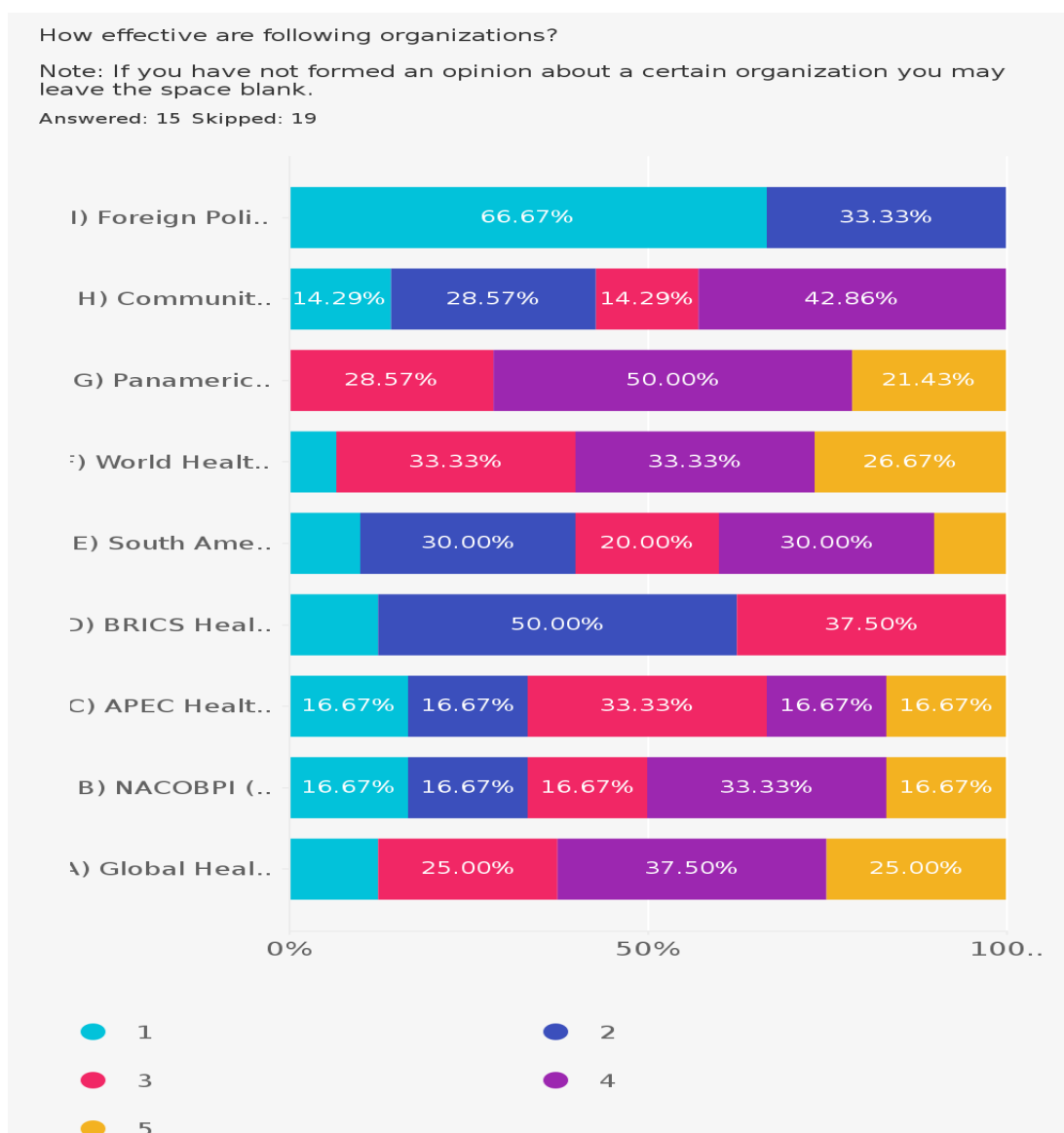
4.7. HOW EFFECTIVE ARE FOLLOWING ORGANIZATIONS? (Q8)

In question number eight I asked respondents to rate on a Likert scale (from 1 to 5) the degree of effectiveness of the nine organizations under study. I assigned the lowest value to *not effective* (number one, color light blue) and the highest to *very effective* (number five, color yellow ochre). Although only 15 respondents answered this question, it gives us clues concerning the perceived degree of effectiveness, and thus, it enables us to compare TGNs and IGOs (see table 4.7.2.).

At first glance, it might seem surprising that respondents rated the biggest IGO operating in the biosecurity field (i.e. the WHO) as very effective (26.67%). Particularly taking into account the stark criticism that received due to the institutional handling of SARS and Ebola in West Africa. Although the GHSI got a similar percentage (25%) in the same value of reference (i.e. very effective), the result changes when we combine the two highest

values (effective and very effective, 4 & 5 respectively). In that scenario, the GHSI cumulates 62.5% whereas the WHO 60%. However, respondents did not confer any of them the title as the most effective organization, but decided that PAHO is with 71.43% (50% regarded it as effective and 21.43% as very effective). By contrast, the Foreign Policy and Global Health Initiative (FPGHI) got the highest assessment concerning ineffectiveness: 66.67% (color light blue). See graph 4.7.1.

Graph 4.7.1. How effective are organizations operating in the biosecurity field?



Source: Author using Zoho software

Although important, this information does not tell us why respondents assessed TGNs and IGOs as effective or ineffective. To complement question eight, I asked my interviewees to give reasons to sustain their choices. For instance, a health specialist from Chile considered that the WHO and PAHO are effective because “they have global/regional scope, country-offices, regional action plans, resources (human, financial and material) and convening power”. Furthermore, “they are in charge of implementing the International Health Regulations” (Face-to-face anonymous interview, O3 MoH).

An international bureaucrat from Peru who also assessed both IGOs as effective, considered that the case because “they have clear mandates and receive backing from countries to face threats, moreover, they have technical and financial resources and experience”. Besides, he noted the importance of having links to other organizations “Both PAHO and the WHO are effective because they have links with other organizations competent in health (e.g. animal health, agriculture, education) and with institutions that conduct research on health” (Skype anonymous interview, O4 IGO).

Table 4.7.2. How effective are following organizations?												
Row	1 (not effective)		2 (slightly effective)		3 (effective)		4 (fairly effective)		5 (very effective)		Average	Number of
IGOs & TGNs	Response %	Response Count	R. %	R. Count	R. %	R. Count	R. %	R. Count	R. %	R. Count	rating	respondents
A) GHSA	12,50%	1	0,00%	0	25,00%	2	37,50%	3	25,00%	2	3.62	8
B) NACOBPI	16,67%	1	16,67%	1	16,67%	1	33,33%	2	16,67%	1	3.17	6
C) APEC HWG	16,67%	1	16,67%	1	33,33%	2	16,67%	1	16,67%	1	3	6
D) BRICS	12,50%	1	50,00 %	4	37,50 %	3	0,00%	0	0,00%	0	2.25	8
E) UNASUR	10,00%	1	30,00%	3	20,00%	2	30,00%	3	10,00%	1	3	10
F) WHO	6,67%	1	0,00%	0	33,33%	5	33,33%	5	26,67 %	4	3.73	15
G) PAHO	0,00%	0	0,00%	0	28,57%	4	50,00 %	7	21,43%	3	3.93	14
H) CPLP	14,29%	1	28,57%	2	14,29%	1	42,86%	3	0,00%	0	2.86	7
I) FPGHI	66,67%	2	33,33%	1	0,00%	0	0,00%	0	0,00%	0	1.33	3

Source: Author's own.

A former health minister from Bolivia who is currently an international bureaucrat answered, “PAHO and the WHO are effective because of its technical capacity whereas the UNASUR is effective due to its technical and political capacities” (Skype anonymous interview, P6 IGO). An international bureaucrat from Colombia added that PAHO is very effective because “the organization counts with reference centers which are capable of assuming the management in group and because it has implemented network actions at the country level in coordination with IGOs” (Skype anonymous interview, O5 IGO). A health senior civil servant from Uruguay considered that the WHO is very effective, and PAHO and the GHSA are effective “because of the success they have had when addressing health emergencies and biosecurity threats” (On-line questionnaire, O6 MoH).

Information sharing seems to be another factor that plays a role in determining how effective an organization can be. In this respect, a health senior civil servant from Argentina pointed out: “UNASUR, PAHO and the CPLP are effective because they can socialize information and have the capacity to negotiate and reach joint solutions (e.g. in the case of UNASUR, member countries were able to buy in block the vaccine against AH1N1)” (Face-to-face anonymous interview, O7 MoH). A Mexican Ambassador agrees with other interviewees and considers “the NACOBPI, the WHO and PAHO to be effective because they are legitimate and can exchange information rapidly” (On-line questionnaire, P7 MoFA). An Argentinian health senior civil servant concurs with the Mexican Ambassador concerning legitimacy as a factor behind effectiveness, but limits its assessment to IGOs (i.e. UNASUR, the WHO, PAHO and the CPLP) (On-line questionnaire, O8 MoH).

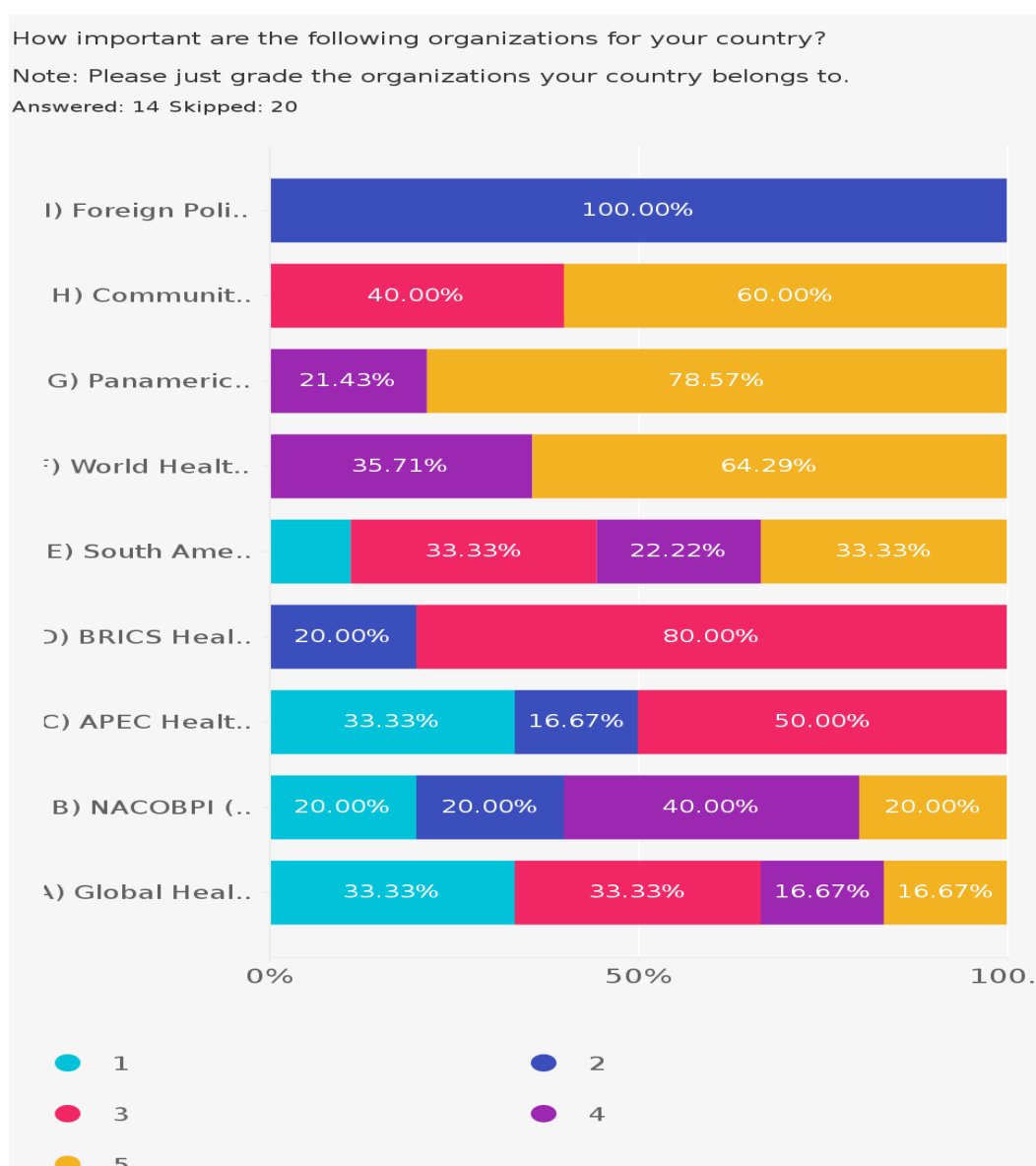
4.8. HOW IMPORTANT ARE THESE ORGANIZATIONS FOR YOUR COUNTRY? (Q9)

Question 9 was also a rating scale question whose aim was to determine the importance of the nine case studies, but also to serve as cross-validation. In this question, I asked participants to rate on a Likert scale (from 1 to 5) the degree of importance of the five TGNs and the four IGOs under study. I assigned the lowest value to *not important* (number one, color light blue) and the highest to *very important* (number five, color yellow ochre).

A condition for answering the question was to rate only the organizations of which the country of the respondent was a member. Considering the fact that the majority of

respondents are from the Americas, –and a substantial part from Brazil- results are not surprising. Nonetheless, it is important to note that all respondents who answered this question (14 people) ranked the WHO and PAHO but only one decided to assess the FPGHI, thus we could not conclude for instance that this organization is slightly important (number two, color dark blue). According to some interviewees, a reason for not ranking the PFGHI had to do with their lack of knowledge concerning this TGN, or due to its limited scope (see graph 4.8.1.).

Graph 4.8.1. How important are following organizations for your country?



Source: Author using Zoho software

As table 4.8.2 illustrates, eleven respondents out of fourteen regard the Panamerican Health Organization as very important for their countries. By contrast, no one assessed the APEC Health Working Group, the BRICS Health Network or the Foreign Policy and Global Health Initiative as very important. On the other hand, regardless of the country of origin, most of respondents ranked highly the WHO. Indeed, nine respondents considered it as very important while five regarded as fairly important.

Concerning the BRICS Health Network, four respondents ranked it as important whereas one ranked it as slightly important. The latter was also the case for other TGNs such as the NACOBPI, the APEC Health Working Group and the Foreign Policy and Global Health Initiative (i.e. one respondent ranked them as slightly important). At the other extreme of the scale, we find that two respondents ranked the Global Health Security Initiative and the APEC Health Working Group as not important. Nevertheless, it is important to mention that unlike the WHO and the PAHO -which were assessed by fourteen respondents-, the GHSI and the APEC HWG were assessed only by six respondents. Results nonetheless, gives clues concerning perceived importance.

Table 4.8.2. How important are the following organizations for your country?										
	1 (not important)		2 (slightly important)		3 (important)		4 (fairly important)		5 (very important)	
Raw										
IGOs &	Response	Response	R.	R.	R.	R.	R.	R.	R.	R.
TGNs	%	Count	%	Count	%	Count	%	Count	%	Count
A) GHSI	33,33%	2	0,00%	0	33,33%	2	16,67%	1	16,67%	1
B) NACOBPI	20,00%	1	20,00%	1	0,00%	0	40,00%	2	20,00%	1
C) APEC HWG	33,33%	2	16,67%	1	50,00%	3	0,00%	0	0,00%	0
D) BRICS HN	0,00%	0	20,00%	1	80,00%	4	0,00%	0	0,00%	0
E) UNASUR	11,11%	1	0,00%	0	33,33%	3	22,22%	2	33,33%	3
F) WHO	0,00%	0	0,00%	0	0,00%	0	35,71%	5	64,29%	9
G) PAHO	0,00%	0	0,00%	0	0,00%	0	21,43%	3	78,57%	11
H) CPLP	0,00%	0	0,00%	0	40,00%	2	0,00%	0	60,00%	3
I) FPGHI	0,00%	0	100,00%	1	0,00%	0	0,00%	0	0,00%	0

Source: Author's own.

4.9. HOW INFLUENTIAL ARE FOLLOWING ORGANIZATIONS? (Q10).

As previous two questions, question ten is a rating scale question whose objective was to have a first approach regarding the degree of influence of the different organizations under study. Unlike question nine (i.e. how important are following organizations?) which was linked to country membership, question ten aimed to have a general assessment of the nine organizations, regardless of whether or not the country of the respondent was a member of a certain organization. Nonetheless, it is important to note that often the knowledge respondents had concerning certain organization was in fact influenced by country membership (i.e. if the country of the respondent was a member of a certain organization, then it was more probable that she decided to assess it). That is the reason why only three respondents assessed the FPGHI and four the NACOBPI. In contrast, fourteen respondents assessed the two major IGOs (i.e. the WHO and PAHO).

As in previous questions, I asked participants to rate on a Likert scale (from 1 to 5) the degree of importance of the five TGNs and the four IGOs under study. I assigned the lowest value to *not influential* (color light blue), number two to *slightly influential* (color dark blue), number three to *influential* (color fuchsia), number four to *fairly influential* (color purple) and the highest value to *very influential* (color yellow ocher). The WHO and PAHO were not only the most assessed organizations but also the best assessed, i.e. both got a high number of mentions in the highest value (very influential). Indeed, ten respondents assessed the WHO in that category, whereas nine respondents assessed PAHO (as stated, out of fourteen). This represents 71.43% in the former and 64.29% in the latter (see graph 4.9.1).

At the other extreme of the spectrum, I found out that the FPGHI is not just regarded as slightly important (see section 4.8) but also as slightly influential (it got two mentions) or even as not influential (it received one mention). Overall, the PFGHI is the least assessed organization (by three respondents), but also the worst assessed (see table 4.9.2).

Table 4.9.2. How influential are the following organizations?										
	1 (not influential)	2 (slightly influential)	3 (influential)	4 (fairly influential)	5 (very influential)					
Raw										
	Response	Response	R	R	R	R	R	R	R	R
	%	Count	%	Count	%	Count	%	Count	%	Count
A) GHSI	0,00%	0	0,00%	0	42,86%	3	42,86%	3	14,29%	1
B) NACOBPI	25,00%	1	0,00%	0	50,00%	2	0,00%	0	25,00%	1
C) APEC HWG	28,57%	2	42,86%	3	28,57%	2	0,00%	0	0,00%	0
D) BRICS HN	0,00%	0	28,57%	2	71,43%	5	0,00%	0	0,00%	0
E) UNASUR-ISAGS	11,11%	1	33,33%	3	11,11%	1	44,44%	4	0,00%	0
F) WHO	0,00%	0	0,00%	0	7,14%	1	21,43%	3	71,43%	10
G) PAHO	0,00%	0	0,00%	0	7,14%	1	28,57%	4	64,29%	9
H) CPLP	16,67%	1	16,67%	1	0,00%	0	33,33%	2	33,33%	2
I) FPGHI	33,33%	1	66,67%	2	0,00%	0	0,00%	0	0,00%	0
Note: If you have not formed an opinion about a certain organization you may leave the space blank.										

Source: Author's own.

In this respect, a Health Senior Civil Servant from Brazil argued that the FPGHI was only successful in bringing to the forefront the interconnections between health and foreign relations:

“This group gathered for the first time in 2007 and I was there. It was a Norwegian and French initiative whose main aim was to approach health with foreign relations, but it remained in that. It is different to the GHSI. The FPGHI does not exist anymore. They brought the topic of health to the realm of foreign relations. From my point of view, that was their only achievement. A proof of it is the fact that at least eight UN resolutions related to this and that UN officials mentioned this group as their primary source. Afterwards, the UN assumed the orientation of this group (i.e. to merge health and foreign affairs) but that was it. Among others, they achieved the Oslo Ministerial Declaration, thus triggering that the international community regarded Global Health as a dimension of foreign policy. That was very important indeed; however, the group did not structure any governance. I participated in several of the meetings. They lasted two hours. Usually, the ambassador arrived, ate, said bla, blu, ble and left. There was no continuity. It was different to the gatherings of the BRICS, MERCOSUR or UNASUR. In this respect, the FPGHI was the least institutionalized of all groups” (Anonymous face-to-face interview, P8 MoH).

Therefore, it is no wonder respondents rarely assessed the FPGHI. Nonetheless, it is important to clarify that the FPGHI was not the only TGN assessed in that way. Respondents

likewise assessed the APEC Health Working Group as either not influential (with two mentions) or as slightly influential (with three mentions). The difference lies perhaps in the fact that the Pacific organization has been active for a longer time and hence, is better known. Another reason why the FPGHI might have got so few mentions is the fact that of the twelve nationalities represented in this survey, only one is a member of the FPGHI (i.e. Brazil), but, even so, a fourth of all respondents are from this country (11 out of 41). In any case, the mean values of both TGNs are very close: 2 for the APEC Health Working Group and 1.67 for the FPGHI (see tables 4.9.2 and 4.9.3).

Table 4.9.3. How influential are the following organizations?										
Organization	Range	Less Frequent		More Frequent		Mean	Median	Standard	Variance	
	From	To	Frequency	Value	Frequency	Value				
A) GHSI	3	5	1	5	3	3, 4	3,71	4	0,76	0,57
B) NACOBPI	1	5	1	1, 5	2	3	3	3	1,63	2,67
C) APEC HWG	1	3	2	1, 3	3	2	2	2	0,82	0,67
D) BRICS HN	2	3	2	2	5	3	2,71	3	0,49	0,24
E) UNASUR	1	4	1	1, 3	4	4	2,89	3	1,17	1,36
F) WHO	3	5	1	3	10	5	4,64	5	0,63	0,4
G) PAHO	3	5	1	3	9	5	4,57	5	0,65	0,42
H) CPLP	1	5	1	1, 2	2	4, 5	3,5	4	1,64	2,7
I) FPGHI	1	2	1	1	2	2	1,67	2	0,58	0,33

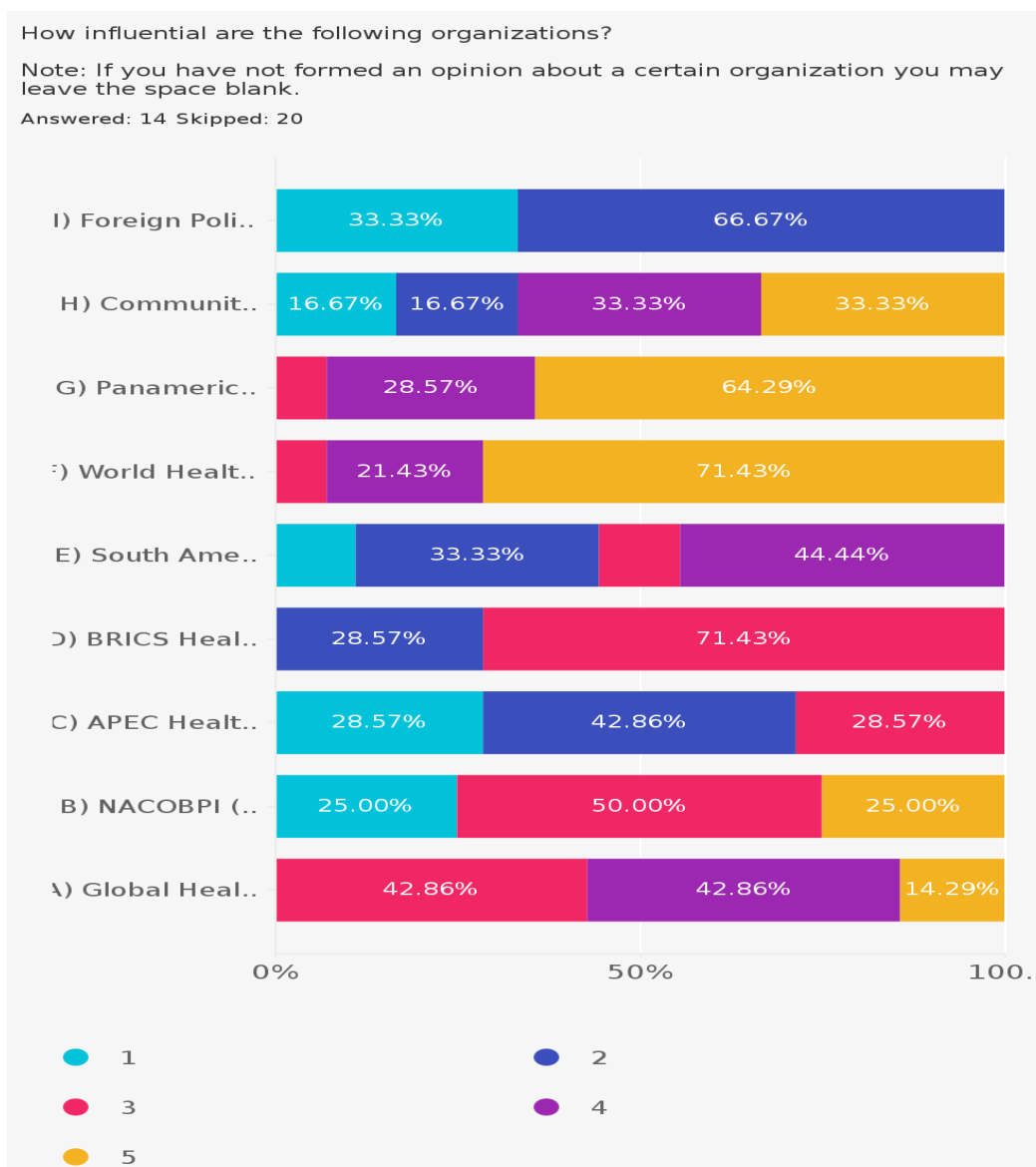
Source: Author's own.

Given the rating scale (from 1 to 5), table above shows that the arithmetic mean for the WHO and PAHO is close to five (4.64 & 4.57 respectively). In other words, unlike the APEC Health Working Group and the PFGHI, respondents mostly assessed the two biggest IGOs in the biosecurity field as very influential.

As shown in graph 4.9.1 and in table 4.9.3, the best-assessed TGN was the GHSI with an arithmetic mean of 3.71. On the other hand, respondents ranked the CPLP as the third most influential IGO with a mean of 3.5. Not far from it was located the NACOBPI with a mean of three (i.e. influential). In total, seven respondents assessed the GHSI, six the CPLP and four the NACOBPI. If we compare regional organizations, results indicate that North

American TGNs⁵¹ are more influential than both IGOs and TGNs representing other regions (e.g. UNASUR-ISAGS, APEC Health Working Group). Consequently, recommendations of some scholars to replicate either the GHSI institutional design (Fidler & Gostin 2008) or the one of the NACOBPI (Avery 2010) may find some support in these results.

Graph 4.9.1. How influential are following organizations?



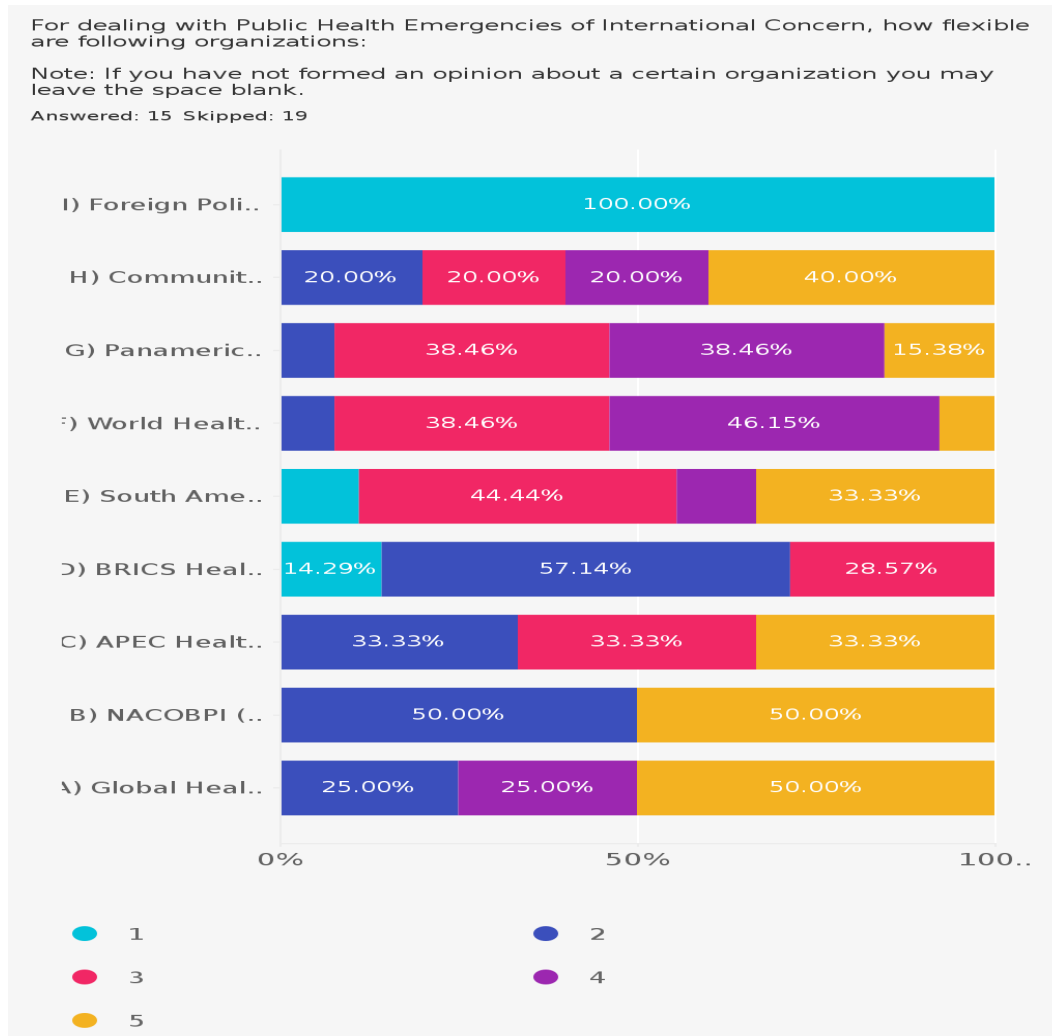
Source: Author using Zoho software

⁵¹ Although the GHSI is not strictly speaking a North American TGN, it was an American initiative and since its foundation, in 2001, the Secretariat has been based in Ottawa.

4.10. FOR DEALING WITH PHEIC, HOW FLEXIBLE ARE FOLLOWING ORGANIZATIONS? (Q11).

According to the literature on networks, flexibility is one of the strengths of the network form. Thus, I deemed important to ask my respondents to assess the degree of flexibility of the five TGNs but also of the four IGOs under study. As in previous questions, I asked participants to rate on a Likert scale (from 1 to 5). I assigned the lowest value to *not flexible* (color light blue), number two to *slightly flexible* (color dark blue), number three to *flexible* (color fuchsia), number four to *fairly flexible* (color purple) and the highest value to *very flexible* (color yellow ocher). See graph 4.10.1.

Graph 4.10.1. For dealing with PHEIC, how flexible are following organizations?



Source: Author using Zoho software

As in previous questions, respondents opted predominantly for assessing the WHO and PAHO. Indeed, thirteen respondents assessed both IGOs, whereas only one did the same with the apparently less popular TGN, i.e. the FPGHI. In contrast, seven respondents decided to evaluate the BRICS Health Network, in passing, when it comes to flexibility, is by the far the most assessed network. However, the number of mentions do not traduce into high levels of flexibility. In fact, despite receiving few mentions, 50% percent of respondents considered the GHSI and the NACOBPI to be very flexible. The opposite is true for the BRICS Health Network, i.e. despite receiving seven mentions –the highest number of mentions for a TGN- not even one respondent regarded it as very flexible. Overall, the most flexible organization is the GHSI with an average rating of four (one meaning not flexible and five meaning very flexible) leaving the CPLP in the second place with an average rating of 3.8, and PAHO in the third place with an average rating of 3.62 (see table 4.10.2).

Table 4.10.2. How flexible are following organizations:

	Range		Less Frequent		More Frequent		Mean	Median	Standard Deviation	Variance
	From	To	Frequency	Value	Frequency	Value				
A) GHSI	2	5	1	2, 4	2	5	4	4,5	1,41	2
B) NACOBPI	2	5	-	-	1	2, 5	3,5	3,5	2,12	4,5
C) APEC HWG	2	5	-	-	1	2, 3, 5	3,33	3	1,53	2,33
D) BRICS HN	1	3	1	1	4	2	2,14	2	0,69	0,48
E) UNASUR-ISAGS	1	5	1	1, 4	4	3	3,56	3	1,33	1,78
F) WHO	2	5	1	2, 5	6	4	3,54	4	0,78	0,6
G) PAHO	2	5	1	2	5	3, 4	3,62	4	0,87	0,76
H) CPLP	2	5	1	2, 3, 4	2	5	3,8	4	1,3	1,7
I) FPGHI	-	-	-	-	1	1	1	1	0	0

Source: Author's own.

Judging by the mean values, it would be premature to conclude that in the biosecurity field, transgovernmental networks are more flexible than intergovernmental organizations and vice versa. Thus, the need to consider other organizational variables such as learning and capacity (see sections 12 and 14). If we analyze the comments respondents gave to the question: “Why are selected organizations flexible?” we will find out that some respondents linked flexibility with capability, either to adjust processes and proceedings, to reallocate resources or to create working groups and

networks. Interestingly, a Vice Minister of Health (see answer 2 of following table) associated flexibility with the easiness to enter or exit from a TGN. He also noted, that unlike IGOs, which are dependent on the Ministry of Foreign Affairs –“when you participate in IGOs you are not the Boss”- TGNs enable participants to enjoy a higher degree of freedom [see table 4.10.3], (phone anonymous interview, P1 MoH).

Table 4.10.3. Why are selected organizations flexible?

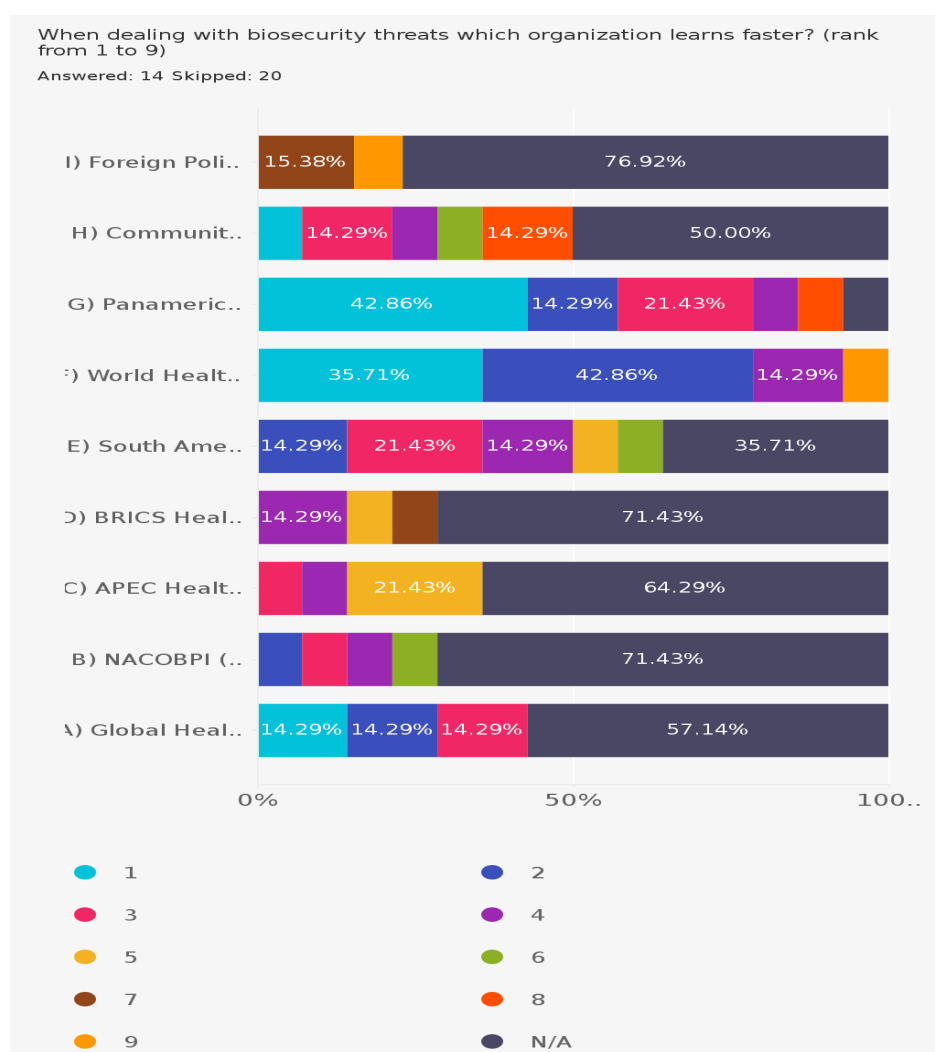
1. When a threat is identified, they are capable of responding almost immediately and can reallocate human and financial resources.
2. Because the members of these organizations know that each situation requires different responses and respect the decision of each country, trusting in its commitment with public health.
3. "TGNs imply resources to participate (travels, meetings). The choice to participate in one organization is not a possible choice, because a government cannot avoid to participate in an official agency as the WHO is, but it can decide to exit from a TGN for instance for economic reasons, because you have to spend time to do this activity. In times of a crisis could be not easy to have the availability of money. It is a voluntary activity." Then, please correct me if I´m wrong, you would see TGNs as more flexible than IGOs? "Yes". Because you may exit the TGN if its not effective...? "Yes. Because when you participate in IGO´s you are not the boss, the Ministry of Foreign Affairs is. They make a lot of diplomatic consults before deciding to exit or not that kind of organizations. In this case -referring to the GHSI- is a technical... network, the -health- minister can decide if it is beneficial to society. You can enter, exit...Obviously you try to stay (stable) settled in the organization. Anyway, you are freer to decide, time by time, what could be the best way (to cooperate...)."
 4. I selected three organizations because I do not think they are particularly flexible, understanding flexibility as the capacity to adjust processes and proceedings rapidly.
 5. In the case of UNASUR-ISAGS because it is closely related to member countries.
 6. Because they have the capacity to form networks and working groups. Besides, they even have the easiness to modify guiding actions without dealing with extensive bureaucratic mechanisms.
 7. Consensus enables members to adapt their decisions.
 8. International support and legitimacy
 9. The proximity and liaisons among the countries.

Source: Author using Zoho software

4.11. WHEN DEALING WITH BIOSECURITY THREATS WHICH ORGANIZATION LEARNS FASTER? (Q12).

Unlike previous questions, respondents had to simultaneously compare and rank all studied organizations from one to nine, -being one the highest value i.e. the organization that learns faster than the other eight, and being nine the lowest value i.e. Slowest organization-. It is important to note that, owing to the software I employed to build the questionnaire, respondents could not assign the same number to two organizations, thus they have no other alternative than making up their minds, with the caveat that I offered them the possibility not to rank a certain organization (N.A). See graph 4.11.1.

Graph 4.11.1. Which organization learns faster?



Source: Author using Zoho software

As can be observed in graph above, respondents preferred to rank IGOs, being the WHO (letter F) the most assessed organization, followed by PAHO (letter G) and then by the ISAGS-UNASUR (letter E). Once more, the most assessed TGN was the GHSI (letter A). As discussed in the literature review (see Chapter 1), fast learning is one of the most important characteristics of the network form –irrespective of whether we are dealing with advocacy networks, transgovernmental networks or even dark networks-. Hence, as when it comes to flexibility, it made sense to ask respondents to rank all organizations to see if this assumption also applies to the biosecurity field (see table 4.11.2).

Table 4.11.2. Which organization learns faster? (rank from 1 to 9)

Range		Less Frequent		More Frequent			Rank	Mean	Median	Standard Deviation	Variance
	From	To	Frequency	Value	Frequency	Value					
A) GHSI	1	N/A	2	1, 2, 3	8	N/A	4	6,57	10	4,15	17,19
B) NACOBPI	2	N/A	1	2, 3, 4, 6	10	N/A	7	8,21	10	3,04	9,26
C) APEC HWG	3	N/A	1	3, 4	9	N/A	6	8	10	2,83	8
D) BRICS HN	4	N/A	1	5, 7	10	N/A	8	8,57	10	2,44	5,96
E) UNASUR	2	N/A	1	5, 6	5	N/A	3	5,86	4,5	3,37	11,36
F) WHO	1	9	1	9	6	2	1	2,43	2	2,14	4,57
G) PAHO	1	N/A	1	4, 8, N/A	6	1	2	2,93	2	2,79	7,76
H) CPLP	1	N/A	1	1, 4, 6	7	N/A	5	7,36	9	3,3	10,86
I) FPGHI	7	N/A	1	9	10	N/A	9	9,46	10	1,13	1,27

Source: Author's own.

Contrary to what network theories would predict, respondents considered that the three organizations that learn faster are IGOs, i.e. the WHO (number one), PAHO (number two) and the ISAGS-UNASUR (number three). In this respect, of fourteen respondents who answered this question, six (42.86%) ranked PAHO as number one, five (35.71%) ranked the WHO as number one, two (14.29%) ranked the GHSI as the fastest and only one (7.14%) assigned that place to the CPLP (see Graph 4.11.1.). Nonetheless, we should be cautious about these results: as shown in graph 4.11.1. , most of respondents decided not to rank the TGNs (in percentages fluctuating from 57.14 to 76.92), thus selecting the option N.A. displayed in color dark grey. Hence, we need to conduct more research to know the reasons behind respondents' choices.

4.12. WHAT WOULD BE THE WEAKNESSES OF FOLLOWING ORGANIZATIONS? (Q13).

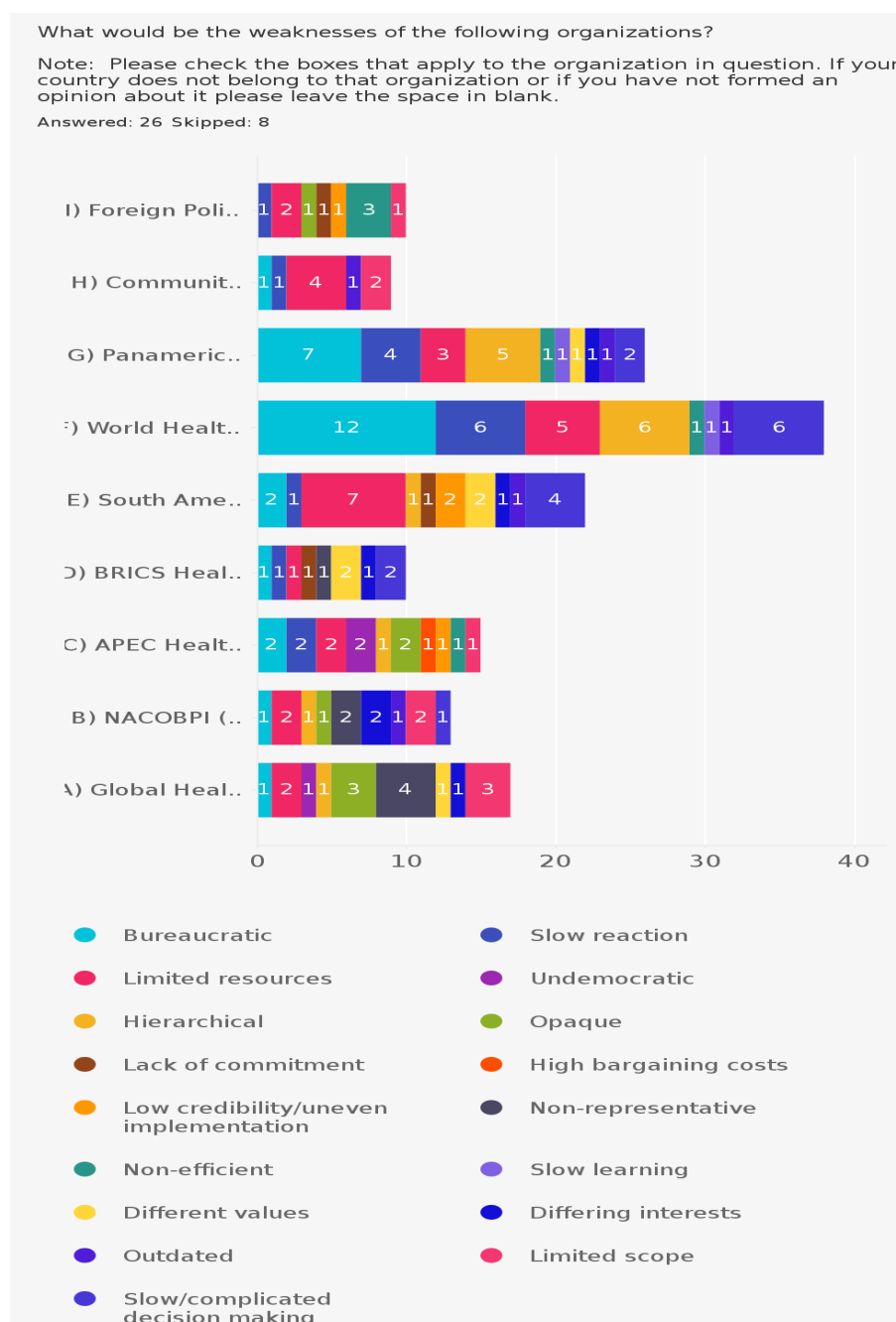
This question mirrors question seven about institutional strengths, thus among others, it helps us for assessing consistency with some of the answers given to that question and for contrasting what the literature on networks and rational design regard as institutional weaknesses with the actual perceptions of respondents. With this in mind, I asked my respondents to assess while comparing organizations. I listed seventeen weaknesses (slow reaction, opaque, hierarchical, etc.) that could apply in various degrees to TGNs and IGOs. As the reader will soon identify, some of these weaknesses are the exact opposites of the institutional strengths I tackled in question seven (e.g. fast learning-slow learning). On the other hand, those, which do not act as opposites, are nonetheless weaknesses/drawbacks (see Chapter 1) of either TGNs or IGOs (e.g. outdated, bureaucratic, undemocratic, etc.).

I asked respondents to check the boxes that apply to the organization in question. Whenever their country of origin was not a member of a certain organization, or when the respondent had no formed opinion about it, I asked them to leave the space blank. Finally, question 13 helps us to grade and compare against each other the different organizations, as well as for detecting what matter most for policy makers and hence, it gives us clues on how to better design or modify organizations operating in the biosecurity field.

As shown from the bar graph below, 26 respondents answered this question and only eight skipped it, consequently the degree of reliability is high. Additionally, 14 respondents left comments at the space provided for that purpose, thus we can know the rationale of their assessments (see subsection 4.12.1.). Most of respondents predominantly assessed three organizations, i.e. the WHO (16 respondents), PAHO (10 respondents) and the GHSI (nine respondents). At the other extreme, the APEC Health Working Group got only four assessments. Respondents and interviewees considered that the principal weakness of both, the WHO and PAHO is that is bureaucratic (12 and 7 respondents, respectively). When it comes to the CPLP and the ISAGS-UNASUR, respondents considered that their main weakness has to do with the limited resources on hand (four and seven respondents, respectively). In the case of the GHSI, respondents identified the non-representativeness as its main weakness (4 respondents out of nine), followed by opaque and limited scope (3

respondents in each case). As for the FPGHI, responses revealed that is inefficient (three assessments out of four). The picture is not that clear for the rest of the organizations, i.e. respondents selected various drawbacks without emphasizing any of them (see graph 4.12.1 & table 4.12.2).

Graph 4.12.1. What would be the weaknesses of following organizations?



Source: Author using Zoho software

As shown in graph 4.12.1, six respondents from 16 considered that the WHO is hierarchical, reacts slowly and has a slow/complicated decision-making. On top of that, five respondents asserted that it has limited resources. When assessing PAHO, respondents also mentioned these weaknesses, although to a lesser extent, i.e. from a total of ten, five respondents regarded it as hierarchical, four considered that it reacts slowly and three that it has limited resources. It is important to highlight that according to network theories, countries select TGNs due to their like-mindedness, and therefore it is revealing that respondents considered that one of the two main drawbacks of the BRICS Health Network pertains to having *different values*, which could be as well a reason for having a slow/complicated decision-making. Table below summarizes the more frequent values for all organizations:

Table 4.12.2. Main institutional weaknesses of IGOs and TGNs in the biosecurity field (more frequent values)

Organization	Value	Frequency	Response count	Response %
A) GHSI	Non-representative	4	9	44
B) NACOBPI	Limited resources, Non-representative, Differing interests, Limited scope	2	5	40
C) APEC HWG	Bureaucratic, Slow reaction, Limited resources, Undemocratic, Opaque	2	4	50
D) BRICS HN	Different values, Slow/complicated decision making	2	5	40
E) UNASUR-ISAGS	Limited resources	7	8	87
F) WHO	Bureaucratic	12	16	75
G) PAHO	Bureaucratic	7	10	70
H) CPLP	Limited resources	4	5	80
I) FPGHI	Non-efficient	3	4	75

Source: Author's own.

When comparing some of these values with their opposites assessed in question seven –related to strengths–, we find a substantial degree of consistency. For example, only one respondent from sixteen considered that the GHSI was representative, whereas in question thirteen, four from a total of nine assessed it as non-representative (*Cfr.* table 4.12.2 & graph 4.6.1). Something similar occurred with the FPGHI and the values efficient/non-efficient, i.e. 75% of those who assessed it in question thirteen deemed it as non-efficient. On the other hand, respondents in section 4.6 confirmed this assessment, i.e. none of them regarded it as efficient. Finally, in question thirteen none of the respondents considered that the GHSI is slow at learning, whereas in question seven, five of them assessed it as a fast learning organization (31.25%). PAHO, incidentally, received exactly the same assessment (31.25%) and lagged behind the UNASUR-ISAGS, which according to 50% of respondents (five from

10) is the organization that learns faster. Indeed, in question thirteen only one respondent from eight considered that the ISAGS-UNASUR is slow at learning.

Notwithstanding, as seen in previous question, when I asked respondents to rank from one to nine - being one the highest value i.e. the organization that learns faster than the other eight- the WHO comes to the fore closely followed by PAHO and then by the UNASUR-ISAGS (*Cfr.* tables 4.12.2, 4.11.2 & graph 4.6.1).

4.12.1. OTHER WEAKNESSES

Apart from the seventeen weaknesses I included in the questionnaire, respondents provided additional comments that we can group into three categories: weaknesses related to IGOs in general; weaknesses related to TGNs, and weaknesses related to a specific organization. Most of them decided to provide comments concerning the WHO and the GHSI. Concerning the first category, a former health minister from North America considered that: “IGOs are **highly politicized** and have **rigid structures** that makes cooperation difficult. For instance, within the WHO **voting mechanisms are not effective**. The WHO **degree of formality** is a tangible disadvantage that we take into consideration when selecting TGNs” (Phone anonymous interview, P9 MoH).

Concerning the second category, a former Health High Senior Civil Servant stated “A weakness of TGNs is probably the **lack of inclusion of other countries**, however if other countries are included, the network may lose agility. It would become multidisciplinary or contingent on the diversity of approaches, but it would lose agility.” (Phone anonymous interview, O2 MoH). As we can see from these comments, policy makers are aware of the pros and cons of a certain institutional design and consider them when deciding or considering possible changes. As the first comment reveals, the question of formality seems to play a role. This substantiates the claims of various scholars who argue that policy makers would favor more informal agreements for escaping what Keohane (2001) coined as “the governance dilemma”⁵² (Lipson, 1991; Koremenos, Lipson, Snidal, 2001; Slaughter 1997;

⁵² One of Keohane’s premises (2001) is that “institutions can foster exploitation or even oppression”, hence the governance dilemma: “although institutions are essential for human life, they are also dangerous”.

Raustiala 2002; Slaughter 2004b; Slaughter 2004a; Krahmann 2005; Kahler 2009b; Lipson 2006; Kirton & Mannell 2007; Eberlein & Newman 2008; Fidler & Gostin 2008; Hoffman 2010).

In the third category, i.e. weaknesses of specific organizations, respondents addressed the WHO, the GHSI, the FPGHI, the UNASUR-ISAGS, the NACOBPI and the G20. As regards the first organization, an experienced North American health senior civil servant who advises PAHO stated that “the WHO is not competent enough concerning for example its capabilities to monitor the situation and to exchange information” (Face-to-face anonymous interview, P4 MoH). Other North American health senior civil servants pointed out that “the WHO did not have everything they needed to provide a long term response and is not prepared to cope with the international dimension (i.e. Globalization spread)”. (Face-to-face anonymous interview, O9 MoH). An international health bureaucrat took a softer line towards the biggest IGO and declared that “the response at the WHO is slow but is in process of adjustment” (Phone anonymous interview, O5 IGO). With respect to institutional management, a Health Vice minister noted “I can tell you that the WHO...is working strongly to recover the prominent position because they understood clearly that **it was very weak** when they had the management of the pandemic influenza” (Phone anonymous interview, P1, MoH).

As for the GHSI, a North American Health Vice Minister pointed out as weaknesses: “a). A potential risk of disappearing; b). collective experience and memory is volatile as it is not formally integrated to governmental files and protocols; c). thematic compartmentalization relative to other areas of government that may be relevant to health security” (Phone anonymous interview, P2 MoH). A European Health Vice Minister indicated:

“Throughout the years the GHSI has lost some concrete activities and consequently the documents we drafted became more general. The difference that I see now is that the first documents we drafted were more practical, now they are strategic. At the beginning, we drafted guidelines. Now if someone in a hospital tries to find a solution in one of our last documents, probably he wouldn’t find it. Probably one weakness of the GHSI is that it has not admitted new members. Besides, the GHSI has no regulation. The problem of the GHSI

Therefore, Keohane holds we are obliged to try explaining “how effective institutions that serve human interests can be designed and maintained” (1).

is that is not formal, so we don't have any decision, any law that is published in an official journal so it is only voluntary. If you are committed on it, all right, otherwise is no easy to reach some results. It's a voluntary group. It depends on the willingness of individuals" (Phone anonymous interview, P1, MoH).

A former North American Health Vice Minister highlighted as a weakness the varying capabilities of its members "Differences within the GHSI related to the budget, i.e. capacities of the members." (Skype anonymous interview, P10, MoH). A North American scholar alluded to the GHSI opaqueness in the following way: "The GHSI doesn't do a lot of self-publication or soft advertisement; they like to maintain a low profile. It's their business, and they go about it in their own particular way." (Face-to-face anonymous interview E1 Academia). As for the NACOBPI, the same scholar pointed out to the lack of continuity and capabilities as follows:

"I traced the actual operation of the NAPAPI up to 2009 but there was a big gap between 2007 and 2009 and you have a kind of administrative body (the NACOBPI) that was established. However, that was only one representative. They have not got a large budget...I really wonder to what extent it really has a future...I think it worked well in 2009 because a number of things converged." (E1, Academia).

Finally, with respect to the ISAGS-UNASUR, the G20 and the FPGHI, three respondents from South America mentioned, "Nowadays, the ISAGS-UNASUR is agonizing but in its best moment, its best strengths -without considering the politic question- were the health and defense meetings. This enabled the organization to make a substantial progress". (Face-to-face anonymous interview, O10 MoFA). As for the G20, a Foreign Relations senior civil servant noted, "In the G20, countries look for consensus but is not always achieved. When that is the case, we underline the points of agreement." (Skype anonymous interview, P11 MoFA). In regards to the FPGHI, an experienced health senior civil servant underlined that there are "no follow up of commitments" (Face-to-face anonymous interview, P8 MoH).

4.13. HOW CAPABLE ARE FOLLOWING ORGANIZATIONS? (Q14).

As some respondents in previous sections revealed, irrespective of the kind of institutional arrangement, capabilities do matter. To find out more, I asked informants to rate the nine

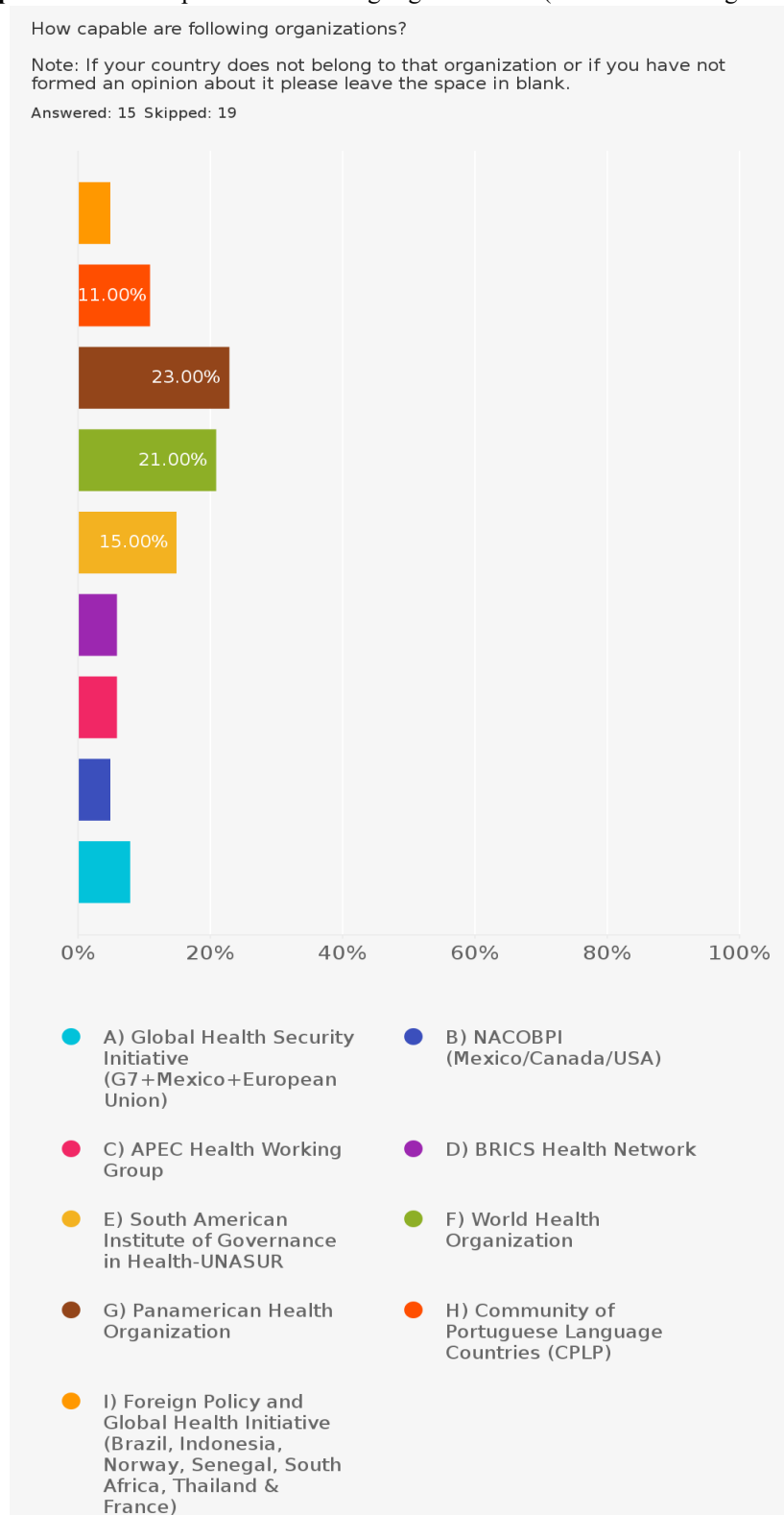
organizations on a Likert scale (from 1 to 5). I assigned the lowest value to *incapable* (color light blue), number two to *slightly capable* (color dark blue), number three to *capable* (color fuchsia), number four to *fairly capable* (color purple) and the highest value to *very capable* (color yellow ocher).

As in other questions, I offered respondents the alternative of not assessing a certain organization (see graph 4.10.2). Despite receiving only 15 responses –from a total of 34-, informants also provided valuable comments that enable us to make some inferences concerning the role of capabilities when selecting a certain institutional design (see subsection 4.13.1).

For different reasons I will try to explain in subsection 4.13.1, when I asked “How capable are following organizations?” respondents predominantly decided to assess IGOs. Indeed, in decreasing order, respondents assessed PAHO (14 mentions, representing 23%), the WHO (13 mentions, representing 21%), the ISAGS-UNASUR (nine mentions, representing 15%) and the CPLP (seven mentions, representing 11%). The five TGNs accounted for the remaining 30%. The bar chart below shows these values (see graph 4.13.1).

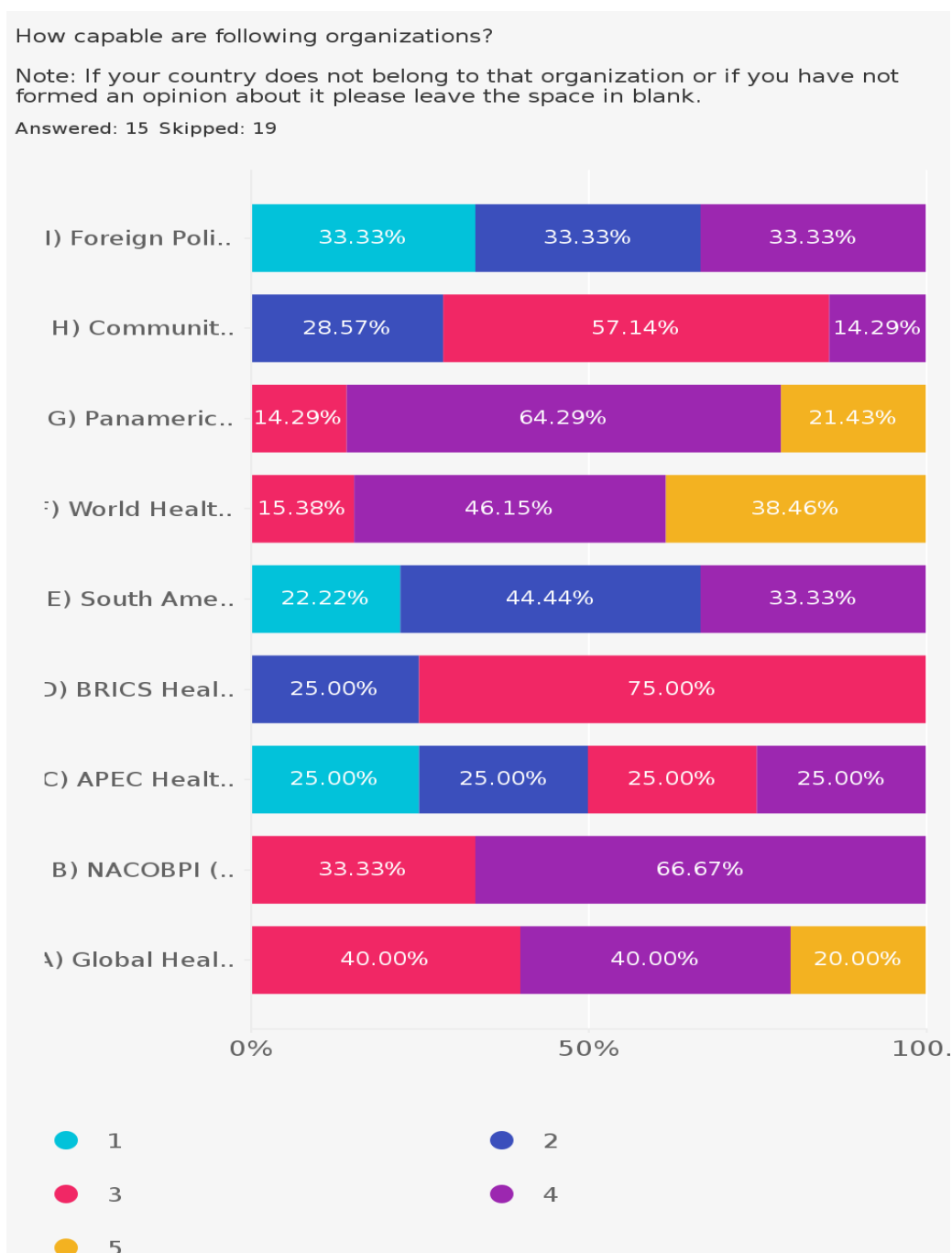
As graph 4.13.2 and table 4.13.3 show respondents considered that the WHO and PAHO are the most capable organizations in the biosecurity field. The former received an average rating of 4.23 and the latter an average rating of 4.07 (five meaning *very capable*). At the other extreme, the FPGHI got the lowest average rating i.e. 2.33 (two meaning *slightly capable*).

Graph 4.13.1 How capable are following organizations? (Most assessed organizations).



Source: Author using Zoho software.

Graph 4.13.2. How capable are following organizations?



Source: Author using Zoho software.

In the third place and ranked as the most capable TGN, respondents gave the GHSI an average rating of 3.67 (four meaning *fairly capable*). Slightly below the GHSI we find the NACOBPI with an average rating of 3.67. Far from both and in a different value we find the rest of the organizations. All of them are located in a range between 2.33 and 2.86. Of these,

the organization that received the highest average value is the CPLP (2.86), whereas the FPGHI got the lowest average value (2.33). Finally, the BRICS Health Network got an average rating of 2.75, the APEC Health working group 2.5 and the ISAGS-UNASUR 2.44 (see table 4.13.3).

Table 4.13.3. How capable are following organizations?										
		Range		Less Frequent		More Frequent		Mean	Median	Standard Deviation
Organization	From	To	Frequency	Value	Frequency	Value				Variance
A) GHSI	3	5	1	5	2	3, 4	3,8	4	0,84	0,7
B) NACOBPI	3	4	1	3	2	4	3,67	4	0,58	0,33
C) APEC HWG	1	4	-	-	1	1, 2, 3, 4	2,5	2,5	1,29	1,67
D) BRICS HN	2	3	1	2	3	3	2,75	3	0,5	0,25
E) UNASUR-ISAGS	1	4	2	1	4	2	2,44	2	1,24	1,53
F) WHO	3	5	2	3	6	4	4,23	4	0,73	0,53
G) PAHO	3	5	2	3	9	4	4,07	4	0,62	0,38
H) CPLP	2	4	1	4	4	3	2,86	3	0,69	0,48
I) FPGHI	1	4	-	-	1	1, 2, 4	2,33	2	1,53	2,33

Source: Author's own.

4.13.1. WHY ARE SELECTED ORGANIZATIONS CAPABLE?

To elucidate the rationale behind these figures, I included a follow-up question in the questionnaire, i.e. why are selected organizations capable? In general, respondents alluded to technical and financial resources but interestingly also underlined the importance of having other sort of resources such as institutional and ideational (e.g. trust, commitment, learning). By way of illustration, an international bureaucrat from an Andean country noted that:

“The WHO and PAHO have the capacity of convening technicians in different subjects. Moreover, these technicians have representativeness before the ministries of health. On the other hand, these organizations have the capacity of providing technical advice in the form of documents (e.g. guides); finally, they have financing as well as contacts with health-related institutions.” (Phone anonymous interview, O4 IGO).

A former South American Health Minister pointed out that “technically the WHO, PAHO and the ISAGS-UNASUR have the duty to be capable.” (Face-to-face anonymous interview, P12 IGO). Another former Health Senior Civil Servant from the same region also referred to technical capacities, but in addition mentioned the variable learning as an

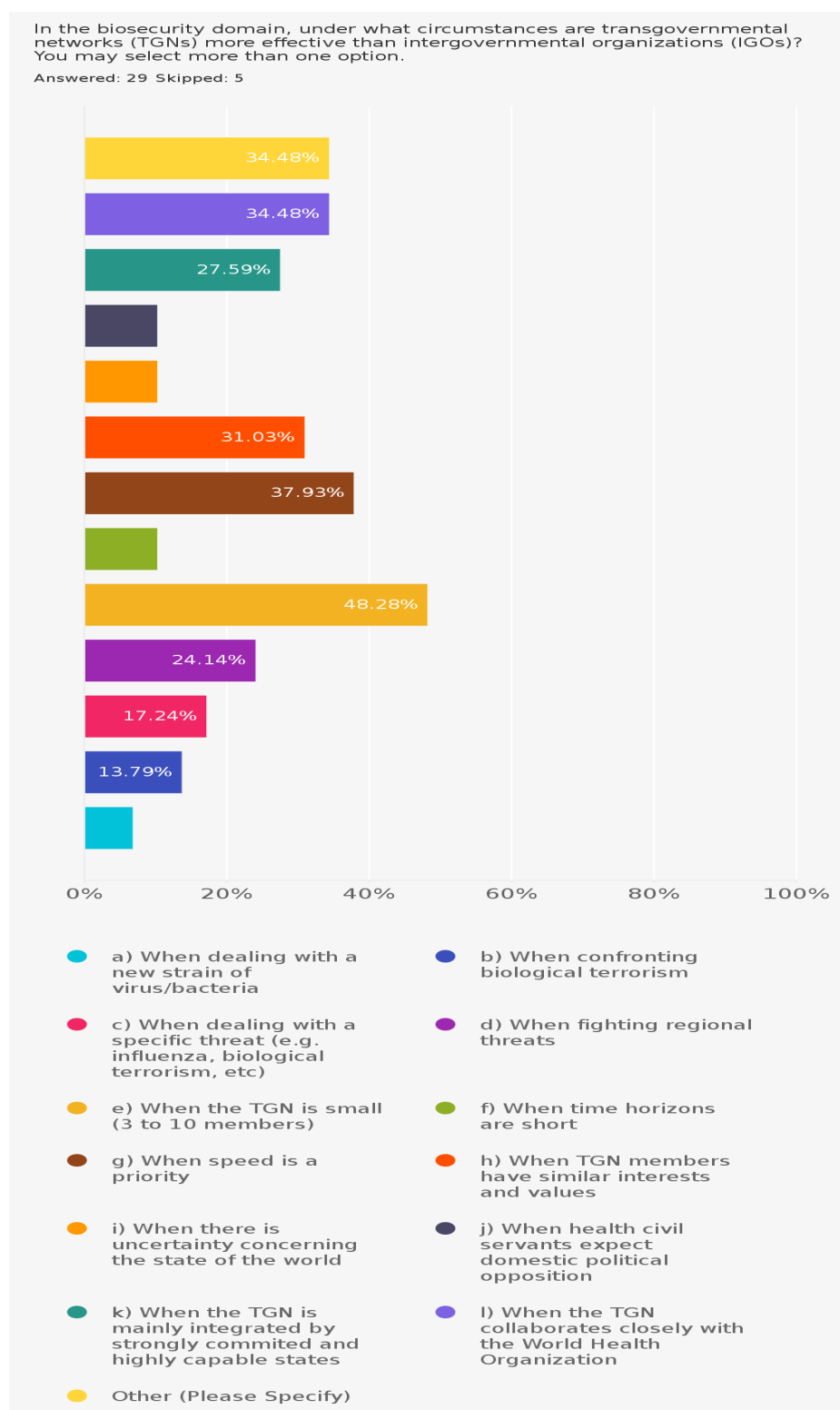
important asset: “The ISAGS-UNASUR and PAHO have technical capacities and have internalized learned experiences that enable them to cooperate with its partners.” (Face-to-face anonymous interview, O11 IGO).

A South American Foreign Relations Senior Civil Servant considered that the WHO and PAHO are capable because of their “proven track-record” (Face-to-face anonymous interview, O10 MoFA). Concerning the GHSI, a former North American Health Vice Minister noted that “At the GHSI, differences related to the budget, in other words to members’ capacities” (Skype anonymous interview, P10 MoH). Another former health civil servant from the same region added that “at the WHO and the GHSI the commitment and trust of each country allows a fast resolution and facilitates the communication within established meetings” (Phone anonymous interview, O2 MoH). In this respect, it is noteworthy that respondents did not only equate material resources with capabilities but broadened the range of options to include other resources, which are also relevant for a variety of scholars such as learning, commitment and trust (Levitt & March 1988; Haas 2000; Koremenos, Lipson, Snidal, 2001; Eilstrup-Sangiovanni 2009; Rathbun 2011).

4.14. IN THE BIOSECURITY DOMAIN, UNDER WHAT CIRCUMSTANCES ARE TGNs MORE EFFECTIVE THAN IGOS? (Q15).

Largely, question 15 resembles the essence of the study main question i.e. when are TGNs the best option to deal with biosecurity threats? Overall, I tried to substantiate the main question by incorporating other variables deemed relevant in the literature (see Chapter 2). Consequently, I combined the conditions laid out by rationalist and network theorists (see Chapter 2) with some insights from the biosecurity area (e.g. when dealing with a new strain of virus/bacteria). With this in mind, I offered respondents twelve conditions and left a blank space in case they were willing to add other(s). In this question, respondents could select more than one condition. Unlike other questions, 29 respondents answered or provided information related to the question and only five skipped it, thus the degree of reliability is very high. Additionally, 10 respondents appointed different conditions they deemed relevant (see graph 4.14.1 and table 4.14.2).

Graph 4.14.1. Under what circumstances are TGNs more effective than IGOs?



Source: Author using Zoho software.

As graph 4.14.1 shows, TGNs in the biosecurity field are more effective than IGOs when the network is small (48.28%); speed is a priority (37.93%); TGNs collaborate with the WHO (34.48%), and its members have similar interests and values (31.03%). According to respondents, specific conditions linked to the biosecurity field also play a role when considering what institutional arrangement to select. Indeed, respondents maintained that TGNs are more effective than IGOs when fighting regional threats (24.14%); dealing with a specific threat such as influenza, biological terrorism, etc. (17.24%); and confronting biological terrorism (13.79%). A variable that plays an even more prominent role than the ones associated with the biosecurity field relates to the capabilities and the commitment of TGN members.

In other words, if the majority of TGN members are strongly committed and highly capable states, it will be more effective than IGOs (27.59%). Some of the conditions that received less support either derive from the rational choice framework (e.g., when time horizons are short), alluded to the domestic variable (i.e. when health civil servants expect domestic political opposition) or to a particularity of the biosecurity realm (i.e. when dealing with a new strain of virus/bacteria). By way of illustration, three respondents (10.34%) pointed out that TGNs are more effective than IGOs when time horizons are short (letter f), when there is uncertainty concerning the state of the world (letter i) and when health civil servants expect domestic political opposition (letter j).

As stated, ten respondents (34.48%) mentioned other circumstances that allow TGNs to be more effective than IGOs (see table 4.14.2). This represents the same amount of people who selected the third most chosen option i.e. when TGNs collaborate with the WHO (letter l). Although respondents pointed out to a variety of conditions, we can group them in three categories: trust, technicality of the issue and need of having better communication. With respect to the first category, a health Vice-minister from a North American country who has actively participated in several GHSI meetings mentioned that TGNs are more effective than IGOs “when members trust each other...” (Phone anonymous interview, P2 MoH). A former Health Vice Minister from the same region that also participated in the GHSI meetings underlined the importance of

“building a circle of trust among the top level people and getting decisions make faster in a short period of time” (Face-to-face anonymous interview, P5 MoH). Finally, three North American health senior civil servants asserted that TGNs are more effective than IGOs “when members trust each other” (Face-to-face anonymous interview, O9,O12,O13 MoH).

Table 4.14.2. When are TGNs more effective than IGOs?

Choices	Response percent	Response count
(1) a) When dealing with a new strain of virus/bacteria	6.90%	2
(2) b) When confronting biological terrorism	13.79%	4
(3) c) When dealing with a specific threat (e.g. influenza, biological terrorism, etc)	17.24%	5
(4) d) When fighting regional threats	24.14%	7
(5) e) When the TGN is small (3 to 10 members)	48.28%	14
(6) f) When time horizons are short	10.34%	3
(7) g) When speed is a priority	37.93%	11
(8) h) When TGN members have similar interests and values	31.03%	9
(9) i) When there is uncertainty concerning the state of the world	10.34%	3
(10) j) When health civil servants expect domestic political opposition	10.34%	3
(11) k) When the TGN is mainly integrated by strongly committed and highly capable states	27.59%	8
(12) l) When the TGN collaborates closely with the World Health Organization	34.48%	10
Other (Please Specify)	34.48%	10

Source: Author using Zoho software.

It is noteworthy that trust as a variable resulted as important as condition c, i.e. dealing with a specific threat such as influenza, biological terrorism, etc., which accounted for 17.24%. Alternatively, the fact that five respondents mentioned this variable reinforces the decision made in the theoretical chapter to combine the fundamentals of the rational design project with the insights of network theories, where generalized trust appears as a prominent explaining variable behind the decision to select TGNs. Nonetheless, this also shows one of the limitations of the rational design project, i.e. not to consider the preferences of the actors and to assign it a secondary role, subsumed to the uncertainty about others' preferences. These findings are in line with the rival hypotheses provided by Rathbun (2011), who argued that it is trust and not distrust, that leads states to cooperate and to construct international organizations (see Chapter 2)⁵³. However, they are also consistent with the findings of network scholars (Scharpf 1997, 137–138; Podolny 1998, 60–62).

Concerning the second category related to the technicality of the issue, a former Health Minister from a North American country asserted that TGNs are more effective “when the nature of the problem is very technical (push and pull factors) and when there is a very clear objective that involves affected countries” (Phone anonymous interview, P9 MoH). A scholar from the same region stated that TGNs are more effective when there is “complexity and expertise intensive but where the expertise substantially lies within the State apparatus” (Face-to-face anonymous interview, E2 Academia). A health Vice Minister from North America mentioned that TGNs are more effective than IGOs “....when the threat has technical and political connotations” (Phone anonymous interview, P2 MoH). As for the third category, (i.e. having better communication), an experienced Health senior civil servant who worked for a North American country and for PAHO considered that TGNs are more effective than IGOs “when there is a need for better communication between the countries” (Face-to-face interview, P4 MoH). A former Health Vice Minister from the same region that participated in the GHSI meetings underlined the importance of “getting the high level decision makers, to have face-to-face conversations” (Face-to-face interview, P5 MoH). Furthermore, a former

⁵³ I will tackle this issue in the next chapter: “linking theory to evidence”.

Health Minister from North America maintained that TGNs are more effective than IGOs when there is the “Need of secrecy (e.g. for dealing with terrorist information, national security information)” (Phone anonymous interview, P3 MoH).

The remaining informants pointed out to other conditions, which despite receiving few mentions are nonetheless relevant for network theories and rational choice such as membership, flexibility and obligation (see Chapter 2). In this respect, a South American Foreign Relations Senior civil servant who has participated in the G20 meetings pointed out that TGNs are more effective than IGOs “when they are flexible, i.e. when there are no pre-established rules” (Skype anonymous interview, P11, MoFA). A European Health Vice Minister considered that TGNs are more effective “when the countries are directly involved and when there is not broad involvement of other countries” (Skype anonymous interview, P1 MoH). Thus, suggesting the need to prevent the admission of spoilers (see Condition 2 in Chapter 2). Lastly, concerning the variable “obligation”, a former Minister who served as President of the U.N. Security Council indicated that TGNs are more effective when “States are committed and their agreements are subject to parliamentary control” (Face-to-face anonymous interview, P13 MoFA). In the next and final chapter, I will link these results with the theoretical framework I laid out in Chapter 2.

CHAPTER FIVE: WHEN IS TRANSGOVERNMENTAL COOPERATION BETTER?

5.1. LINKING THEORY TO EVIDENCE

Despite disagreements within Political Science on how to better connect theory with evidence, there are advantages of attempting the endeavor. When following a successful strategy, we increase for instance the understanding of the theory and create a common ground across the boundaries established by disciplines, sub disciplines and epistemic communities. Moreover, by conducting empirical research it is easier to identify at what stage of the process disagreement is clearer and what constitutes the substance of the disagreement. Besides, we should not forget that a common criticism of both rational choice and constructivism theorizing⁵⁴ is that very few of it is actually linked to evidence. One positivist strategy to undertake consists in connecting the concepts that constitute a theory to observable indicators, then to make explicit what expectations follow from the theory, and as a final step, to demonstrate whether these expectations materialize or not. Albeit the strategy sounds easy to follow, is not simple to demonstrate that the chosen indicators validly connect to the abstract concept. Likewise, it is difficult to determine the specific expectations that should follow (Herrmann 2002, 159).

A different method for linking cognitive concepts to empirical evidence is to study an actor's statements and choices. We can study statements through systematic content analysis – qualitative, quantitative or both-, linguistic discourse analysis, close-ended questionnaires, structured interviews, unrestrained interviews and last but not least, through focus groups and interactive dialogues. Of course, the method is not exempt of criticisms nor difficulties (Herrmann 2002). As Herrmann (2002) notes, “it is naïve both for political and philosophical reasons to believe that a scholar can simply listen to what an actor says or watch what they do and know how to describe the actor's values and worldviews. The very idea of values and world views are concepts that belong to the scholar not to the observed actor” (169). A way for partially overcoming this obstacle is to develop concepts together

⁵⁴ I raise this point because my theoretical framework is mostly articulated around rational choice assumptions and the two rival explanations come from constructivism theorizing.

with the actor and then elucidating propositions about what concepts might precisely describe her mindset. Last, it is advisable to pose questions designed to test these alternatives or watch for choices deemed by the scholar to reveal these mental dispositions (Herrmann 2002).

In the present study, I followed these methods and strategies to learn about not only an actor's perceptions and beliefs concerning biosecurity cooperation but also as way of understanding how TGNs surge, operate, evolve and be more effective than OIGs. Thus, when interviewing I sought to remain flexible by constantly refining my concepts and making them explicit to my interview partners. As can be expected in any interdisciplinary research—as is the case of Global Health Governance, where Public Health and International Relations intersect-, concepts, terms and approaches vary largely. Therefore, I used a single survey instrument but always explained the doubts and the main concepts to my different interviewers (ambassadors, physicians, epidemiologists, political scientists, etc.).

This proved to be quite useful when interviewing physicians or professionals with no IR background. One such example was precisely the concept of biosecurity, which arouse controversy among some physicians and senior civil servants. Another factor that prompted substantial variation revolved around the geographical origin of the interviewees. In that respect, I soon learned that for the majority of the interviewees from the three North American countries⁵⁵ the concept of biosecurity included biological terrorist attacks and leaned towards the position of Fidler and Gostin. Instead, for many interview partners in South America the concept only alluded to naturally occurring diseases such as Influenza, Zika or Ebola, and hence, criticized what they perceived as a securitization process of health. Despite these differences in perceptions, interests and reasoned positions, I remained with the definition provided by Fidler and Gostin, which—as WHO's public health emergencies of international concern listed in the IHR 2005- comprise both kinds of threats—i.e. naturally occurring and deliberate-.

⁵⁵ Being that particularly the case in the United States of America and Canada.

In the theoretical section (see Chapter 2), I argued that in the biosecurity field and under certain conditions (e.g. when speed is a priority) we should expect governments to choose TGNs because they consider them as superior institutional arrangements. I grouped these rational choice conditions according to the origin of the stimuli (i.e. external or domestic) and related them to certain factors (e.g. cooperation problems, perceptions, capacities, interests, group size, etc.). I also offered two rival explanations derived from Constructivism. In short, *governments are more likely to select a TGN instead of an IGO for dealing with biosecurity threats*:

External:

- 1) When they foresee distributional problems and thus aim to reduce bargaining costs;
- 2) Among strongly committed and capable states that wish to exclude spoilers from cooperation;
- 3) When they share interests and values with other governments and when the group is small (i.e. from 2 to ten members);
- 4) When they are uncertain regarding the “state of the world”, and hence doubt about the future implications of agreements;
- 5) When speed is a priority and time horizons are short;
- 6) When they aim to reconceptualise their responsibilities and interests with respect to biosecurity threats;

Domestic:

- 7a) When they anticipate high sovereignty costs and react to domestic opposition (within either the government’s structure or society);
- 7b) When sub-state officials wish to build coalitions with like-minded peers from other governments against elements within their own administrative structures;

Rival explanations:

- A)** Instead of considering costs and benefits, governments base their institutional design decision on **normative considerations**, i.e. they do what is appropriate (Wendt, 2001);
- B) Generalized trust**⁵⁶ leads governments to cooperate and to construct international organizations (Rathbun, 2011).

⁵⁶ Although generalized trust is usually associated with constructivism, is also in line with network theories (see Scharpf 1997, 137–138; Slaughter 1997, 192; Podolny 1998, 60–62; Raustiala 2002, 24; Kenney 2009, 83).

In this chapter, I discuss each of these conditions in light of the evidence I got in the face-to-face interviews and in the on-line questionnaires. The way to proceed will be the following: First, I will tackle the rational choice external conditions, and then I will move forward to analyze the domestic conditions. Lastly, I will assess the validity of the constructivist claims.

5.2. EXTERNAL CONDITIONS

5.2.1. DISTRIBUTIONAL PROBLEMS (CONDITION 1).

We can expect transgovernmental cooperation to be more effective when governments anticipate distributional problems and thus aim to reduce bargaining costs. As stated, a distribution problem occurs when governments have to select one outcome from a range of known possible outcomes. The magnitude of the distributional problem hinges upon the way each government compares its preferred alternative to other governments preferred alternatives (Koremenos *et al.*, 2001, 775). To put it another way, governments are more likely to choose a TGN when more than one cooperative agreement is possible (TGNs, IGOs, Public-private partnerships, etc.).

According to Koremenos *et al.* (2001) “States may reduce distributional problems, and bargaining costs, by adopting a more flexible agreement structure” (794). As a rule, where the distributional implications of a choice are small - such as when the “shadow of the future” is short - bargaining costs will be proportionately small. In contrast, where the distributional implications are large - e.g., when the “shadow of the future” is long - bargaining costs will likely be large (Koremenos *et al.* 2001, 775). However, network relations can reduce the risk of opportunism by extending the “shadow of the future”, and by increasing the visibility of transactions. Thus, the existence of a network will ultimately determine the interactions that take place among its members in various ways:

- 1) By enabling some interactions that would not have else arisen;
- 2) By making some of them more likely than others and
- 3) By altering the outcomes of some in favour of one or another of the members (Scharpf 1997, 137).

Despite declaring that institutional arrangements are not mutually exclusive, a Brazilian former Minister of Foreign Affairs who also served as Minister of Defence stated that governments resort to different organizations depending on the outcome they are looking for. Hence, suggesting that institutional design is deliberate and that interests and expected outcomes do matter:

“I believe that these groups [TGNs] arise when there is a perception of either **affinities or interests**. It is difficult to say exactly and ... some are, so to say, functional for certain issues but dysfunctional for others. For example, I can address the issue of the UN Security Council reform within the India, Brazil, South Africa Dialogue Forum (IBSA), but not within the BRICS because China has a different vision. Health, for example, can be treated within the BRICS. Two cases that illustrate the previous point are antimicrobial resistance or tuberculosis, which is also linked to antimicrobial resistance. The 40% of the world's population lives within the BRICS, but those countries account for the 60% of patients infected with tuberculosis, so there is obviously a common interest in dealing with this issue. The BRICS already existed, i.e. **it was not created for that purpose, but once you create an ad hoc group, you discover other points in common**. In short, it is very difficult to generalize. I would say that governments create these groups based on affinities or coincidence of interests. **I do not think they are exclusive of other treatments**. Tuberculosis, for example, Brazil addresses the issue at the WHO, at UNCTAD, within the BRICS, in South America, at PAHO, they are not exclusive, and I do not think it is a matter of choosing one or the other. At a certain moment, **you may discover that a given aspect for example regarding the drug patent is more difficult to treat at the WHO** because there you will find countries such as the United States of America and Switzerland. On the other hand, **it will be easier to address this issue within the BRICS**. When it comes to normative issues, the BRICS for example does not serve to regulate. In that case, the only thing you can do is exchanging experiences but these countries cannot create rules, either for biosecurity or against epidemics. That you have to do it at the WHO because it is the only organization that has legal weight and can be followed by everyone. In an epidemic for example, it is of little use for Brazil to follow a rule if Paraguay or Bolivia do not follow it.” (Face-to-face anonymous interview, P14 MoFA).

I asked a former Health Minister from an Andean country whether governments face an institutional choice between TGNs and IGOs and she replied in line with previous answer, namely, that governments resort to a certain organization because they know they can expect certain outcomes from it:

“**Yes, it is a decision** [to opt between TGNs and IGOs]. Depending on the area, we considered PAHO or not. It is a sovereign decision of each country. PAHO

is a reference but we made the decision on how to do things. **Sometimes we chose to collaborate with the Andean Health Organization.** In the case of Ecuador the IGO determines the position / decision of the Minister of Health. **In extreme situations, the government will choose who else can collaborate** (for example, during the earthquake PAHO was a strategic ally of first instance). It is an internal issue of each country. Depending on how each country operates. In the case of Ecuador, decisions are made within the Pan American Health Conference of PAHO. As a minister, I could have a position and could contribute from my perspective and obviously under my responsibility, understanding that I was a representative of the government, and therefore, that my answers and contributions had to be framed in previous agreements. Not necessarily for everything you do internationally you have to have the ok or an authorization chain for taking action. **Binding decisions** in the field of health involve the participation of the Ministry of Foreign Affairs, while only the Minister of Health makes **non-binding decisions.**” (Face-to-face anonymous interview, P12 IGO).

Previous comments do not only illustrate governments face choices when deciding how to confront particular threats (e.g. natural disasters), but also that as long theorized by Keohane and Nye (1974), sub-state officials decide how to cooperate with other governments. As implied in previous answer, sub-state official seek flexibility and they usually find it in soft law instruments (non-binding decisions). Following response from a Health Senior Civil Servant from a country belonging to MERCOSUR goes hand in hand with previous response and sheds light on the reasoning behind a governments’ decision when confronting biosecurity threats:

TGNs versus IGOs in the biosecurity field, is it a matter of choice? Why? If there is a choice, who takes the decision on behalf of your government? “I prefer to think of them as **complementary**, for several reasons. Transgovernmental networks tend to **strengthen high-level political engagement** between Member States, but they **lack of tools for emergencies** or PHEIC. For example, the **APEC HWG** does not have an emergency team or coordination and operation arrangements for transnational emergencies. However, the benefit of these networks is the **capacity** to transcend the pure health-sector policy discussion to others such as IP or R&D financing. IGOs have better **capacity** to address emergencies with independent technical expertise, but sometimes they lack of political power to open some discussion with other sectors. For example, the lack of coordination or joint-discussions between WHO and WIPO. One of the most notable characteristics of the intergovernmental organizations is that they have **more democratic and multilateral structures** to drive the resolutions, than the networks, which are driven generally by one donor, and follow its particular agenda. In Uruguay, the engagement in one or another scheme is adopted by the **joint resolution of**

the Ministry of Health and the Ministry of Foreign Affairs. However, for most of these arrangements, particularly the intergovernmental organizations, a National Congress approval is needed.” (Phone anonymous interview, O6 MoH).

Security concerns magnify the distributional problems associated to any agreement, particularly those of great magnitude or involving great uncertainty. However, soft forms of legalization can help mitigating these costs. For example, States can choose escape clauses, imprecise commitments or “political” forms of delegation that allow them to keep control if unfavourable circumstances arise (Abbot & Snidal, 2000, 435). TGNs may as well reduce domestic pressure by obscuring distributive effects (Eilstrup-Sangiovanni 2009, 209).

Although respondents are aware that States can opt for various institutional options (see section 4.3), the majority of them (58.33%) did not answer that TGNs were more effective. Indeed, only 16.67% answered that TGNs were more effective than IGOs. Either this makes us wonder whether there are “soft” security concerns (e.g. pandemic, climate change, etc.) and “hard” security concerns (e.g. dual use technologies, drug trafficking, peacekeeping, conventional terrorism, etc.) or whether the biosecurity issue area is one, in which States do not foresee distributional problems. Certainly the biosecurity issue area implies a degree of uncertainty (‘uncertainty concerning the state of the world’ was named by 10.34% of respondents, see section 4.14), however, it seems that it is not as relevant as other variables for explaining a governments decision (see graph 4.14.1).

On the other hand, respondents did allude to **soft forms of legalization** to reduce costs associated to cooperation such as escape clauses. Furthermore, some of them favoured a more flexible organizational structure as a way of reducing costs. By way of illustration, when comparing both institutional arrangements, a Canadian former Vice Minister of Health stated:

“For us, we don’t look at one [institutional arrangement] being better than the other in terms of legally binding treaties vs affiliations of like-minded countries we look at how the two can support each other. Therefore, for instance with GHSI, one of our conversations has been around IHR Regulations and how we might help WHO help its member states meet IHR capacity requirements. So for us really is not a question of **one or the other**. Neither GHSI nor NAPAPI come with any additional **funding**. These are things we do within the considering of our founding envelops within our countries. It is like in kind partnership if you will, we get together, we **pay** for

things we believe are important, we develop synergies, and **we leverage each other**. Hence, from a business perspective there is a **better return on investment** if you are doing something with seven likeminded countries than each seven countries trying to do it on their own and not moving forward as much. It does not mean that [the NACOBPI] is a **legally binding group; we can just ban it at any time** if we feel it is not necessary, but we felt it is necessary to move forward and to keep action. Things would stagnate if you do not continually discuss and bring new ideas and keep them relevant... Thus, the opportunity for us with these affiliated groups is one that **no longer relevant and no longer timely we don't need them anymore and we would abandon them.**" (Face-to-face anonymous interview, P15 MoH).

An Italian Vice Minister of Health who has also participated in several GHSI meetings named similar reasons to cooperate through a TGN. Unlike the previous respondent, he did not link TGNs with the possibility of sharing/reducing costs but referred to the exit option and even expressly linked the network form to flexibility and to a higher degree of autonomy from the Ministry of Foreign affairs. Thus, supporting Abbot and Snidal's (2000) arguments concerning transgovernmental institutions, i.e. that government agencies may be driven to rely on soft law because they lack authority to enter binding treaties (453):

"TGNs imply resources to participate (travels, meetings, etc.). The choice to participate in one [intergovernmental] organization is not a possible choice, because a government cannot avoid to participate in an official agency as the WHO is, but **it can decide to exit from a TGN** for instance for economic reasons, because you have to spend time to do this activity. In times of a crisis, it could be not easy to have the availability of money. **It is a voluntary activity.**" Then, please correct me if I'm wrong, you would see TGNs as more flexible than IGOs? "Yes". Because you may exit the TGN if it is not effective...? "Yes. Because when you **participate in IGO's you are not the boss, the Ministry of Foreign Affairs is**. They make many diplomatic consults before deciding to exit or not of that kind of organizations. In this case, [referring to the GHSI] is a **technical... network, the (health) minister can decide** if it is beneficial to society. **You can enter, exit...** Obviously you try to stay (stable) settled in the organization. **Anyway, you are freer to decide**, time by time, what could be the best way [to cooperate...]." (Skype anonymous interview, P1 MoH).

On soft forms of legalization, a Mexican Vice Minister of Health, who in previous years participated in several meetings of the GHSI Senior Working Group stated concerning TGNs in general, and the GHSI in particular:

“To my view, the GHSI fundamentally reflects the capacity of a group of “like-minded countries” to work together in sharing information and in discussing how to prepare and respond to potential threats. GHSI has **no legally binding agreements** and works on a number of **implicit assumptions** regarding the capacity and willingness of each country to work on biosecurity. I think TGNs are complementary to IGOs. I would expect TGNs to be **more effective** than IGOs in **smaller** groups of countries, which have common political features, **similar capacities** or clearly identified **regional interests**. TGN require a higher level of **implicit understanding to work without binding rules**”. (Phone anonymous interview, P2 MoH).

According to Koremenos, *et al.* (2001) when there are distributional problems, one form to rearrange the terms of cooperation without incurring in additional costs or difficulties is to expand the membership. This allows sharing benefits more equally “by expanding the possibilities for tradeoffs among the members...because new members implicitly increase the range of issues included” (785). However, as a matter fact, none of the TGNs analyzed here has expanded its membership in the last years. That even applies to the oldest TGNs in the biosecurity field, i.e. the GHSI (created in 2001) and the APEC Health Working Group (established in 2003 as APEC Health Task Force). When asked, some respondents regarded problematic to expand the size of a certain TGN.

For example, a former Health Vice Minister from North America who attended several of the GHSI meetings considered the network to be effective due to its small size. For this reason, he claimed the group eventually turned down Australia and Brazil’ requests for membership. In his view, “the members of the network had no differences in terms of values or interests, just different ways of approaching the problems. Due to the technicalities of the field, the best argument would carry the day, and the scientific evidence would solve any conflicts that may arise among them”⁵⁷ (Phone anonymous interview, P10 MoH).

5.2.2. CAPABILITIES, COMMITMENT AND THE EXCLUSION OF SPOILERS (CONDITION 2).

In Chapter 2, I argued that one of the reasons why governments are more likely to choose a TGN has to do with the capabilities and commitment of other prospective members. I also argued that capable and committed states would select the network form to exclude spoilers.

⁵⁷ The interviewee also participated in several meetings of the NACOBPI and the APEC Health Group.

Indeed, according to seven respondents (22.58% of the total) it is more probable to witness the appearance of TGNs in the biosecurity field among strongly committed and capable states (see graph 4.4.1). Six high-ranking officials –including two Vice Ministers- from the three North American countries referred to “like-mindedness” as an important factor prompting cooperation under the network form (see table 4.4.3). To the question: IGOs vs TGNs, is it a matter of choice? Are they complementary? A Canadian Vice Minister of Health answered:

“It depends. You have to go back to what the objectives of those structures are [referring to the TGNs] and the objectives of participation of the countries and those structures are. If it is, an organization like the GHSI is an organization of **convenience** almost “**likeminded countries**”, meaning having generally speaking **shared issues** in the biosecurity side. Whether it is eight or that could be fifteen, it is up to debate. Depending on how far you go with the **like-mindedness**, but there would not be all 190.... **Objectives and concerns** would not be mutually shared among all 190-member states of the WHO, for example. To participate in this sort of Transgovernmental body you actually have a much more **restricted focus of objectives** (where those objectives are actually shared by the participants). That is maybe why the GHSI is the G7 + Mexico. Actually, Mexico was added to that because their objectives turned out to be shared by the other seven. It could have been ten or whatever, that is a different question. However, if you have objectives that are either mutually **shared** among all the member states of the WHO that puts a very different perspective on what you are doing. Otherwise, if its objectives cannot be addressed except by everybody’s participation like IHR regulations (you really want to have everybody participation), in that case, even though their level of contribution in their participation may vary according to their **capacities** of the moment. But ultimately, everybody benefits also, that is one of the overarching objectives, by having a system using International Health Regulations in place” (Face-to-face anonymous interview, P15 MoH).

Another Canadian Senior civil servant also underlined the importance of having strong capacities and like-mindedness as prerequisites for collaborating in a TGN. What is more, she linked high capacities with low prevalence diseases:

“Within a country’s decision making there are certain benefits to these affiliations of **like-minded countries** to get together to have a shared strategy and shared objectives to work collectively towards something and you tend to gather not only with **likeminded** but people that are or groups that are within the same... “**Low prevalence/high resources**”. Gatherings of “Low prevalence/high resource” countries that help together to move things forward. **Like-mindedness helps stimulate activity**. Moving forward together and not taking a scattered approach. **High resource countries** help to move things forward. Some will be able to do it easier than others. You cannot protect your citizens within your borders anymore without looking outside your borders.

For us, we don't look at one being better than the other in terms of legally binding treaties vs **affiliations of like-minded** countries we look at **how the two can support each other**. So for instance with the GHSI, one of our conversations has been around IHR Regulations and how we might help WHO help its member states meet **IHR capacity requirements**.” (Face-to-face anonymous interview, O14 MoH).

Moreover, a Secretary of Health from the United States declared that it is more probable to witness the appearance of TGNs in the biosecurity field: “among strongly committed and capable states who have worked together for a long time (i.e. history course of action), and when there is transparency among them” (Phone anonymous interview, P3 MoH). According to Eilstrup-Sangiovanni (2009), “TGNs are useful for forming clubs of strongly committed states and for excluding spoilers. By confining an initiative to a small group of highly committed states, ‘insiders’ can set standards to which ‘outsiders’ are later compelled to accede” (209). An Italian Vice Minister of Health would suggest that to be the case within the GHSI:

“Commitment depends on the Ministers. If the Ministers are interested and is relevant for the people, they can send officers, speak with the ministers and push for the main activities of the group. However, if the Ministers are not so much interested... The problem of the GHSI is that **is not formal**, so we don't have any **decision**, any **law** that is published in an official journal so **it is only voluntary**. If you are **committed** on it, all right, otherwise is no easy to reach some **results**. It's a voluntary group. It depends on the **willingness of individuals**. Despite the informal character of the group, the **commitment** of the European Commission and the WHO is **useful** because they are official bodies that **can transform** in something that is **mandatory** for the countries not only the ideas.” (Skype anonymous interview, P1 MoH).

Another Health Vice Minister who attended for more than four years the Senior and the technical meetings of the GHSI and who besides served as Head of his country's IHR Focal point stated that: “The GHSI countries influenced in the modification of the IHR so that it had the orientation currently has concerning bioterrorism. Specifically, the GHSI exerted influence in the WHO with the aim of modifying the IHR to include bioterrorism in the algorithm as a PHEIC” (Phone anonymous interview, P2 MoH). These comments are in line with Raustiala's (2002) concept of regulatory export (7) and with the arguments of some network scholars (Slaughter 1997, 192; Eilstrup-Sangiovanni 2009, 209–10; Kahler 2009a, 15).

As for the **exclusion of spoilers**, various respondents stated Russia was expressly excluded from the GHSI either because members did not trust her or because her interests diverged. In that respect, I asked one Canadian global health specialist why Russia was not invited to the GHSI, to which he responded by saying that:

“I asked people in the State Department, why Russia, why Mexico and not Russia?” **Why Mexico?** “Both sides, because of the Americans. Mexico and United States had the border agreement in 2000 to improve the health conditions in border regions and the Bush administration was more favorably predisposed to Mexico. It felt it was in America’s, in their own geopolitical perspective; **Mexican** presence was an **advantage**, whereas, **Russian** presence would be a **complication**. How it can be a truly transnational organization without Russia? And the response was: That is not the intent of the organization, it is not meant to be global, **it is selective, you are invited** to become a member, you do not become automatically a member upon application like you do in the WHO, who invited you to join...” **Why do you think it is like that?** “Well, because it was emerged to the crisis and in a way the crisis mentality is still prevalent and it was to maximize the assets, abilities of the member countries that **everyone would profit** and they could all be trusted, even the Italians”. (Face-to-face anonymous interview, E1 Academia).

A former Health Secretary from North America who was a founder of the GHSI, and participated in the trilateral meeting where the former Health Secretary of the United States, Tommy Thompson presented them the idea⁵⁸, commented the following regarding Russia:

“The exclusion of Russia was due to the **logic** and **purpose** of this group [the GHSI]. In fact, the issue was a concern for the most advanced economies, starting with the United States that had just been the victim of an attack on its territory (throughout its history, 9/11 was worse than the attack on Pearl Harbor). Then there was a very specific concern, **Russia really did not share that concern**. Besides, due to the reemergence of chemical and biological weapons there was a completely separate negotiation that the United States had

⁵⁸ According to two scholars interviewed, two former vice-Ministers of Health and one former Minister of Health from the three North American countries, Tommy Thompson created the GHSI due to the Anthrax attacks. As per one current health Minister, it was Thompson together with William R. Steiger, the then Special Assistant to the Secretary for International Affairs and the Director of the Office of Global Health Affairs at the U.S. Department of Health and Human Services (HHS), who created that TGN. In either case, this underpins Keohanes’ and Nyes’ (1974) arguments concerning transgovernmentalism, i.e. Sub-units of governments interact with their counterparts without being controlled or closely guided by the policies of the cabinets or chief executives of their governments (see section 1.3). One of the interviewees stated: “If you would need to name a person it is Thommy Thompson but it would happen unless the Americans were going to play ball...and was certainly not self-evident that our traumatized American friends in that autumn were looking for any international solution.” (Face-to-face anonymous interview, E1 Academia).

been doing with, first the Soviet Union and then with the Russian Federation. This meant that the coordination elements required for the operation of this group were in place. However, it seems to me that this is an example of how sometimes these transgovernmental instances operate when traditional intergovernmental mechanisms would not function. In this case, there were two very powerful reasons so as not to include Russia, because if this is done through the WHO, where Russia is a member state, the political handling of this *sui generis* grouping is very complicated. Why Mexico? It is the only country that is not a member of the G7 and that was there. It was due to the border with the United States. It is this situation where a very defined purpose justifies the creation of these *ad hoc* instances. On the other hand, after creating this group we communicated with the WHO, in fact we made a presentation at the World Health Assembly in 2002, to inform all other Member States of what we were doing. It was not in any way an interest to exclude anyone but there was a **logic**, and it did not fit to follow conventional channels. **It demanded *ad hoc* mechanisms.** Finally, after the Anthrax the GHSI worked because bioterrorist attacks never materialized and began to focus much on the issue of preparation against influenza”. (Phone anonymous interview, P9 MoH).

I asked another interviewee why Russia was not a member of the GHSI and why instead Mexico was included, to which he pointed out to a lack of trust concerning Russia and as other interviewees agreed on the geographical factor concerning Mexico:

“Moving more towards the military side of the US government...and the military side of the Canadian government. Basically, their conclusion was, if it is about weapons gear Anthrax it can only come from basically two countries, but they did not know that at the beginning, it took them some time to figure that out, and the two countries were the US and the former USSR. Hence, we are not sure we want to have a **leading suspect** at the table because one of us is enough to be there. Even if you have a dialogue with them, they will find out all our State secrets about what we know of bioweapons. Bioweapons, really tough in comparison to chemical and nuclear weapons [easy]. Even with the Russians, so **we are not quite sure about the Russians. Sort of in general but especially on weapons gear anthrax.** Thus, it is easy why the Russians were not there. That is kind of shock high politics security calculus, cold war like.” Who might have made that decision? “Tommy was getting the intelligence (memos) from the security forces that it was a weapons gear anthrax. Therefore, Tommy would have kind of known just by the **routine processes** by which the US government operates and then, what is the value added in bringing the Russians? Some good **border security reason** to add **Mexico** to the GHSI. Thus, you basically needed the Mexicans there to for example do better agricultural inspections (e.g. cattle crossing the border carrying anthrax) or for tracking the samples to labs. As I understood the story, it was those two levels of calculation. For those two reasons, cattle anthrax and the American borders: That is enough to bring Mexico to the table.” (Face-to-face anonymous interview, E1 Academia).

Seeking for an answer concerning Russia's absence of the GHSI, I told a European Vice Minister of Health the following: "Let me push the issue a bit forward. I find interesting –to say the least- that Russia is not a member of the GHSI taken into account that they are a member of the G8 – at the time of speaking, in 2012- and that at the G8 meetings, even at the ministerial summits Russia has been very enthusiastic about global health, particularly since 2006. Why do you think Russia is not a member? To which, he replied:

"Probably the problem is that there is not complete **trust** in them". **What would be the reason for that?** "I think that each country that wishes to participate in this organization [referring to the GHSI] should be totally **transparent** to the others with the only exception of secret matters. They have to be transparent; otherwise, this kind of cooperation is not useful. At this moment, probably our political level decided **Russia** is not ready for this aspect. By "our political level", I mean the international, not the Italian one." (Skype anonymous interview, P1 MoH).

Coming back to the point related to the capabilities of the actors, I asked an experienced Brazilian Health civil servant to tell me what factors would drive governments to choose between a TGN and an IGO? To which, he replied:

"I believe it is **institutional capacity** and **governance**. Brazil has an established power structure. Historically, we have had a strong Ministry of Health, which was substantially strengthened in the democratic period. During the dictatorship, the Ministry did not have autonomy or strength (in fact, no ministry had it). At the National Health Conference of 1986, 5,000 people gathered in Brasilia, they were elected half by the government and half by the population (in municipal and state health assemblies). In those assemblies, was designed what would then become the rules of the federal constitution concerning health. It was due to an intense popular participation. That makes the health structure a highly respected one, both within the government and civil society. Brazilian government structures came out very reinforced with the constitution and administrative reform and today we can say that there is a high degree of autonomy of the Ministry of Health and a high degree of respect of the population towards it and towards the disease control part (vaccines, HIV medications, etc.). Primary and third level care is good, but not emergency care that has many criticisms. In public health, immunization, disease control, etc. there is a respect, for example concerning control of malaria in the Amazon." (Face-to-face anonymous interview, P8 MoH).

I then asked my interviewee whether capabilities would be the only factor behind a government's decision, to which he answered:

“I think it would also be the legal delimitation. The structure of Brazilian governance is very organized; we depend very little on international and national NGOs. The Brazilian public power is very large, that applies to its three levels. For example, Doctors without Borders (MSF) has no expression in Brazil” (Face-to-face anonymous interview, P8 MoH).

The previous paragraph is indicative of the role of capabilities. Despite mentioning “the legal delimitation” as an additional explicative variable, the truth is that the answer emphasizes “public power” as well as “local and national capabilities”. The example provided would confirm this by bringing to memory the Ebola epidemic in West Africa and the important role MSF played in countries whose medical capacities were insufficient and limited. On the other hand, in explaining the origin of TGNs in the biosecurity field, an Italian vice minister of Health pointed out that:

“Probably, we need a TGN only to be sure that the **main/most important countries** are effectively **committed** to adopt some measures...Otherwise, you are right... The new IHR have the same approach we are discussing in the network, namely a broader scope, they deal with biological terrorism not only with infectious diseases (e.g. yellow fever, cholera, etc.) as before (Skype anonymous interview, P1 MoH).

Concerning the BRICS, two Brazilian senior civil servants ascribed to the Ministry of Foreign Affairs referred not only to the importance of having “power resources” as a prerequisite for creating TGNs but also for gaining more power at the international stage. To the question, under what conditions can we witness the appearance of TGNs? They answered:

“When there is a common goal that those countries would like to achieve. In the case of the BRICS, basically, the reason that led to its emergence was the reform of international financial organizations, but it was preceded by a political decision linked to its **power resources to occupy more spaces at the international level**. I also believe that the reason for the desire to reform international institutions has a lot to do with **multipolarity**, an international context of order that would facilitate the formation of these institutional arrangements. We can verify this, for example, with the agricultural G20 within the WTO. This arises precisely because there were new players in the international agricultural market who tried to change the rules of the game that existed when China and the United States decided everything by themselves. Now it is not like that, Brazil is also a player in the agricultural market and therefore these countries had to take into account what Brazil had to say. Thus, the **desire to reform institutions is a factor in opting for networks** but it would not be the only one. **We seek to reform to have more influence**. The spirit of the BRICS was always to work with the system that existed, it was not

intended to replace or confront it, but **to have more influence**: “I want to have more of a say”, hence I want to reform... In our foreign policy we call these networks as “coalitions of variable geometry”, that is, very different coalitions. An example of this is the BRICS group where there are two status quo countries” (Face-to-face anonymous interview, O15 & O16 MoFA).

To disentangle the causality associated to the origin of TGNs from the causality associated to its effectiveness, at the end of the questionnaire I rephrased question five⁵⁹ but in a comparative fashion while emphasizing effectiveness: Q15. In the biosecurity domain, under what circumstances are TGNs more effective than IGOs? Similar to the findings of question five, eight respondents (vs seven in question five) representing 27.59% of the sample sustained that TGNs are more effective than IGOs when the TGN is mainly integrated by strongly committed and highly capable states. Although this is not the main factor prompting governments to choose TGNs, is nonetheless the fifth condition that received more mentions (see graph 4.14.1). Consequently, these findings are in line with the ones of other empirical studies focused on transgovernmental networks, although in other policy fields such as finance (Puetter, 2006, 140-145), conventional terrorism (Cozine, 2010, 201), non-proliferation and missile technology control (Eilstrup-Sangiovanni, 2009, 221).

Furthermore, the findings disconfirm Abbot and Snidal hypothesis concerning hard legalization, i.e. that states should strive for hard legalization (i.e. IGOs) when they aim to limit participation to actors strongly committed to an agreement (Abbott & Snidal 2000, 431). In other words, what we observed in the biosecurity field is exactly the opposite, i.e. governments preferred soft law forms (i.e. transgovernmental networks such as the GHSI, the NACOBPI or the BRICS Health Network) to limit participation to committed countries. Despite differences in the capabilities of some members (e.g. Mexico or South Africa), governments are aware of their power resources and show commitment to achieve their goals. These results also contradict Abbot and Snidal’s argument that states should select soft law when there is a high degree of divergence in terms of their capacities (Abbott & Snidal 2000, 445).

As shown in the analysis of the interviews, the degree of divergence between the members of the GHSI, the NACOBPI and the BRICS Health Network is not high. However,

⁵⁹ Under what conditions is more probable to witness the appearance of TGNs in the biosecurity field?

differences within the FPGHI are more pronounced. For instance, the scope of the organization was limited to bringing health diplomacy into the international agenda. The APEC Health Working Group would be an exception (i.e. its membership shows a high degree of divergence), but in itself, is a different kind of network (of the first type, according to Slaughter) in comparison to the other four cases. To put it differently, the APEC HWG is a TGN that emerged within an established IGO, and is enmeshed with it (see section 1.3.2).

5.2.3. SMALL GROUP AND HOMOGENOUS INTEREST & VALUES (CONDITION 3).

A third condition behind a governments decision for designing TGNs in the biosecurity field is linked to sharing interests and values and when the group is small (i.e. from 2 to ten members). On an aggregated basis, this condition received more mentions than the other six (23 mentions if we sum up options E & H). Indeed, 14 respondents (48.28% of the total, i.e. option E) considered “small size” as the most important condition affecting effectiveness in the biosecurity field. Although, homogenous interest and values do play a role, it is not as indicative as small size. In fact, nine respondents (31.03% of the total, i.e. option H) considered TGNs are more effective than IGOs when members share interests and values.

However, there is a caveat: when I asked my respondents, “Under what conditions can we witness the appearance of TGNs?” (Question five of the questionnaire) a substantial number of them replied “among actors who have similar interests”. This accounted to 21 responses of 34 (i.e. 67.74%). Hence, actors clearly identified common interests as the most important condition explaining the emergence of TGNs in the biosecurity field. Nonetheless, they regard small size (14 mentions, i.e. 48.28%), speed (11 mentions, i.e. 37.93%) and close collaboration with the WHO (10 mentions, i.e. 34.48%) as more important factors explaining TGNs’ effectiveness (*vis-à-vis* IGOs) than option H (i.e. similar interests & values), which accounted for 31.03% (*Cfr.* Graphs 4.4.1 & 4.14.1).

These results are consistent with Koremenos, Lipson and Snidal’s (2001) arguments concerning the independent variable number. Let us recall that “number” is an exogenous attribute of the issue context. It includes prior institutional developments, as well as the set of interested actors and their relative power concerning the issue in question (i.e. asymmetrical distribution of actors ‘capabilities). Number of actors “refers to the actors that

are potentially relevant to joint welfare because their actions affect others or others ‘actions affect them’ (777). As stated, “number does not depend solely on geographic or technological factors and is often determined by prior political and institutional arrangements” (Koremenos, Lipson & Snidal, 2001, 777).

The findings are also in line with the first condition (i.e. small group size and relatively homogenous interests) for networked cooperation laid out by Eilstrup-Sangiovanni (2009), which according to her lessens the need for central arbitration and sanctioning (205). As noted in the theoretical chapter, small groups are more likely to take advantage from the speed and flexibility associated with networked cooperation. Furthermore, due to credibility issues networks are more likely among small homogenous groups. The rationale behind is that peer-to-peer monitoring will substitute central arbitration and sanctioning. This is because it is easier to achieve effective peer-to-peer monitoring among small numbers (Eilstrup-Sangiovanni, 2009, 205). Concerning effectiveness and small size of international organizations, a former Foreign Affairs and Defense Minister from South America would validate previous arguments:

“Each organization has its role [referring to IGOs and TGNs]. If you take an initiative, let us say to create a fund for fighting Zika, in general it is easier to act in a **smaller group**. For example, at the G20 you could do a thing like that and whoever wants to join can do it. Instead, if you are willing to create standards it has to be done at WHO. In other words, to create longer-term plans, you have to do it preferably at the WHO, because it is the international organization. They have different roles, i.e. they are not mutually exclusive. Nowadays **they are complementary**. However, ideally at some point in the future, a topic like that should be treated in an international organization that has rules and everyone participates. It is the most democratic thing that exists. However, we must recognize that now certain decisions can be taken in TGNs. Because either we need **to act quickly**, or because of the **obstacles** that might exist **in a more formal organization**. In that sense, I believe **networks can be complementary and not exclusionary**. These networks can also have a catalytic effect as happened in the G20 in the financial area, in which the countries concluded that things had to be organized in a certain way, but then you have to modify the rules of the IMF and BM according to the G20, and the same applies to health. You can have a discussion about Ebola inside the G20, or tuberculosis inside the BRICS but you are not going to create a rule that is applicable to everyone in either the BRICS or the G20, for that you have to go to a larger organization. Networks are mechanisms to take initiatives that later can be extended or not, depending on the case (epidemics, for example)” (Face-to-face anonymous interview, P14 MoFA).

Furthermore, I asked a Vice Minister of Health from North America about TGNs strengths and he coincided with the South American former Minister of Foreign Affairs that small size is important, but additionally he emphasized homogeneity among members in terms of interests, capacities and political features as important factors determining TGNs effectiveness *vis-à-vis* IGOs:

“The GHSI is a trust-based organization; it has a wide margin of freedom to discuss in a safe environment; individuals who participate are real experts in the field of public health and health security; it involves three levels of governmental hierarchy in an up-to-bottom, bottom-to-top fashion. This helps preserving live discussions firmly rooted in science and technical knowledge rather than politically constraint formality; the group of countries is **small and homogeneous** to help maintaining a dynamic group. In that respect, in various GHSI meetings colleagues remarked that **if the group grows bigger it could impinge upon the groups ‘effectiveness**. On the other hand, the NACOBPI is similar to the GHSI. In fact, there is a lot of cross-reference between the North American officers of the GHSI and the NACOBPI. An important strength of the NACOBPI is its cross-sectoral perspective, particularly after NAPAPI was reviewed in 2010-2011. I think TGNs are indeed complementary to IGOs. I would expect TGNs to be **more effective** than IGOs in **smaller** groups of countries who have **common political features, similar capacities** or clearly identified **regional interests**. TGNs require a higher level of implicit understanding to work without binding rules. TGNs also need to isolate to some extent the technical issues from the political ramifications (or roots) of such issues, as it is hard to achieve consensus in highly politicized matters. I would expect TGN be more effective than IGO in matters that require **quick responses**: global (or regional) health security, food safety, environmental security, public safety, etc.” (Phone anonymous interview, P2 MoH).

Another interviewee who currently serves as Health Minister in another North American country and who participated as Deputy Secretary in the GHSI ministerial summits in Rome (2005) and Tokyo (2006) stressed the importance of having few members for coordinating policies:

“The GHSI is just a subset of countries that have pre-existing commonalities and that have worked extensively together on broader economic policy questions and could then work on some other urgent matters such as health care, but it does not exclude working with PAHO or the WHO. It is the fact that you can act faster with a **smaller organization**. A smaller body like this allows for **faster decision-making** and **easier coordination**. Even with these big countries involved is quite difficult to reach agreement and negotiate

things, but still is much more of a nimble organization than having 150 countries represented and having to coordinate a meeting of 150.” (Phone anonymous interview, P3 MoH).

To find out why Russia was not a member of the GHSI, I asked a Health Vice Minister from North America to tell me why the GHSI has not expanded its membership, indirectly I got an answer concerning group size and effectiveness:

“There are all sorts of political size questions concerning the effectiveness of organizations of different sizes. At a **certain size**, organizations can do certain things; when they get **larger** there are other things they can do, but also there are things they cannot do. The extent you **over expand a size of the organization it becomes less effective** by having that circle of trust type of conversation between nations that are very strongly allied. So if you want to have a larger organization that has more chairs at the table, the WHO is great for that, or PAHO is great for that.” (Face-to-face anonymous interview, P5 MoH).

Hence, when designing organizations policy makers seem to be aware of the pros and cons of selecting certain institutional features, which supports Koremenos, Lipson and Snidal main argument that institutional design is deliberate. According to them, “even institutions that are not highly formalized and arise through informal and evolutionary processes may embody significant rational design principles” (2001, 767). Thus, considering the long G7 experience in the economic front, it seems that it made sense to use the preexisting structure and knowledge for responding to changing conditions epitomized by biosecurity threats.

As stated in previous section, respondents who have participated in TGNs underlined the importance of “like-mindedness” (i.e. sharing similar objectives and background), and are aware of past institutional experiences (e.g. the G7), which make them realize who can be an eligible partner. In a similar vein, respondents stressed the importance of other factors such as geographic (e.g., the case of Mexico in the GHSI or South Africa within the BRICS) or technological ones and have a clear notion of the role size plays in determining effective outcomes. Results are however not conclusive concerning values, at least not when it comes to TGNs (except perhaps for IBSA). In contrast, some respondents do claim that values were behind the creation of certain IGOs in South America such as the ISAGS-UNASUR. As a way of illustration, a former Canadian Health Vice Minister who attended meetings of several TGNs observed:

“TGNs **are not uniform** in that sense. NAPAPIs objectives and criteria for the existence of NAPAPI are different from the criteria for the existence of the GHSI. GHSI is driven by criteria of countries.... who –well (to) be frankly- feel themselves as having perhaps a particular **risk** with respect to **bioterrorism**. Because of that risk, they feel they need to have **open** and **rapid communication capabilities**, which are based on establishing a sort of **like-mindedness**, a **trust** almost, which is often based on individuals knowing each other. So that you can have that easy information flow, you got that persons’ phone number in your mobile, and you know what they look like and how approximately they may think for receiving certain information, or for being asked for advice, or whatever. That is driven by a **social security issue**, which is a whole house security issue, versus NAPAPI where is the **geographic proximity** that is actually bringing those three nations (Canada, Mexico and the US) together. Because that geographic proximity relates to the characteristics of the spread of a pandemic or a potential pandemic at least, because they are closely together, **they do share trade** on a regular basis, **people travel back and forth**. You may potentially see something similar in Europe for the same reasons; the **geographic proximity** in that case is driving [cooperation].... If you do have the geographic proximity, you **got similar geographically based risks** to an avian pandemic or an influenza type of pandemic and also have **the capacity** to easily assist each other, but you have to have that system established ahead of time. Hence, there are two different reasons for having this sort of [organization] and that would not happen in the true broad sense of an **IGO** (Face-to-face anonymous interview, P15 MoH).

The former Foreign Affairs and Defense Minister from South America stressed the importance of having institutional experiences, similar interests and at times ideological affinities as prerequisites for the emergence of TGNs. According to him, this even applies to cases where experiences had in principle nothing to do with a new issue or conditions:

“It is not necessarily ideological affinities what is behind a decision [to create a certain organization]. Every story is a different story. The India, Brazil, South Africa Dialogue Forum (IBSA) for example, there was clearly a **coincidence of interests and worldviews**. The three countries are multiethnic democracies, share trade and development issues, each of them is in a developing continent, we even agree on the reform of the Security Council. In the case of the BRICS, affinities were less important, but not **interests**, particularly from an economic point of view. It arises from the opportunity to create a group of countries that could influence global economic issues. However, the BRIC group **began as a forum for exchanging ideas at the UN**, between Brazil and Russia who were the ones that provoked the idea. Together with Minister Lavrov, I participated from the beginning - and then **it evolved** to address **other issues including health**, but they were especially important at the G20, during the economic crisis of the G20. Each organization has its type. In the commercial area, we created another G20, prior to the establishment of the G20, made up

of countries concerned with agriculture and with the negotiation of the agricultural agreement between the EU and the US. That group of countries considered that the negotiations did not respond to our **interests** nor were being carried out in an appropriate manner, therefore they decided to join. Countries like Brazil or Mexico that have a relatively higher level of development and countries like Tanzania had a common desire to eliminate or reduce agricultural subsidies. To sum up, I believe these groups [TGNs] arise when there is a **perception** of either **affinities** or **interests**. It is difficult to say exactly and ... some are, so to say, **functional for certain issues but dysfunctional for others**. For example, I can address the issue of the UN Security Council reform within the IBSA, but not within the BRICS because China has a **different vision**. Health, for example, can be treated within the BRICS. Two cases that illustrate the previous point are antimicrobial resistance or tuberculosis, which is also linked to antimicrobial resistance. The 40% of the world's population lives within the BRICS, but those countries account for the 60% of patients infected with tuberculosis, so there is obviously a common interest in dealing with this issue. **The BRICS already existed, i.e. it was not created for that purpose, but once you create an *ad hoc* group, you discover other points in common.** In short, it is very difficult to generalize. I would say that governments create these groups based on **affinities or coincidence of interests**. I do not think they are exclusive of other treatments. Tuberculosis, for example, Brazil addresses the issue at the WHO, at UNCTAD, within the BRICS, in South America, at PAHO, they are not exclusive, and I do not think it is a matter of choosing one or the other. At a certain moment, you may discover that a given aspect for example regarding the drug patent is more difficult to treat at the WHO because there you will find countries such as the United States of America and Switzerland. On the other hand, **it will be easier to address this issue within the BRICS**. When it comes to normative issues, **the BRICS for example does not serve to regulate**. In that case, the only thing you can do is to exchange experiences, but these countries cannot create rules, either for biosecurity or against epidemics. That you have to do it at **the WHO**, because **it is the only organization that has legal weight and can be followed by everyone**. In an epidemic for example, it is of little use for Brazil to follow a rule if Paraguay or Bolivia do not follow it” (Face-to-face anonymous interview, P14 MoFA).

The above supports functional regime theory main assumption, i.e. institutions exist to perform specific functions; thus, it is essential to show the function an institution serves to explain its creation (Keohane 1984, 80–2). According to previous statements, in the case of the WHO, the function would be to regulate, whereas in the case of the BRICS, the main function would be to influence international outcomes in the financial area (i.e. to exert more

power). Moreover, we can link the statements of the BRICS and IBSA founder⁶⁰ to Abbott and Snidal arguments concerning soft law instruments⁶¹, namely, that specific forms of soft law chosen by states - in their varying combinations of obligation (O), precision (P) and delegation (D) - reflect the particular problems they are trying to solve (Abbott and Snidal 2000, 423). According to aforementioned statements, in the case of the G20 Group of developing countries⁶², the BRICS and IBSA, the problems that would help us explaining their institutional dimensions (i.e., O+P+D) would be agricultural subsidies, the reform of international institutions, including the UN Security Council, antimicrobial resistance, tuberculosis and drug patents.

As explained, organizations evolve and with them, the interests of their members. Furthermore, as underlined in Chapter 1, organizations can nest other organizations. This applies not only to IGOs, which can give birth to TGNs, but also to networks, which lay the foundation of IGOs such as Mercosur or UNASUR. The following answer by a Foreign Relations Senior Civil Servant helps illustrating the point:

“The health collaboration networks (health institute networks) that exist in South America **precede the formation of blocks**. Mercosur or UNASUR first arise as political entities, later they included social issues in a general way. Social issues helped in the consolidation of the blocks, so that they were not purely economic-commercial and political entities. In MERCOSUR, for example, we began organizing meetings with the ministers of health and created instances enabling civil servants to meet. As an outcome, we observed that it was worthwhile for the regional bloc to have other issues, preferably those that raise little controversy. Because economic-commercial issues are more complex, while it is much easier to find common ground to talk about health, social development and even defense. Nowadays UNASUR is dying but at its best, the strength of UNASUR - except for the political question - were the health and defense meetings. That was what allowed the organization to move forward. **The block begins and then other collaboration avenues arise**. Some issues fade away while others continue, and health is one of the

⁶⁰ Two key respondents from Brazil’s Ministry of Foreign Affairs and one Senior Health servant who has occupied leading positions at the Oswaldo Cruz Foundation (*Fiocruz*) and advised the WHO and PAHO validated this claim.

⁶¹ Namely, informal organizations not linked to a treaty or international convention.

⁶² For a detailed explanation concerning the origins of the G20 Group of Developing Countries, see: Pedro da Motta Veiga “Brazil and the G20 Group of Developing countries”. Among others, da Motta argues that the “political trust” built up among IBSA countries gave rise to the G20 Group of Developing countries. https://www.wto.org/english/res_e/booksp_e/casestudies_e/case7_e.htm

topics that always continue. So much so that health is included in forums that apparently have little to do with it. Brazil considers health to be a human right. Today IBSA forum is not a very vital forum, but it also had health meetings”. (Face-to-face anonymous interview, O10 MoFA).

The prior goes along with two of the three subtypes of networks categorized by Slaughter (i.e. networks that emerge within the context of an established IGO and networks that develop within the framework of an executive agreement)⁶³, but also sheds light concerning the role epistemic communities play beyond knowledge diffusion. In that respect, following quote helps explaining how some institutions learn, evolve and nest networks.

How do networks arise? “**There has to be a topic of common interest for the integration to progress.** A practical example: Tuberculosis supports a network, the same happens with HIV or Zika in Mercosur and the Community of Portuguese Language Countries (CPLP). So much so, that both the Executive Director of PAHO and the General Director of WHO went to Brazil to see what we were doing in relation to the disease”. Are there other factors that influence the creation / choice of a network? “I think it depends a lot on the profile of the block. The FPGHI is fundamentally an initiative to discuss issues. It is not very effective. It is very different from the WHO or the G20 that simulated an emergency regarding antimicrobial resistance or different from North American initiatives that are very objective, for example the fund against AIDS. They have money to invest in a disease. In this regard, Brazil is careful with that. We understand that we have conditions to respond with our own financial resources, but we recognize that it is important for other countries with a lower level of relative development. Each forum has a viewpoint, a *modus operandi*. The FPGHI is a very different forum compared to the G20 that is already beginning to talk about financial resources for strengthening the health systems of the countries. There is no money in the CPLP but there is a very rich exchange of information because in Portuguese there is not much information. We may not invest so much money proper, but we invest training personnel from one country or another or sending technical missions that will collaborate in training and education. **Organizations have different profiles.** UNASUR ... That had its peak 6-7 years ago, **managed to organize a regional institute** with an operating statute, its own headquarters (i.e. ISAGS), and a greater institutionalization than Mercosur which is older and does not have a health institute. Mercosur has an Institute of Social Issues and Human Rights but not health and vice versa” (Face-to-face anonymous interview, O10 MoFA).

⁶³ Kahler does not distinguish between TGNs of the second and the third type; rather he divides networks into two categories: networks that emerge from state membership in IGOs and TGNs in general (Kahler 2009a, 17).

Finally, to find out how institutional arrangements evolve, I asked the same Foreign Affairs Senior Civil Servant to tell me why was the issue of health incorporated into the UNASUR and not within Mercosur to which she replied:

“I think it's the moment. **Mercosur** was already very scattered, it has many specialized meetings. They start with specialized meetings and continue with ministerial summits or with meetings with other authorities. **UNASUR used that experience**, i.e. what was working best in Mercosur. I am not saying that it has better results. The functioning of the health area was very well organized and some countries had already expressed interest in participating in some health initiatives of Mercosur, and that facilitated it. Brazil ultimately has a border with almost all countries in the region, so Brazil exchanges diseases with all countries in the region but we also exchange information. I believe this characteristic of health triggers collaboration a lot”. Then, are you implying that the geographical factor was important in the conformation of UNASUR? “That factor, the geographical one, increased the interest of countries in health that is what I believe. Now, why did the issue of health progressed substantially within UNASUR and not in Mercosur? I think it had to do with a historical-political moment, including some leaderships. There was a historic moment when the leaders of South America had a very close ideological tendency and it worked well” (Face-to-face anonymous interview, O10 MoFA).

5.2.4. UNCERTAINTY CONCERNING THE STATE OF THE WORLD (CONDITION 4).

In the theoretical chapter, I argued that governments are likely to select a TGN for dealing with biosecurity threats when they are uncertain concerning the state of the world, and hence doubt about the implication of future agreements. As stated, this kind of uncertainty refers to the knowledge States have about the consequence of their own actions, the actions of other States, or the action of international institutions. These kinds of knowledge could be scientific, technical, political or economic. (Koremenos *et al.* 2001, 778). According to four respondents (out of 31), ‘uncertainty concerning the state of the world’ is one of the conditions contributing to the appearance of TGNs in the biosecurity field (see section 4.4, question five).

This assessment applies as well to TGNs effectiveness i.e. respondents considered this kind of uncertainty as one of the factors explaining TGNs effectiveness *vis-à-vis* IGOs (see section 4.14, question 15). Notwithstanding, as in question five, support is not significant. Indeed, only three respondents out of 29 (10.34%) chose this option. Overall, conditions seven (i.e. the domestic variable) and four received the lowest percentage of

mentions (10.34%). Consequently, findings suggest they do not fit prominently in the leaders' considerations when deciding what institutional arrangement to choose for dealing with biosecurity threats.

One of the conclusions of the Review Committee on the functioning of the new IHR during the influenza pandemic identified the IHR 2005 as insufficient. Among others, it cited "...difficulties in decision-making under conditions of uncertainty, complexities in international cooperation and challenges in communication among experts, policy-makers and the public" (Review Committee on the Functioning of the IHR 2005, 2011, 6). In that respect, I asked a European Vice Minister of Health what could we do to improve the decision-making under conditions of uncertainty and he replied that:

"In a communications exercise in a GHSI ministerial meeting, we agreed that **uncertainty** is **the most sensitive issue** because the public may think governments are not telling what is happening. I think it is better to say everything clearly in a simple manner. I think that is the best approach. We are now nonetheless uncertain concerning the causes of the crisis. It is also important to communicate what is happening through the social media because the young are not interested in traditional media, which they regard as boring. In the face of **uncertainty**, countries should **agree on some principles**. We are talking about two different approaches that are dealt with in a different way depending on the country. One approach for the management of the crises and the other for communicating through the media. Hence, you have to adapt to the national and local levels the information you aim to communicate" (Skype anonymous interview, P1 MoH).

An interviewee from North America elaborated on the importance of uncertainty as an explaining variable and exemplified the reasons why governments may opt for TGNs when dealing with biosecurity threats. Additionally, he delved into the role Tommy Thompson played in the creation of the GHSI and reinforced the suspects concerning Russia:

"...the breadth and the intensity on societal connections which could produce problems where the intergovernmental attention and ultimately attention by the leaders of national governments were so large both in the intensity and the breadth and in some degrees in their novelty and that takes you to a world of **uncertainty** and **complexity**. That for reasons of necessity, neither of our formal civil servants -you know operating under the type command in control of the person at the top right? Which is the classic typical specification government to government- could possibly simply cope with the volume of the workload and because they were increasingly either very **technical** and very **local** or involved **complexity** and **uncertainty**. Only Americans died from the Anthrax, so you would see why would have been Thommy Thompson the

Health Minister who kind of looms larger in the story rather than the other two [health ministers from Canada and Mexico]. For the US, Anthrax was a **problem**; Canada instead wanted to avoid a problem (the closing of borders to keep on exporting Canadian goods). The Americans needed a high degree of **scientific expertise** from the Cold War weapons all way to anthrax in cattle coming into California... In that circumstances (high degree of **surprise** and high degree **uncertainty**). That is a starting point, then it makes sense to get this particular **Gang of eight** [referring to the G7+Mexico] to start working on the problem. **Because nobody really knew who would be next...**”. What kind of uncertainty? **“Where did it come from and why was it done, was it anthrax or was it something else, then was it a weapons-gear anthrax or another kind? If it was anthrax, whose anthrax was it?** If it is weapons gear anthrax, then you have two big choices. However, it could have been smuggled out of **Russia**, is not it? Or even conceivably smuggled out of the US. At the other end, if it was a cattle, was it an American cattle, a Canadian cattle, a Mexican cattle or somebody’s else? However, it looked out pretty **deliberate**... Coming in letters... **How big, how quickly can this thing get. Scope, scale and speed...** They did not know. Unlike 9/11 (three planes, four planes. At one point they thought there were several more planes about to hit...). This was more of a slow burn, but you just never know what the pattern would be... For instance, if they just stop it for a month, or two, or whether it would start again in January... **Bioweapons was always different** to other security related-issues such as crime, terrorism, etc. The G8 had had a fairly extensive record of dealing with bioweapons but it was basically Saddam Hussein’s sort of staff” (Face-to-face anonymous interview, E2 Academia).

An experienced Health Senior civil servant who was directly involved in the management of the AH1N1 Influenza pandemic in Mexico and the SARS outbreak in Canada commented the following concerning the link between information and uncertainty, as well as its impact on decision making:

“In a situation like that of influenza in Mexico, or the earthquake and subsequent Tsunami in Japan, the first hours or days of a crisis - regardless of the type -, are of **chaos**. There is never **complete information** available. **There is uncertainty**. There are three periods during an epidemic: in the first phase, there is **uncertainty**. You do not know what is happening (**you have to get more information**). The second stage is the response (where there is an overlap) and the third, is the recovery stage (where there is also an overlap). Regardless of the event, these phases are all the same”. At this stage of uncertainty, do you believe that uncertainty as such determines the way in which you will coordinate your strategies and the organization that you will choose? Do you think it is an important factor? “I think so. Obviously, during **a period of uncertainty** the event manager or the authorities have to make decisions in an **environment of uncertainty**. You have to do something. You cannot tell the press: ‘Wait two more weeks for us to have more information.’

No, **you have to start acting with the best available information**. Now, with all the things that happen at that time, screams and so on, you also have to think about informing the G7. I have to activate the system. Possibly, they did, but it is a bit difficult because there are many things that are affecting at that time, you run from one place to another **trying to know what is happening**" (Face-to-face anonymous interview, P4 MoH).

This supports Eilstrup-Sangiovanni's argument concerning uncertainty, i.e., that "there may be situations in which states' interest are uncertain due either to inadequate information about the situation at hand or to doubt about the likely outcomes of different courses of action" (2009, 207). Moreover, it underlines the importance of honoring international commitments (Condition 2) and memberships such as following certain protocols and notifying specific international organizations. In this respect, it is illustrative the way the same Health Senior Civil Servant tells the story regarding the first days of the Influenza pandemic:

"In the first weeks, after recognizing that there was a new strain, the WHO was entering into Mexico without invitation. They came with their GOARN⁶⁴ and as part of that team came the CDC of Atlanta using the GOARN 'hat' as a mechanism to enter Mexico. Once inside, they took off their 'hats', left the WHO aside and **tried to get their own information** for their country. It was a **chaos** of groups, people, institutions, international organizations, all **seeking information** and if one authority did not have it, they went with another. They start having a picture that is incomplete. They try to understand what is happening and to make decisions. That is the environment. In that environment it is my duty to call Canada and say we have a situation here. I do not know how fast that happened. It is the same case with the nuclear disaster in Fukushima. Those are the two major events that could possibly motivate the activation of the GHSI" And the E. coli outbreak in Germany too? "Yes, that could also be another reason for the **activation of the information** between the G7 and Mexico". So, did Mexico first notify PAHO or WHO? "There was a **formal notification to WHO**. I think they did it quite well. I do not remember the date. Specifically, when they learned that it was a new strain after the laboratory tests that were performed in Atlanta and Winnipeg, because they quickly sent the strains to both places and received notification that it was

⁶⁴ The Global Outbreak Alert and Response Network (GOARN) is a collaboration of established institutions and networks that was set up in Geneva in April 2000. The network pools human and technical resources for rapid identification, confirmation and response to public health emergencies of international concern (PHEIC). The WHO coordinates international outbreak response using resources from the network. WHO also provides a secretarial service for the network as part of its Alert and Response Operations. The three main objectives of GOARN are: 1) Combating the international spread of outbreaks; 2) ensuring that appropriate technical assistance reaches affected states rapidly; 3) contributing to long-term epidemic preparedness and capacity building. For more information see: https://www.who.int/ihr/alert_and_response/outbreak-network/en/

a new strain, but I would have to check my documents because I was in Mexico in June and the outbreak began in April. I went to Mexico to analyze Mexico's response and try to help them answering the WHO questionnaire. When Mexico notified the WHO that it was a new strain, Mexico received, I remember it well, 19 questions from the WHO **asking for more information**. Among them the mortality rate, transmissibility rate, etc. They began to answer the first and could not answer the others because **there was no time to sit and think. They had the information, but it was scattered and not well integrated and organized. There was information, but it had to be sought and gathered and that would take time and there was such a sense of urgency and emergency**, anyway. The fact is that they did not answer the questions. In June, the Mexicans called me through PAHO to help them answer the questions” (Face-to-face anonymous interview, P4 MoH).

Taking into account the various kinds of uncertainty that exist (see section 2.2.1), I asked above-mentioned interviewee to elaborate on the kind of uncertainty he was referring to. He decided to exemplify with two hypothetical risk management situations, one of them directly linked to the biosecurity issue-area (i.e. an outbreak of yellow fever) and the other with the handling of a natural disaster (i.e. a mudslide in a mountainous region): What kind of uncertainty do you mean?

“It depends a lot on the level. Consider for example the case of natural disasters. If I live in the capital and there is a big collapse in some town in the mountainous area. Now, what? The first question would be, ‘How many dead do we have?’ ‘we do not know. ‘How many injured do we have?’ ‘we do not know. ‘Do we still have a hospital?’ ‘we do not know, but we know with certainty that we have three problems: Get housing for survivors, food and water. There are three things necessary to survive, but **we do not know** how many accommodations, how many foods and how much water we need. **That is the uncertainty.** However, you have to start reacting; you have to start mobilizing what you have as a reserve. At that moment when you are beginning to think what you are going to do, calls from outside arrive. ‘How much help do you need from outside?’ ‘Wait a moment, we are calculating ...’ No, it is already on its way. NGOs for example, say *Médecins Sans Frontières*’ help starts arriving. The same applies to donations. Donations of coats arrive to a tropical country ... And **chaos** is generated because **they do not know** what to do with all those donations that are coming. Donations by plane arrive in hours. Another event would be ‘news is coming that in a certain city there are five dead with what appears to be yellow fever. The questions you would ask yourself are Where did they come from, from outside or from the same city? Is there transmission within the city, how many are in an incubation period? 10, 100, 100? What is our hospital capacity? Are they on alert, are they prepared? Do we have a diagnostic capacity in the laboratory to know if it is

yellow fever? Because people with cirrhosis of the liver will show up because the clinical picture is similar and that would freeze the system. Or else, hypochondriacs would arrive. "I think I was exposed ..." Anyway. Another series of questions we would have to answer would be 'we have to think how we are going to respond to that situation'. 'What is the status of mosquitoes in this city. ' 'Do we have the yellow fever vector installed in this city. Thus, **we would have other questions, concerns and other types of chaos.** Much depends on the event, the risk and the impact on the population" (Face-to-face anonymous interview, P4 MoH).

5.2.5. SPEED AND SHORT TIME HORIZONS (CONDITION 5).

Aside from condition number three (i.e. small group, similar interests and values), condition number five received more empirical support (when answering Q5, 48.39% of respondents, i.e. 15 out of 31 considered speed would make governments select a TGN instead of an IGO). Indeed, as above quote exemplifies, the biosecurity issue-area demands a rapid reaction from the State and the international community, otherwise, uncertainty and chaos could increase with all of the unfortunate consequences this entails (recall the Ebola epidemic in 2014). As previously shown, The 2001 Anthrax outbreak clearly illustrates the way in which leaders first identify a problem and then select/design an institutional arrangement (i.e. the GHSI).

Within the biosecurity issue area Speed does not only explains why TGNs arise, but also when they can be more effective than IGOs. As analyzed in previous chapter, 37.93% of respondents (i.e. 11 from 29) considered that TGNs are more effective than IGOs when speed is a priority. In other words, as in question five, speed comes second only to small group size (48.8% meaning 14 respondents). On the other hand, 10.34% of respondents (i.e. 3 from 29) regarded TGNs to be more effective when time horizons are short (see section 4.14).

As explained in Chapter 2, TGNs are generally faster to set up than IGOs (Raustiala 2002, 24; Eilstrup-Sangiovanni Forthcoming, 17). Hence, reliance on TGNs should shorten the time between the moment when leaders identify a problem and when they decide to act collectively. (Eilstrup-Sangiovanni 2009). Slaughter contends that the network form of TGNs is ideal for providing the speed and flexibility required for functioning effectively in the information age (1997, 193; 2004b, 162). Likewise, Lipson argues that governments will choose "less formal" instruments when security issues must be resolved quickly or quietly to

avoid serious conflict. Furthermore, since these kinds of instruments do not require elaborate ratification governments could rapidly conclude them and implement them (1991, 500–1).

According to Fidler, the WHO legal Counsel expressed the view that “using binding regulations to combat disease threats was unrealistic because such regulations cannot be adopted quickly enough to meet the health requirements of the moment” (2005, 340). Evidence provided by a former Vice Minister would substantiate this view. He declared that one reason to select a network-form of cooperation pertained to the necessity of having “a more **rapid answer** to effectively deal with the changing circumstances”. As an illustration he stated that in 2003 during the SARS outbreak, the senior officials of the GHSI communicated with each other four or five times a day either per telephone or via videoconference⁶⁵ (Skype anonymous interview, P10 MoH). In consonance with previous comments, a European health Vice Minister indicated:

“The decision to participate in these kind of networks is because in TGNs **you can interact more directly** with the other countries, **without passing thorough a management body** or director general of the WHO or at the European level through the European Commission. You can interact with your colleagues in another country. For instance, I’m very friendly in contact with Julia Marinissen (Dir. of the division of international health security) in the United States. With her, I have **frank** discussions; I handle e-mails on **daily basis** to her, etc. It’s not easy to have something similar in **a big, official organization.**” (Skype anonymous interview, P1 MoH).

Another interviewee who currently serves as Health Minister in a North American country and who participated as Deputy Secretary in the GHSI ministerial meetings in Rome (2005) and Tokyo (2006) commented on speed and urgency:

“In the time period after 9/11 when **speed and urgency** were needed, those were two of the major reasons to create the GHSI. There was a common perspective given all of our economic interests and the fact that as a military matter, as an economic matter these are all countries which work very closely together through the G7 on routine basis. This subset of countries that have preexisting commonalities and that have worked extensively together on broader economic policy questions could then work on some other **urgent** matters such as health care, but it does not exclude working with PAHO or the

⁶⁵ The interviewee participated as well in several meetings of the NACOBPI and the APEC Health Group.

WHO. It is just the **speed** of action that can happen with a smaller organization” (Phone anonymous interview, P3 MoH).

Two North American Health senior officials seem to support Lipson claims i.e. that governments will choose “less formal” instruments when security issues must be resolved quickly or quietly to avoid serious conflict:

“TGNs **are not uniform** in that sense. NAPAPIs objectives and criteria for the existence of NAPAPI are different than the criteria for the existence of GHSI. GHSI is driven by criteria of countries.... who –well (to) be frankly- feel themselves as having perhaps a particular risk with respect to **bioterrorism**. Because of that risk they feel they need to have **open** and **rapid communication capabilities** which is based on establishing a sort of likeminded, a trust almost which is often based on individuals knowing each other. So that you can have that **easy information flow**. You got that persons’ phone number in your mobile and you know what they look like and roughly, how they may think for receiving certain information or for being asked for advice or whatever. That is all driven by a **social security issue**, which is a whole **house security issue**. Unlike NAPAPI, where **geographic proximity**, is actually bringing those three nations (Canada, Mexico and the US) together.” (Face-to-face anonymous interview, P15 & O14 MoH).

This statement shows that the biosecurity issue area demands a similar answer than more conventional security issues, but also that there are differences between TGNs operating in the biosecurity field. TGNs arise for various reasons (e.g. geography, common interests or values, need to act rapidly, etc.), but also they can be the product of previous institutional developments, -including epistemic communities-, which reinforces some of the arguments explained in chapter 2 concerning the origin of TGNs (see also evidence on section 5.2.3.).

5.2.6. RECONCEPTUALIZATION OF RESPONSIBILITIES AND INTERESTS WITH RESPECT TO BIOSECURITY THREATS (CONDITION 6).

Six respondents (19.35%) from 31 considered TGNs arise when governments aim to reconceptualize their responsibilities and interests with respect to biosecurity threats. Respondent rate in C6 is clearly low in comparison to the majority of conditions (C3-similar interests & values and small group; C5-speed and short time horizons; and C2-strongly committed and capable members, in decreasing order). Nonetheless, it is strongly related to Condition 1 (distributional problems), equivalent to Condition 7 (i.e. domestic variable) in

terms of mentions and higher than Condition 4 related to uncertainty (for details see graph 4.4.1.).

As laid out in the theoretical chapter, the reconceptualization of state responsibilities and interests in biosecurity make states hesitant to accept binding schemes of international governance. As an outcome, “partnering arrangements” –in the terminology of Fidler and Gostin- enable states to engage in cooperation without contracting the high transaction costs of negotiating and implementing formally binding rules. Thus, since disagreement prevails concerning which biosecurity policies are more appropriate, “flexible, cooperative relationships have advantages (*vis-à-vis* treaties) in allowing states to navigate uncertainties present in the new worlds of biological weapons and public health governance” (Fidler & Gostin, 2008, 231).

Indeed, in the empirical research, some respondents referred to the lack of binding rules as one reason to choose transgovernmental networks in the biosecurity field (see section 5.2.1 related to distributional problems). For example, a Health Vice minister from a North American country commented that:

“TGNs require a higher level of implicit understanding to work **without binding rules**. For instance, there are **no legal or political binding rules** in the GHSI, all comes from consensus and compliance to agreements is assumed” (Phone anonymous interview, P2 MoH).

Evidence from two former Health high civil servants from a different North American country supports Fidler and Gostin’s argument concerning flexibility as a reason to choose TGNs but also suggests a sort of division of labor between IGOs and TGNs. According to the civil servants, within the biosecurity field, IGOs would be responsible for enforcement and TGNs for operationalization:

“What do we do first? You always do what is **legally binding treaties** that sort of thing. That’s what you have to do first, and that’s the only way to bring all global countries together to decide what they are going to do. How you do it? Is where you come into play with WHO, PAHO; issues like GHSI, NAPAPI...It is really about the **operationalization** of how you get it done and that is why NAPAPI senior coordinating body was created. We had a great frame on how to work together during a pandemic but you need a governance structure to actually **enforce the decision-making** and make sure that you are meeting those deliverables that you have set for yourself. It does not mean that it is a **legally binding group; we can just ban it at any time if we feel it is**

not necessary, but we felt it is necessary to move forward and to keep action. Things would stagnate if you do not continually discuss and bring new ideas and keep them relevant... Thus, the opportunity for us with these **affiliated groups** is one that no longer relevant and no longer timely we do not need them anymore and **we would abandon them**". (Face-to-face anonymous interview, P15 & O14 MoH).

Concerning the election of an institutional arrangement, an experienced Health Senior Civil Servant from the same country who also advises PAHO and the WHO expressed the following:

"A crisis would trigger the creation of a certain organization (e.g. anthrax attacks) but also the level of anxiety (e.g. the revision of IHR after SARS. That was a strong impulse to proceed with the revision). There is tendency to spend after the fact. You do not put all your eggs in one basket. **IGOs are important venues to express views but governments also like to set other organizations.**" (Face-to-face anonymous interview, P4 MoH).

Then, if governments do not put all their eggs in the same basket, how do they decide which basket to use? On what basis? Is commitment a decisive criterion? In that respect, what is the role of norms? A former Foreign Affairs and Defense Minister from South America remarked:

"I would say governments create these groups [referring to TGNs] based on affinities or coincidence of interests. **I do not think they are exclusive of other treatments.** Tuberculosis, for example, Brazil addresses the issue at the WHO, at UNCTAD, within the BRICS, in South America, at PAHO, they are not exclusive, and I do not think it is a matter of choosing one or the other. At a certain moment, you may discover that a given aspect for example regarding the drug patent **is more difficult to treat at the WHO** because there you will find countries such as the United States of America and Switzerland. On the other hand, **it will be easier to address this issue within the BRICS.** When it comes to **normative issues**, the BRICS for example **does not serve to regulate.** In that case, the only thing you can do is exchanging experiences but **these countries cannot create rules**, either for biosecurity or against epidemics. That you have to do it at the WHO because it is the only organization that has **legal weight** and can be followed by everyone. In an epidemic for example, it is of little use for Brazil to follow a rule if Paraguay or Bolivia do not follow it." (Face-to-face anonymous interview, P14 MoFA).

Although the interviewee stated that governments create TGNs based on affinities or common interests, he also seems to suggest that there is a division of labor among IGOs and TGNs. Hence, in his view governments would choose a certain institutional arrangement

because they deem it as more appropriate for dealing with the issue at hand and would disdain others because they regard them as less apt for addressing collective action problems in a certain way. Consequently, if senior civil servants deliberately design flexible organizations (i.e. TGNs) as an attempt for 'escaping the governance dilemma'⁶⁶, rules or binding commitments are the very last things that should come into their minds if they aim to preserve flexibility and easiness to address certain issues. In that respect, a Foreign Affairs Senior Civil Servant who has organized and participated in various BRICS meetings pointed out that:

“Networks arise when negotiations are stuck. They are a symptom of the health of the international regime. Networks are in the back seat. For the network to be effective, it is necessary to have resources, a clear action philosophy, convergence in interests and aims, as well as values (i.e. to have at least one common perception)”. (Skype anonymous interview, P11 MoFA).

Unlike other respondents, an experienced epidemiologist from Brazil considered that governments do not choose between TGNs and IGOs, but in line with other interviewees, he regarded both organizations as complementary:

“No, it is not a matter of choice, because there is opportunity to work with both of them. It depends of the specificity of the transgovernmental entity. At the Ministry of Health, the decision depends on the health sector (MoH) and the Ministry of Foreign Affairs (MOFA) (Face-to-face anonymous interview, O11 MoH).

Organizations change, but they usually do not do it fast. As some biosecurity threats have exemplified (e.g. Anthrax attacks, influenza A (H1N1), etc.) it is faster and easier to set up an *ad hoc* TGN (e.g. the GHSI, the NAPAPI) than reforming a bureaucratic, universal and rigid IGO such as the WHO (12 respondents from a total of 26 assessed the WHO as bureaucratic, see section 4.12). In that respect, it was easier for the U.S. government to create the GHSI for addressing biological terrorism than waiting four more years to convince the international community to amend the IHR to incorporate 'events of unknown causes or

⁶⁶ Cfr. Eberlein, B., & Newman, A. L. (2008). Escaping the international governance dilemma? Incorporated transgovernmental networks in the European Union. *Governance*, 21(1), 25-52.

sources' into the algorithm⁶⁷ of the (2005) IHR⁶⁸. In that respect, is illustrative following response from three representatives of a North American country:

Why a TGN to deal with biosecurity threats? (Q16) “In the case of the NAPAPI, for economic reasons. It made sense to focus and to include relevant actors; also, for collaborating on preparedness and joint response. Furthermore, the **NAPAPI** was important to increase regional capabilities and mutual assistance. The created capabilities could be used for other threats. On the other hand, assistance provides infrastructure for other issues, whereas the **GHSI** helps for deployment of medical countermeasures. Countries look at domestic capacities to see what happened. **Sub regional initiatives** like the NAPAPI are extremely valuable to share resources, to develop capabilities, to advance preparedness. In the case of North America, there was the need of a regional solution. The GHSI is a 'trusted network of help'. Because **TGNs are much easier to negotiate than IGOs.**” What institutional arrangement is most effective? “It depends on the impact. **TGNs are good for issues of bilateral interest and IGO for multidimensional issues,** which are global and regional. IGOs are good for policies which will have impact regionally.” (Face-to-face anonymous interview, O9, O12, O13, MoH).

A former North American Minister of Health, who together with Tommy Thompson founded the GHSI mentioned three logics behind the creation of a TGN, being one of them the dissatisfaction with intergovernmental organizations due to their degree of formality and bureaucratization:

“The second logic or reason for choosing a TGN is **dissatisfaction with intergovernmental mechanisms** that have a **degree of formality and sometimes bureaucratization** that makes coordination between countries little agile. That is why we created the GHSI. For the members of the group it was a security issue and **the WHO is a very heavy mechanism** with its decision-making methods, so it was not an option” (Phone anonymous interview, P9 MoH).

An experienced Health Senior civil servant from South America agreed to some extent with previous diagnosis concerning the WHO but deemed important that the UN

⁶⁷ Also known as 'decision instrument for the assessment and notification of events that may constitute a public health emergency of international concern'.

⁶⁸ See WHO Guidance for the use of Annex 2 of the International Health Regulations (2005). https://www.who.int/ihr/revised_annex2_guidance.pdf?ua=1

agency leads worldwide efforts to deal with Public Health Emergencies of International Concern:

Who should coordinate global response? “I believe the WHO. Despite his failure ... Despite his **material fatigue**. Who is better than that? The UN, for better or worse ... Organizations have material fatigue, **it has a bureaucracy that has aged**. In 2010 when Brazil was vice president of the Executive Board, **we wanted to reform the structure of WHO** but there was great resistance from the Secretariat and the powerful countries that always distribute the cards. Nevertheless, in spite of all that, it is the one that has legitimacy. (Face-to-face anonymous interview, P8 MoH).

In line with Fidler and Gostin’ argument, a former Foreign Relations Minister who also occupied the Defence Ministry in a South American country seems to agree with previous statements that governments choose TGNs for decreasing the transaction costs of negotiating and implementing formally binding rules:

“Nowadays TGNs and IGOs **are complementary**. However, ideally at some point in the future, a topic like that should be treated in an international organization that has **rules** and everyone participates. It is the most democratic thing that exists. Nonetheless, we must recognize that now certain decisions **can be taken in TGNs**, because either we **need to act quickly**, or because of the **obstacles** that might exist **in a more formal organization**. In that sense, I believe networks can be complementary and not exclusionary. These networks can also have a **catalytic effect** as happened in the G20 in the financial area, in which the countries concluded that things had to be organized in a certain way, but then you have to **modify the rules** of the IMF and the World Bank according to the G20, and the same applies to health. You can have a discussion about Ebola inside the G20, or tuberculosis inside the BRICS but you are not going to create a **rule** that is applicable to everyone in either the BRICS or the G20, for that you have to go to a larger organization. **Networks are mechanisms to take initiatives that later can be extended or not**, depending on the case (epidemics, for example)” (Face-to-face anonymous interview, P14 MoFA).

In sum, there seems to be a predilection in North America for selecting TGNs to deal with biosecurity threats, whereas the majority of interviewees from South America favor IGOs for dealing with PHEIC. However, a caveat is important: the biggest countries of each region (i.e. The United States and Brazil) deliberately create and use various TGNs (i.e. the GHSA or the NAPAPI in the American case, and the BRICS and IBSA in the Brazilian case) to project its power and diffuse norms. Consequently, it would not be surprising to find

similar rationales in the case of other big countries such as China, India and Russia. Thus, as argued by Abbott and Snidal (2000), state will choose “softer forms of legalized governance when those forms offer superior institutional solutions” (421). Conversely, as it happens in other policy areas, small countries with few capabilities will likely have to resort to IGOs, thus opting for the multilateral approach and for the certainties provided by hard law instruments.

5.3. DOMESTIC CONDITIONS

It is no longer an issue that International Relations and domestic politics interact in various ways and even determine each other⁶⁹ (Gourevitch, 1978; Axelrod & Keohane, 1985; Putnam, 1988; Bueno de Mesquita, 2000; Haas, 2000; Gourevitch, 2002; Kahler, 2009). For instance, we could not explain the foreign policy of a state without looking at the different domestic actors, both governmental and non-governmental (e.g. legislatures, political parties, trade unions, companies, NGOs, the general public, churches, etc.) influencing state preferences as well as foreign policy design and execution. Health diplomacy is not an exception. To a higher or lesser extent, the same applies to the institutional handling of Public Health Emergencies of International Concern.

5.3.1. HIGH SOVEREIGNTY COSTS AND DOMESTIC OPPOSITION (CONDITION 7A).

In Chapter 2, I argued that governments are more likely to favour TGNs rather than treaties linked to an IGO when they anticipate high sovereignty costs and expect key domestic groups (e.g. legislatures, interest groups, and the general public) to oppose an international agreement. As stated, TGNs are more likely to enable governments to evade various domestic restrictions than IGOs for different reasons. First, cooperation through TGNs reduces the significance of public debate. Second, TGNs may reduce incentives for domestic groups to mobilize and pressure their governments to adopt specific policies that favour their interests. Finally, their members can use the narrow technical scope of many TGNs as a pretext for claiming special scientific and technical expertise. As an outcome, the members' activities

⁶⁹ Building on Waltz (1959) images, Gourevitch (1978) termed this relationship as “the second image reversed”.

may be less exposed to scrutiny or intrusion by other agencies (Eilstrup-Sangiovanni 2009, 208–9; Lipson 1991, 535; Slaughter 2003, 1056; Raustiala 2002, 24).

Moreover, hard legalization imposes high sovereignty costs, being that particularly the case in areas related to national security. As explained in the theoretical chapter, “sovereignty costs” refer to the costs associated to obtaining inferior outcomes, losing authority, or when there is a diminution of sovereignty. For example, great sovereignty costs occur when states accept external authority over significant decisions, or when international arrangements interfere with the relations between a state and its citizens or its territory. Nonetheless, states can evade sovereignty costs in various ways. For instance, they can either subscribe non-binding or ambiguous arrangements or choose not to delegate extensive powers. Frequently, states protect themselves by adopting less precise rules and weaker legal institutions. Soft law provides means to lessen sovereignty costs by expanding the range of available institutional arrangements. In that respect, weak forms of delegation such as consultation arrangements can limit sovereignty costs while coupling legal obligations with political mechanisms of control and defence (Abbot & Snidal, 2000, 437–0).

As in the case of Condition 6 related to the reconceptualization of responsibilities and interests, Condition 7a commanded a relatively low level of support. In fact, only six respondents from 31 considered that TGNs arise when governments anticipate high sovereignty costs and expect domestic opposition to an international agreement (see section 4.4.). On the other hand, when I asked respondents: “In the biosecurity domain, under what circumstances are TGNs more effective than IGOs?”, only three (i.e. 10.34%) from 29 answered that when health civil servants expect domestic political opposition. These findings are clearly sparse; hence, I do not claim much for domestic variable 7a. Even so, the content analysis of responses highlights that for some policy makers domestic concerns⁷⁰ such as public anxiety, need of secrecy, media scrutiny, intrusion by other agencies (most notably the Ministry of Foreign Affairs) etc. come to mind when selecting a certain institutional

⁷⁰ Peter Haas (2000) refers to some of these concerns as ‘national concern’ and argues that together with institutional and ideational factors may influence a state’s decision to comply with an international treaty.

arrangement to deal with biosecurity threats. To the question, “why a TGN to deal with biosecurity threats (Q16)” a North American Vice Minister of Health pointed out:

“To deal with unconventional security threats (e.g. biological terrorism) and **to avoid public scrutiny**. Because **in that way is more efficient** to communicate and coordinate with other countries; to have a rapid capacity to react and in the case of biological terrorism to isolate the technical issues from the political ramifications or roots of the threat since it is difficult to reach a consensus on highly politicized issues.” (Phone anonymous interview, P2 MoH).

The GHSI managed to maintain a low profile for at least four years, raising suspicions about its activities and feeding critics who attack TGNs for not being accountable and democratic (Slaughter, 2002; Pütter, 2006; Blazejewski, 2008). That situation started to change in 2005 when the Secretariat created its web page. Nonetheless, I asked a Canadian expert the reason why the GHSI was so secretive. Regarding this, he commented as follows:

“Well, it could be weapons-gear Anthrax. If so, it is Russian or American? And If so, it seems to have been intentionally. So, since is weapons gear anthrax is **a national security asset** and if it is done intentionally that could take you back to the high politics of the old State to **State security** of weapons of mass destruction, I guess. Twined with the ultimate nightmare, terrorists using WMDs. It happened before with the sarin gas attack in the Tokyo subway station, but that was chemical” (Face-to-face anonymous interview, E2 Academia).

Coinciding with Abbot and Snidal’ premise, if the Anthrax attacks constituted a national security issue, it made sense for the US government represented by Tommy Thompson to evade the high sovereignty costs that hard legalization would have imposed by choosing instead a soft law instrument, i.e. a transgovernmental network. Thus, simultaneously evading public scrutiny and interference from the congress.

To find out about the NAPAPI performance during the A (H1N1) influenza pandemic I asked a Senior Canadian researcher whether it could serve as model for other countries or regions and he brought about path dependence and national concern as factors behind the creation of that TGN:

“I think the NAPAPI has a number of advantages. But it is unique in that you have a bilateral relationship between Canada and the United States that has so many manifestations and **it has evolved in enormous ways since WWII**, in the military sense, in the health sense, in the immigration sense so that **you**

could built on that and the NAPAPI is trilateral. Put this together, Ottawa negotiating with Mexico City -to make this a suggest- and the Americans were opposed to it, would it happen? No. It requires Washington to be strongly in favor. I talked to people in terms of the negotiations that took place. At one of the early stages, the Americans more or less came in and said: 'This is the way is going to be, we have the plan, just sign and put your name' [concerning the NAPAPI]. We do not feel you should have all these exceptions allowing the US under certain circumstances to always say no in terms of cross border movements, particularly medical personal going from one jurisdiction to the other. Very delicate issue. The process was a complex one and it went over more than a year in terms of the negotiations at different levels. What happened was that Americans became team players through the well-played and diplomatic points made by the Mexican and Canadian negotiators; of course, it was a lot easier in terms of **public health** (i.e. Saving people from pandemic influenza than if you were talking of trade issues). There are not as many vested interests in health as there are in trade issues. In addition, it **was a general concern. The concern I think is still there over pandemic influenza. You got to do something.** The NAPAPI that came out of the Montebello summit was a kind of win-win situation. How could you be opposed to saving lives? Which NAPAPI represents. And it was at least on the statements of high-profile people and HHS, Obama himself, the summit following the epidemic, were all very positive" (Face-to-face anonymous interview, E2 Academia).

In line with the arguments of Sangiovanni, Lipson, Slaughter and Raustiala who posit that TGN members can use the narrow technical scope of the network as a pretext for claiming special scientific expertise or for evading the intrusion by other agencies, I asked a Health Vice Minister to tell me who invited his country to participate in the GHSI, to which he replied:

"I think it was the US who invited Italy to join. Thommy Thompson invited Minister Girolamo Sirchia to participate. In that time, it was also **a scientific proposal** in these joint activities. We were very **interested in developing something to fight biological threats.** Our national institute of health (*Istituto Superiore di Sanità*) was very involved in these activities, like *Pasteur Institute* or the *Robert Koch Institut* in Germany and we also had a clinical institute in Rome which was very interested in cooperating with the US and having a broader cooperation with other countries. That was the beginning of our participation in the GHSI". Do you think governments choose TGNs? "Is difficult to say. The Italian government was really interested in cooperating in **advanced research.** It was not just a question of diplomacy. In that moment there was a strong **willingness** to produce **something useful for our people.** **When you participate in IGO's you are not the boss, the Ministry of Foreign Affairs is.** They make a lot of diplomatic consults before deciding to exit or not that kind of organizations. In this case (referring to the GHSI) **is a**

technical... network, the (health) minister can decide if it is **beneficial to society**. You can enter, exit... Obviously you try to stay (stable) settled in the organization. Anyway, **you are freer to decide**, time by time, **what could be the best way (to cooperate...)**. When we go to a meeting of the GHSI, sometimes our embassy participates in **the scientific council** meetings. They [referring to the Ministry of Foreign Affairs] are aware of what we are doing. But the **decision is technical, i.e. is not made at the diplomatic level**. Concerning participation in the GHSI, **we decide what we want without the need to inform the Ministry of Foreign Affairs before. Health is considered a technical activity**. At the diplomatic level you probably discuss a proposal to join or exit an organization, but when we are discussing measures, countermeasures, joint procurement or pandemic vaccines use is not something that can be managed by the Ministry of Foreign Affairs. (Skype anonymous interview, P1 MoH).

An experienced Health Senior civil servant who was directly involved in the management of the AH1N1 Influenza pandemic in Mexico commented the following concerning the peoples' level of anxiety, as well as its impact on institutional coordination:

“In a situation like that of influenza in Mexico or the earthquake and subsequent Tsunami in Japan, the first hours or days of a crisis -regardless of the type-, are of **chaos**. There is never **complete information** available. During **a period of uncertainty** the event manager or the authorities have to make decisions in an environment of uncertainty. **You have to do something. You cannot tell the press:** ‘Wait two more weeks for us to have more information.’ No, **you have to start acting with the best available information**. Now, with all the things that happen at that time, **screams and so on**, you also have to think about **informing the G7**. During an event, **the peoples' level of anxiety is one of the factors that determine who makes decisions** as evidenced during the A (H1N1) Influenza outbreak in Mexico. The president himself had to get involved with the issue because the level of anxiety was higher than expected in a regular situation. On top of that, it was a new strain and mortality rate seemed high. Clearly, the Mexican president would have never got involved with a Dengue outbreak. **Once you raise the anxiety of the world including the level of anxiety of officials, epidemiologists, etc., it is very difficult to lower it**. Although the youngest group was the most affected, in general terms it was lower than in the case of seasonal influenza, but the anxiety was so high at the beginning. Therefore, it is difficult, very difficult to lower the anxiety of people. You can have all the possible data, but it is very difficult to lower the feeling of anxiety and to a certain level of panic. Beyond that, resource mobilization within the **WHO** was more or less good. In Latin America, we had another consultancy with a team to analyze the **PAHO** response in support to all member countries. I was in Argentina and Chile, other team members were in the Caribbean and in Peru. For example, no one in Latin America had PCR primers (rapid tests) of this strain. However, the CDC in Atlanta quickly awarded them and disseminated in all countries. So

all the countries in their central laboratories acquired the capacity to quickly diagnose this virus, **through PAHO and with the cooperation of the CDC in Atlanta**. That was one of the great successes for the American countries.” (Face-to-face anonymous interview, P4 MoH).

Another Health Senior civil servant who has advised PAHO/WHO shed light on the influence politics and public pressure can have on how governments respond to a public health emergency of international concern. From her point of view, the Ebola threat exemplified the issue:

“I think it was very political, I'm telling you. The possibility that an Ebola came here was really small, **but the public, together with the great mass media pain... They demanded the government to be prepared. It is very political; it was not a real risk reason**. In fact, the cases we had told us they came in a boat that had been once in their life somewhere...There was no possibility of real contagion. That person arrived, they isolated him and **all the people ran away, then it was more the collective alarm** than the real threat and **the Chilean public demands that you are prepared**, in fact all the countries prepare for an eventual arrival of a case and prevent it from spreading even though the possibilities were not many.”(Face-to-face anonymous interview, O3 MoH).

In conformity with the views expressed by various civil servants from Mexico, the US, Canada and Italy (all members of the GHSI), a Canadian researcher who specializes in the G8/G20 supports the point that one of the reasons to create the GHSI had to do with the need of counting with special scientific and technical expertise. Moreover, he considered that expertise-intensive is one of the conditions under which TGNs are more effective than IGOs:

“Only Americans died from the Anthrax, so you would see why would have been Thommy Thompson the health minister who kind of looms larger in the story rather than the other two (health ministers from Canada and Mexico). **For the US, there was a problem**; Canada instead wanted to avoid a problem (the closing of borders to keep on exporting Canadian goods). The Americans needed a high degree of **scientific expertise** from the cold war weapons all way to anthrax in cattle coming into California...in that circumstances (high degree of **surprise** and high degree **uncertainty**). That is a starting point, then it makes sense to get this particular **Gang of 8** to start working on the problem. Because nobody really knew who would be next...”. Under what circumstances do you think TGNs are more effective than IGOs? “Uncertainty, complexity, **expertise intensive** but where the expertise substantially lies within the State apparatus” (Face-to-face anonymous interview, E2 Academia).

As in previous comments, a former Health Minister from North America answered that TGNs are more effective than IGOs “When the nature of the problem is very technical (push and pull factors) and there is a very clear objective that involves affected countries”.⁷¹ Like him, a European Health vice Minister underlined the technical nature of the GHSI, and by doing so, he indirectly justified the need of counting with an *ad hoc* organization that could evade direct control by the Ministry of Foreign Affairs:

Then, please correct me if I’m wrong, you would see TGNs as more flexible than IGOs? “Yes”. Because you may exit the TGN if it is not effective...? “Yes. Because when you **participate in IGO’s you are not the boss, the Ministry of Foreign Affairs is.** They make a lot of diplomatic consults before deciding to exit or not that kind of organizations. In this case (referring to the GHSI) is a **technical... network, the (health) minister can decide if it is beneficial to society.** You can enter, exit...Obviously you try to stay (stable) settled in the organization. Anyway, you are freer to decide, time by time, what could be the best way [to cooperate...].” (Skype anonymous interview, P1 MoH).

To find out whether there were any conflicts or coordination problems with the Ministry of Foreign Affairs because of the network composition, I then asked him about the relationship between the Ministry of Health and the Ministry of Foreign Affairs in his country, to which he replied:

“In general, we have a good relationship. I have interacted with them for two years, so I’m totally experienced dealing with the Ministry of Foreign Affairs. **At the technical level we have a very good relationship, at the political level depends on the [relationship between] ministers** because they may be more or less friends. Anyway, **we have a diplomatic counselor from the Ministry of Foreign Affairs within our ministry;** hence, we have a **straight link** between the two ministries”. So they perfectly know what you are doing...? “They should do. Besides, when we go to a meeting of the GHSI, sometimes our embassy participates in the scientific council meetings. They are aware of what we are doing, **but the decision is technical,** i.e. is not made at the diplomatic level. **Concerning participation in the GHSI, we decide what we want without the need to inform the Ministry of Foreign Affairs before. Health is considered a technical activity.** At the diplomatic level you probably discuss a proposal to join or exit an organization, but when we are discussing **measures, countermeasures, joint procurement or pandemic**

⁷¹ Phone interview conducted in April 2012.

vaccines use is not something that can be managed by the Ministry of Foreign Affairs.” (Skype anonymous interview, P1 MoH).

This brings us to the next domestic condition related to coalition building. If governments claim a special expertise to solve a particular problem and purposefully seek to evade interference by other state agencies why not to profit from the network form for making alliances with like-minded peers from abroad?

5.3.2. COALITION BUILDING (CONDITION 7B).

As explained in Chapter 2, Sub-officials are more likely to choose a networked form of cooperation when they wish to build coalitions with like-minded peers from other governments against elements in their own administrative structures (Keohane & Nye 1974, 44; Pollack & Shaffer 2001, 287, 295; Slaughter 2003, 1054–6). As stated, I distinguish between two kinds of cooperative transgovernmental behavior: transgovernmental policy coordination and transgovernmental coalition building. The former is the main outcome of the TGN, whereas the latter could be regarded as an additional explanation of why sub-state officials select these kinds of institutional arrangements. Although I recognize that both kinds of transgovernmental coordination are analytically distinct processes, they combine with each other at the margins (Keohane & Nye 1974, 44). Transgovernmental policy coordination turns into transgovernmental coalition building when sub-units of different governments concertedly use resources to influence governmental decisions. Furthermore, to increase their chances of success, sub-state officials will attempt to incorporate their counterparts into their own decision-making processes. When such coalitions succeed, the outcomes would be different had the coalition not emerged (Keohane & Nye, 1974, 46–7).

Thus, transgovernmental coalitions are more likely to arise when the following conditions are present. First, when there are broad and intensive contacts among sub-state officials; second, when the degree of executive control is low; and finally, when there is a severe conflict of interests within governments. However, they are not enough to guarantee the formation of the coalition. In other words, they are necessary but not sufficient conditions. For coalitions to be feasible, networked actors with common interests also need to combine their resources effectively. This implies that the political resources of actors outside a

government must be attractive for some actors within it. Such resources comprise funds, prestige, information and consent (Keohane & Nye 1974, 48–9).

The empirical findings do not validate the formation of any coalition within any of the analysed TGNs, nonetheless five respondents (from 31) considered that TGNs arise when health officials wish to build coalitions with like-minded peers from other governments to strengthen its position within their own government (see section 4.4). On the other hand, the content analysis of the elite interviews revealed reasons not to include members from other ministries. For example, three health representatives from a North American country referred to variable number as one reason not to include representatives from other agencies in the GHSI. They added, “To include people from other sectors becomes more of a challenge”. After all, civil servants are not only aware of the conditions needed for achieving efficient outcomes but also that creating organizations is costly and time consuming. In that respect, the same interviewees also pointed out “it has taken so long to build the organizations. You would lose the value of the initiative if you increase the membership”. Unlike the GHSI composition, they justified the inclusion of representatives from other agencies in the NAPAPI due to its more restricted scope (i.e. focus on pandemic influenza). According to them, the multisector focus of NAPAPI was needed “to adequately address problems”.

Of all interviewees, only one decided to elaborate on coalition building as one of the factors behind the creation of TGNs. I asked her “could you give me some example where you have seen that expressly the Ministry of Health decided to participate in some initiative to counteract the influence of let’s say the Ministry of Foreign Affairs, or for having an ally abroad, that allows it to domestically legitimize the implementation of some political agreement?” To which she replied:

“It seems to me that Ebola is a very good example. When we had the Ebola threat, we did not only go behind the Chancellery, we pursued diverse paths because we needed to learn, we did not know, Chile had never had Ebola; we had never had Ebola threat. Hence, we turned to the Ministry of Foreign Affairs but we also turned to other countries. In fact, the one that trained us was the United States through the CDC. It was not even USAID; it was the CDC. We used the network we have with them and they came to train us. We organized the course here; we are quite institutional, once we contacted them, we contacted PAHO and they came together with the CDC. As soon as we were ready, we invited other countries, but we did not go behind the Chancellery, nor the embassies, we invited the countries directly through PAHO with the

aim of holding the big meeting here in Chile” (Face-to-face anonymous interview, O3 MoH).

Then, I asked her whether Chile was the promoter of the meeting to which she replied affirmatively and used it as an example of how her country collaborates through networks, but she also insisted that they always try to include multilateral organizations due to their comparative advantage:

“Had we only talked to the CDC, the CDC would have only benefited Chile, and since we were going to make the effort, we informed PAHO. PAHO as well decided to send experts. At the end, we organized a big meeting. By then Chile had already mounted services, bought the capsules, we spent millions...” (Face-to-face anonymous interview, O3 MoH).

5.4. RIVAL EXPLANATIONS

5.4.1 A) NORMATIVE CONSIDERATIONS.

One alternative to rational choice is that states choose institutional designs based on the “logic of appropriateness”. In other words, instead of considering costs and benefits, states base their decision on normative considerations. They do what is regarded as normatively appropriate. As actors become socialized to norms, they incorporate them to their identity, and that identity in turn creates a collective interest in norms as ends *per se*. As a consequence, actors follow norms not because it is in their self-interest, but because it is the right thing to do in society (Wendt 2001, 1024–5).

Although Wendt argues that there are at least three ways in which normative logics might be rivals to rational explanations of institutional design, I did not find much evidence that allow me to detect the logic of appropriateness behind the creation of any TGN in the biosecurity field. To put it differently, none of the interviewees expressed for example reasons for creating a norm of universal membership or a norm of democratic control. Furthermore, to my knowledge none of them took “design options that might be instrumentally attractive off the table as ‘normative prohibitions’ (2001, 1025–7). However, what I did observe in one of the TGNs (i.e. the GHSI) was that the attainment of a level of collective identity within the G7 might have acted as catalyst for the rational design of the

GHSI. Moreover, one of my interviewees who actively participated in the BRICS meetings alluded to normative reasons to act: “Although health coordination within the BRICS is very incipient and the level of institutionalization is low, China –as *primus inter pares*- will go with the wind if she has no clear idea of what to do **to be a good international citizen**”. (Skype anonymous interview, P11 MoFA). Clearly, more research is needed to validate these claims.

5.4.2. B) GENERALIZED TRUST.

Besides number and homogenous values and interests, it seems that trust but also distrust come into the calculations of leaders when deciding whom to invite for joining a transgovernmental network. Indeed, some interviewees alluded to a lack of trust as a reason for not inviting the Russians to join the GHSI, and conversely, i.e. within the biosecurity field trust is likely bringing participants to the table⁷². According to Podolny and Page, “the network form of organization can be characterized by a distinct ethic or value orientation on the part of exchange partners”. They underline that in this kind of relationships, there exists a “spirit of goodwill”, namely a commitment to use “voice” rather than “exit” to solve conflicts, as well as a high level of mutual trust (1998, 60).

That is exactly what I found in the statements of network participants, i.e. like-mindedness, willingness to cooperate, to achieve consensus and to base their views in scientific evidence. This is what Risse (2000) termed “the logic of arguing” in opposition to the “logic of consequentialism” -associated to Rational Choice- and the “logic of appropriateness” – mostly linked to sociological institutionalism-. According to Risse (2000) “human actors engage in truth seeking with the aim of reaching a mutual understanding based on a reasoned consensus (*verständigungsorientiertes Handeln*), challenging the validity claims involved in any communication” (1). To him, “arguing constitutes a necessary (though not sufficient) step in a negotiating process. Arguing is also relevant for problem solving in the sense of seeking an optimal solution for a commonly perceived problem and for agreeing on a common normative framework.” Additionally, “seeking a reasoned

⁷² An example would be America’s decision to invite Canada to the GHSI and allowing it to permanently host the Secretariat based on the long record of amical relationship.

consensus helps actors to overcome many collective action problems.” On the other hand, he warns, “when actors engage in a truth-seeking discourse, they must be prepared to change their own views of the world, their interests and sometimes their identities”. That is the reason why he links ‘argumentative rationality’ to “the constitutive rather than the regulative role of norms and identities”. He claims that ‘argumentative rationality’ provides “actors with a mode of interaction that enables them to mutually challenge and explore the validity claims of those norms and identities” (Risse, 2000, 2). Finally, Risse (2000) posits, “successful arguing means that the better argument carries the day, while one’s (material) bargaining power becomes less relevant” (9).

Research findings go along these lines. Indeed, participants in the GHSI and NAPAPI meetings underlined that “evidenced-based arguments solved conflicts” and that “differences among members essentially limited to budgets”.⁷³ Thus, downplaying power considerations such as the ones that usually prevail within IGOs. Thereon, A Health Vice Minister remarked:

“Within the GHSI there were **democratic** discussions, at the end of which, obviously **the US was the strongest partner** and this is clear to anyone. Anyway, there was a **frank discussion** and so the Italian representative had an opportunity to express his ideas. So decisions were adopted by **majority** and not by someone. **The agenda** was drafted by the **Secretariat**, that is Canada, but the countries had the opportunity to interact with the secretariat and express disconformity with something in preparatory meetings, prior to the senior official meetings and the ministerial meetings.” (Skype anonymous interview, P1 MoH).

In fact, ten respondents (32.26%) from 31 considered that it is more probable to witness the appearance of TGNs in the biosecurity field when actors trust each other (see section 4.4). To put it differently, behind similar interests (i.e. 21 mentions, representing 67.74%), speed (i.e. 15 mentions, representing 48.39%) and similar values (i.e. 11 mentions, representing 35.48%), trust comes as the fourth more important condition determining the appearance of TGNs in the biosecurity field (see section 4.4). Taken all together, these findings are in line with the trust-related arguments/findings of Slaughter (1997), Powell

⁷³ Skype interview with a Health vice Minister from a North American country who participated in eight of the 20 GHSI ministerial meetings that have taken place since 2001.

(1990), Podolny & Page (1998), Puetter (2006), Kahler (2009), Eilstrup-Sangiovanni (2009), Cozine (2010). Moreover, they support argumentative rationality advocated by Risse (2000).

Following statements by a former North American Health vice Minister suggested replicating the institutional design of the GHSI in the Middle East as way of achieving outcomes but also peace through trust.

How can we increase the effectiveness of organizations operating in the biosecurity field? “There are going to be mistakes. In any biosecurity event you look at what you did, what went right and what went wrong and then you try to fix what went wrong for the future.” Is it a good idea to replicate the institutional design of the GHSI in other regions? “The existence of a TGN in the Middle East could contribute to **building relationships** among the countries of the region. If there were some type of outbreak in the region, it would not respect borders. Having those kind of crossborder, crosscountry **discussions**, putting aside politics just talking about health, could help the region in terms of its preparedness for some type of even. Nevertheless, perhaps it could even help **building the ties** that could lead to **greater peace, security and stability** in the region. Because pathogens do not respect borders.” (Face-to-face anonymous interview, P5 MoH).

To some extent, the research findings contradict one of Abbott and Snidal (2000) arguments concerning legalization i.e. that actors with different interests and values should choose soft law because it would help them to reach a compromise. According to them, the lack of common values and interest would not only be a distinctive criterion influencing actors to opt for a soft law arrangement, but also a way to reconcile differences (423). The findings suggest that in the biosecurity field actors who hold similar values and interests and trust each other should choose soft law in the form of transgovernmental networks not as a way of achieving consensus –because they nonetheless achieve it based on the argumentative rationality- but as a form for changing international outcomes and national policies. This seems to be particularly the case with the GHSI, the NAPAPI and IBSA, but less so with the BRICS Health Network where interests are similar but values diverge (see for example section 5.2.1).

A G7 Health vice-Minister declared that the reason why the Russians are not members of the GHSI is “probably because there is not complete trust in them”. Additionally, he explained:

“I think that each country that wishes to participate in this organization should be totally **transparent** to the others with the only exception of secret matters, on the other side they have to be transparent, **otherwise this kind of cooperation is not useful**. At this moment, probably our political level decided **Russia**⁷⁴ is not ready for this aspect. By ‘our political level’ I mean the international, not the Italian one” (Skype anonymous interview, P1 MoH).

To find out whether the kind of threat influences the selection of a certain institutional arrangement, I asked a biosecurity expert about it and he indirectly raised the issue of trust as a defining criterion for selecting with whom to cooperate:

“Well, I think the key elements for biodefense are not in the GHSI and it is not the WHO, it is not even NATO. It is the Chemical, Biological, and Radiological Memorandum of Understanding (CBRMOU), the exclusive **Australia, Canada, USA, UK** agreements between military officials. You know the military in our country is the custodian of biological weapons not Public Health people. Public Health people would deal with the consequences. In terms of transnational governmental considerations, I heard people saying the really important information on the area of biodefence, this information is not shared with NATO **because NATO is not to be trusted**.” Because of their members? “Yes, because of their members, **even the French**. It's an exclusive group of power” (Face-to-face anonymous interview, E1 Academia).

However, a former Health Vice Minister who attended eight of the 20 GHSI meetings either as acting vice Minister or as representative of the Minister in turn, offered another interpretation that goes along with network theories and with the main findings of this research. Namely, that some countries requested membership in the GHSI but were not admitted. To his knowledge, Russia, Australia and Brazil requested to join the network but received no answer. According to him, the reason not to expand the membership was functional: “the group functioned well because of its size” (Skype anonymous interview, P10 MoH). In that respect, he is not the only one who considered that small size impinges upon efficiency. In fact, he is one of fourteen respondents (from 29) who stated that TGNs are more effective than IGOs when the network is small (i.e. from three to ten members). This is by no means a minor issue because option e (small size) in question 15 received the highest number of mentions ahead of option g related to speed (11 mentions) or option h related to similar interests and values which got nine mentions (see section 4.14). Thus, when it comes

⁷⁴ For more evidence concerning Russia, see section 5.2.2 of this chapter concerning capabilities, commitment and the exclusion of spoilers.

to effectiveness, TGNs members do assign an important role to homogenous interest and values (what some of them referred to like-mindedness, see section 5.2.2.), but they deemed small size and speed as more important conditions.

Another former Health Vice Minister from a different North American country expressed a similar opinion than his peer, but went further by asserting that small size is conducive to trust:

Why the GHSI has not expanded its membership? “There are all sorts of political size questions concerning the **effectiveness of organizations of different sizes**. At a certain size organizations can do certain things, when they get larger there are other things they can do, but also there are things they cannot do. **The extent you over expand a size of the organization it becomes less effective by having that circle of trust type of conversation** between nations that are very **strongly allied**. So if you want to have a larger organization that has more chairs at the table, the WHO is great for that, or PAHO is great for that.” (Face-to-face anonymous interview, P5 MoH).

Finally, what makes governments cooperate and construct organizations in the biosecurity field? Is it trust as claimed by Rathbun or is it distrust as maintained by Koremenos, Lipson and Snidal? Rathbun contends that security organizations should be more effective when they ask their members to make legally binding commitments that limit their future discretion in specific cases. However, none of the interviewees provided evidence of the sort, not even in the case of the GHSI, which started as a security organization to deal with bioterrorism (i.e. Anthrax attacks following 9/11). Rathbun also argues that “generalized trusters” will be more willing to make commitments to binding security guarantees and authoritative conflict resolution procedures than “non-trusters”. Furthermore, “non-trusters” will prefer unilateralism or limited cooperation with a smaller number of other states who have a demonstrated record of trustworthiness, shared identity, and/or closely overlapping interests. Consequently, he hypothesizes that “generalized trusters” will favor less flexible agreements than “non-trusters” (2011, 247–54).

Following Rathbun’ reasoning, the members of the two main TGNs in the biosecurity field (i.e. the GHSI and its nemesis, the BRICS Health Network) are “non-trusters”. Clearly none of them saw the need to make commitments for binding security guarantees nor for setting conflict resolution procedures. Furthermore, they all opted for limited cooperation in

the form of TGNs with a smaller number of other states who have a demonstrated record of trustworthiness, shared identity, and/or closely overlapping interests. Overall, this applies more to the GHSI than to the BRICS Health Network where common interests prevail. Nonetheless, Rathbun is right in implying that “non-trusters” will favour more flexible agreements as in fact happened with both TGNs. Anyway, this is also consistent with network theories.

CONCLUSIONS.

MAIN FINDINGS

Institutional design is deliberate and transgovernmental networks in the biosecurity field are not an exception. Governments consciously select certain institutional features for achieving objectives that range from reacting rapidly to new problems (e.g. dealing with a new strain of a virus) to influencing international outcomes (e.g. modifying other institutions such as the IHR). Governments are however not homogenous in their preferences. Health Senior Civil servants are perfectly aware of the alternatives they have when confronting Public Health Emergencies of International Concern (PHEIC). The election of a certain institutional arrangement will vary according to different factors including a country's location, interests, values, capabilities and scientific knowledge. The United States for example seems to have a particular predilection for TGNs, whereas less capable countries seem to rely more on IGOs. What it started as an American informal model for cooperation soon expanded to other developed or emerging countries such as the European Union (e.g. the Eurogroup, the GHSI, etc.) or the BRICS (e.g. the BRICS Health Network).

Although the sample does not enable me to generalize, it nonetheless allows me to make some inferences concerning the Americas. Within the biosecurity issue-area, North American governments will more likely opt for a TGN as a way of dealing with both epidemics (especially influenza) and biological terrorism (e.g. weaponised Anthrax). Among others, a TGN becomes their ideal institutional arrangement for influencing international outcomes (e.g. reforming IGOs), evading domestic scrutiny, reacting rapidly, communicating freely and directly with peers and excluding spoilers. In contrast, South American governments have a predilection for intergovernmental cooperation, adamantly refuse to securitize health and are willing to knock on all doors for achieving their objectives. In North America common interests, values and geography drive cooperation in biosecurity, whereas in South America –at least when there was a confluence of left parties in power- ideology also played a role in the formation of institutional arrangements (e.g. ISAGS-UNASUR). In South America, biological terrorism is not a priority nor an area of concern. Rather, South American countries create organizations for increasing universal health coverage,

strengthening capacities, exchanging knowledge and dealing with communicable and non-communicable diseases. Certainly, epidemics are in their minds when deciding how to cooperate. This is particularly so when it comes to tropical diseases such as cholera, yellow fever, dengue, chikungunya or Zika, as the latter recently revealed.

Despite regional preferences, when is transgovernmental cooperation better? In other words, under what conditions are TGNs more effective than IGOs for dealing with biosecurity threats? Almost one in two respondents (48.28%) considered that TGNs are more effective than IGOs when the network is small, i.e. from three to ten members. This helps us to understand why one of the organizations ranked as most effective (i.e. the GHSI) has not expanded its membership. Besides small size, speed comes into the calculations of policy makers when deciding what door to knock. Indeed, 37.93% of respondents regarded TGNs as more effective when speed is a priority. These results come as no surprise. Irrespective of the policy field, both small size and speed are two of the most prominent characteristics associated to effective networks.

What is new is that despite its previous failures and drawbacks (e.g. the EVD epidemic in West Africa) policy makers considered TGNs to be more effective than IGOs when they collaborate with the WHO. In other words, respondents assessed collaboration with the WHO as the third most important condition (34.48%) for TGNs to be effective. In this respect, ties between the GHSI, the BRICS Health Network, the FPGHI and the WHO are particularly strong. The fourth condition respondents associated with effectiveness is common interests and values. In fact, almost one out of three respondents (31.03%) considered that TGNs are more effective when members have similar interests and values. According to the qualitative content analysis, common interests and values played a crucial role in the creation of the GHSI, whereas in the case of the BRICS Health Network what cemented cooperation were not values but common interests. A fifth condition behind the effectiveness of networks is related to a strong commitment and high capabilities (27.59%). Hence, if as suggested by Fidler and Gostin we aim to replicate the design of the GHSI, we better include some powerful and strongly committed states. The A(H1N1) pandemic and the NACOPBI are indicative in that respect.

I must confess that I expected more of other conditions such as the domestic ones or the ones directly associated with the biosecurity field (e.g. biological terrorism, or when governments have to deal with a new strain of virus/bacteria, etc). Conversely, I expected less of the rival hypotheses and found out that for different reasons policy makers from the north or the south alluded respectively to trust or ideology as reasons for creating or modifying institutional arrangements. In the case of trust, GHSI members frequently mentioned it as a characteristic of the network form, and thus as a reason why there is a high degree of compliance. Due to frequent and direct interaction TGN members know their peers quite well and know they can count on them irrespective of the time or circumstance. Over the years, they have cultivated strong ties. Their governments come and go but due to the technicalities of their field, they usually remain in office. Thus, it would not be surprising if throughout the years a convergence of interests transcends into a collective identity.

What is not so clear is whether -as Wendt (2001) and Bull (1977) claim- is the other way around, i.e. the attainment of a certain level of collective identity precedes the rational design of institutions. Although ideology seemingly was not a factor influencing the design of TGNs in the biosecurity field, it was an important condition behind the creation of several intergovernmental organizations in South America irrespective of the issue-area. A prominent example is the UNASUR, which is now agonizing owing to the political shift in the region. Anyway, this may imply that although institutional design is rational, there may be other variables contingent on the time or site that may explain the choice of a government.

While it is true that the study main question concerned TGNs, I nonetheless decided to ask respondents to assess all organizations operating in the biosecurity field irrespective of whether they were governmental or non-governmental. Since the majority of interviewees were civil servants –with the exception of two scholars- it was reasonable to expect them leaning to the governmental side, as it happened. However, despite all criticism directed towards the WHO, almost sixty percent of respondents considered that IGOs are more effective for dealing with PHEIC. On the other hand, in spite of the majoritarian support for the workings of organizations such as the WHO, the World Bank, UNASUR, etc. there are also voices who call for either a coordination between different organizations (29.17% of respondents) or who suggest TGNs such as the GHSI or the BRICS Health Network are more

effective than IGOs (16.67%). Nevertheless, what is striking is that despite *Médecins Sans Frontières* leading role during the Ebola epidemic in West Africa just one out of 25 interviewees regarded NGOs as an integral part of a coordinated answer to PHEIC. Finally, it is worth mentioning that as claimed by scholars such as Raustiala (2002), some of the interviewees regarded IGOs and TGNs as complementary.

IMPLICATIONS FOR RESEARCH AND PUBLIC POLICY.

In the Real New World Order, Anne Marie Slaughter (1997) argued that in the 21st century TGNs would be the preferred vehicle for international cooperation. Even though this has not yet materialized, we are nonetheless witnessing an epoch of cohabitation and increasingly 'disaggregated sovereignty'. Senior Civil Servants from ministries other than the ministries of foreign affairs are strengthening their ties with their peers abroad. By doing so, they are influencing international and national outcomes, establishing alliances and evading intrusion by other agencies and the wider public. True the biosecurity issue area demands a high degree of technical and scientific expertise. A prove of this is the recurring assistance of the same Health civil servants to the various TGN meetings, but do they really need to coordinate their policies without the supervision of the Ministry of Foreign Affairs (MoFA) to remain effective?

This research found out than under certain conditions (e.g. when the network is small; speed is a priority; members share similar interests and values, in decreasing order.) TGNs are more effective than IGOs for dealing with biosecurity threats. Consequently, we may expect that if TGNs expand their membership to include officials from other ministries conflicts may arise due to diverging interests. Furthermore, as expressed by various interviewees, if the network grows it could lose effectiveness. Finally, if during a PHEIC Health Civil Servants need to inform the MoFA about their decisions; this may result in a delay in the government's response increasing uncertainty and possibly the death toll. Although this may seem obvious, we should not forget that the Review Committee on the functioning of the IHR (2005) underlined "complexities in international cooperation and challenges in communication among experts, policy-makers and the public" (2011, 6). Hence, we need to reflect not only on the design of institutions but also on the ways institutions engage the public and become accountable. In other words, while designing

institutions policy makers and scholars may consider adjusting the two logics behind decision-making (i.e. consequentialism and appropriateness) for increasing legitimacy and effectiveness.

On the other hand, this study contributed to our understanding of TGNs in an issue area that had received scant attention (i.e. health). Thus far, network researchers were mainly concerned with TGNs dealing with criminal, terrorist or financial issues. Moreover, this study brings together TGNs that deal with naturally occurring diseases such as the BRICS Health Network but also TGNs that deal with the two kinds of biosecurity threats, i.e. naturally occurring and man-made. This proved to be important for observing differences in the way each of the networks conceptualize and respond to biosecurity threats. Besides, by identifying new variables (e.g. lack of medical capabilities as a reason to join a TGN) this study advanced one-step in the reflection concerning the governance of global health and the reform of health-related institutions. Among others, this may prove to be helpful for both scholars and government officials seeking to design more effective institutional arrangements in a rapidly changing and poorly understood domain as evidenced by the Covid-19 pandemic (Phelan, Katz, Gostin, 2020; Peeri et al, 2020; Ravi *et al* 2019; Hoffman & Silverberg 2018; Gostin 2015; Fidler & Gostin 2008, 2; Avery 2010, 3; Kickbusch, Hein & Silberschmidt 2010, 2; Nuzzo & Gronvall 2011, 1).

Finally, the evidence of this study is consistent with the arguments of various institutionalist, health governance and network scholars. For example, it supports Abbot and Snidal's (2000) claims concerning transgovernmental institutions, i.e. that government agencies may be driven to rely on soft law because they lack authority to enter binding treaties (453), which goes in line with Fidler and Gostin arguments concerning "partnering agreements" (2008, 231). Moreover, the evidence is in line with Raustiala's (2002) concept of regulatory export (7) and with the speed and flexibility-related arguments of prominent network scholars (Slaughter 1997, 2004b; Eilstrup-Sangiovanni 2009; Kahler 2009a). Concerning commitment and capabilities, the findings concur with other empirical studies focused on transgovernmental networks, although in other policy fields such as finance (Puetter, 2006, 140-145), conventional terrorism (Cozine, 2010, 201), non-proliferation and missile technology control (Eilstrup-Sangiovanni, 2009, 221). Results are also consistent

with Koremenos, Lipson and Snidal's (2001) arguments concerning the independent variable number. Furthermore, the findings are also in line with the first condition (i.e. small group size and relatively homogenous interests) for networked cooperation laid out by Eilstrup-Sangiovanni (2009) and with her argument concerning uncertainty.

When designing organizations policy makers seem to be aware of the pros and cons of selecting certain institutional features, which supports Koremenos, Lipson and Snidal (2001) main argument that institutional design is deliberate. Additionally, the creation of the GHSI supports Lipson argument that governments will choose "less formal" instruments when security issues must be resolved quickly or quietly to avoid serious conflict. Findings related to the BRICS and IBSA also support functional regime theory main assumption, i.e. institutions exist to perform specific functions (Keohane 1984, 80–2). Moreover, we can link the statements of the BRICS and IBSA founder⁷⁵ to Abbot and Snidal arguments concerning soft law instruments⁷⁶, namely, that specific forms of soft law chosen by states - in their varying combinations of obligation (O), precision (P) and delegation (D) - reflect the particular problems they are trying to solve (2000, 423).

On the other hand, the findings disconfirm Abbot and Snidal hypothesis concerning hard legalization, i.e. that states should strive for hard legalization (i.e. IGOs) when they aim to limit participation to actors strongly committed to an agreement (Abbott & Snidal 2000, 431). In other words, what we observed in the biosecurity field is exactly the opposite, i.e. governments preferred soft law forms (i.e. transgovernmental networks such as the GHSI, the NACOBPI or the BRICS Health Network) to limit participation to committed countries. Despite differences in the capabilities of some members (e.g. Mexico or South Africa), governments are aware of their power resources and show commitment to achieve their goals. These results also contradict Abbot and Snidal's argument that states should select soft law when there is a high degree of divergence in terms of their capacities (Abbott & Snidal 2000, 445).

⁷⁵ Two key respondents from Brazil's Ministry of Foreign Affairs and one Senior Health servant who has occupied leading positions at the Oswaldo Cruz Foundation (*Fiocruz*) and advised the WHO and PAHO validated this claim.

⁷⁶ Namely, an informal organization not linked to a treaty or international convention.

OUTLOOK FOR FURTHER RESEARCH

The objective of this research was to determine the conditions under which TGNs can be a better option than IGOs for dealing with biosecurity threats. By focusing on a set of positive (i.e. TGNs) and negative or control cases (i.e. IGOs) I advanced the foundations for understanding the rationale of a governments' choice as well as provided initial empirical evidence for establishing a causal link between the independent (e.g. cooperation problems) and dependent variable (i.e. organizational form).

There are at least five ways in which the research can be expanded. First, since there were differences in terms of interests, values and institutional choices between North American and South American countries and between developed and emerging countries, it may prove valuable to keep on exploring the geographic variable. In that respect, it may be fruitful to conduct empirical research in Europe, Asia and Africa. For instance, a case study of the APEC Health Working Group may well complement the findings associated to the North American TGNs. Second, as another way of increasing variety, scholars can add other issue areas to this investigation. One possible avenue for research might be to select another non-conventional security issue such as climate change. After all, as in the case of public health emergencies of international concern, governments need to react quickly to natural disasters associated to global warming. Third, although the research aim was not to compare the institutional management of different PHEIC as a way of determining the effectiveness of TGNs vis-à-vis IGOs, it is certainly a line of research that should be pursued in a future study. Among others, this may prove to be helpful for analysing more in detail and confirming the conditions suggested in section 4.14. Fourth, the responding rate per region was clearly a limitation of this study, thus researchers should try to interview Senior Civil Servants from other countries, particularly from the regions where TGNs predominantly operate such as the European Union. Finally, the role of ideas, norms and identities should be further explored to determine their influence in the rational design of institutions. For example, it may prove rewarding to find out a causal link between epistemic communities and the creation of TGNs.

APPENDICES.

Appendix 1. - E-Mail request for participation to potential respondents

Appendix 2. - Tweet request for participation to potential respondents

Appendix 3. - Questionnaire

Appendix 4. - Photographic evidence.

APPENDIX 1: E MAIL REQUEST

Para:GHSI@hc-sc.gc.ca
de marzo de 2018 a las 11:44

20

Dear Sir/Madam:

My name is Octavio González Segovia, I'm a research fellow at the BRICS Policy Center in Rio de Janeiro. I'm currently doing research on international organizations, global health governance and biosecurity. I got your e-mail from the web page of Health Canada. Among others, my research aims to improve the institutional design of international organizations working in the biosecurity field, including the Global Health Security Initiative (GHSI), whose secretariat to my knowledge is held by Canada.

Right now, I'm collecting empirical data and would like to ask you to answer the on-line questionnaire below. Since representatives of the Canadian government attended the annual meetings of the GHSI your input becomes very valuable for the research I'm conducting. Hence, I'd highly appreciate if you could take 15-20 minutes to answer 16 questions, the majority of which are multiple choice. If apart from that, a senior civil servant of Health Canada could give me some more minutes to have a skype conversation I'd be more than grateful.

I thank in advance you for your collaboration!

Kind regards!

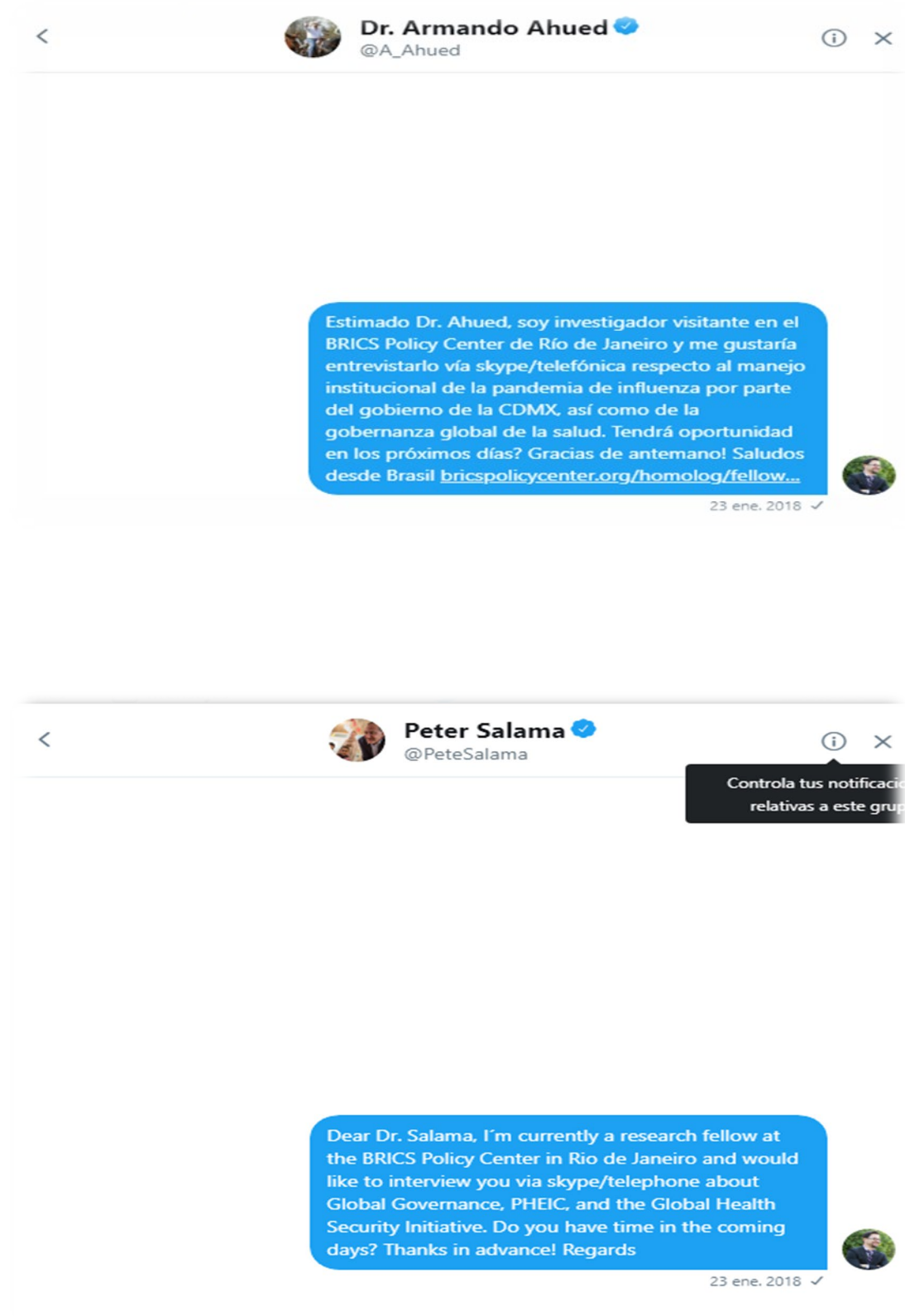
Octavio González Segovia

BRICS Policy Center - Centro de Estudos e Pesquisas BRICS
Rua Dona Mariana, 63 - Botafogo - Rio de Janeiro/RJ - Telephone: (+55 21) 2535-0447
CEP/ZIP CODE: 22280-020

Please click here to participate in this survey or cut and paste this address onto the bar of your web browser:

[When are Transgovernmental networks the best option to deal with biosecurity threats?](#)

APPENDIX 2: TWEET REQUESTS



APPENDIX 3: QUESTIONNAIRE

Select Language: English | Portuguese | German | French | Spanish | Japanese



BRICS Policy Center Centro de Estudos e Pesquisas - BRICS

When are transgovernmental networks the best option to deal with biosecurity threats?

1/1

100%

1.

First Name (optional)

Last Name (optional)

2. Current or former charge related to Global Health Governance/biosecurity:

- | | |
|---|--|
| ☐ A) Health Senior Civil Servant | ☐ B) Minister/Secretary of Health |
| ☐ C) Vice Minister/Under Secretary of Health | ☐ D) Foreign Relations Senior Civil Servant |
| ☐ E) Minister/Secretary of Foreign Relations | ☐ F) Vice Minister/Under Secretary of Foreign Relations |
| ☐ G) International bureaucrat (staff member of an intergovernmental organization, e.g. WHO). | ☐ H) Ambassador |
| ☐ I) Other (Please Specify) | <input type="text"/> |

3. When confronting biosecurity threats (Public Health Emergencies of International Concern) what institutional arrangement is the most effective?

- ☐ a) Transgovernmental networks (e.g. Global Health Security Initiative, BRICS Health Network, G-20, Foreign Policy and Global Health Initiative, North American Coordinating Body for Pandemic Influenza, APEC Health Working Group, etc).
- ☐ b) Intergovernmental organizations (e.g. World Health Organization, Panamerican Health Organization, World Bank, ISAGS-UNASUR, Community of Portuguese Language Countries [CPLP], etc).
- ☐ c) Non governmental organizations (e.g. Gavi Alliance, Médecins Sans Frontières, Bill & Melinda Gates Foundation, Save the Children, Accordia Global Health Foundation, etc.).
- ☐ d) Other (Please Specify)

4. **Transgovernmental networks versus intergovernmental organizations in the biosecurity field, is it a matter of choice?**

Why? If there is a choice, who takes the decision on behalf of your government (President/Minister of Health/Minister of Foreign Affairs, etc)?

5. **Under what conditions is more probable to witness the appearance of transgovernmental networks (TGNs) in the biosecurity field?**

In other words, what kind of circumstances/factors would make governments choose that kind of institutional arrangement? (you may select more than one option).

- | | | |
|--|--|--|
| ☐ a) Lack of or insufficient capabilities (not counting with a BSL-4 lab) | ☐ b) Uncertainty concerning the state of the world | ☐ c) Limitations of scientific knowledge |
| ☐ d) Among actors who have similar values | ☐ e) Among actors who have similar interests | ☐ f) Speed is a priority |
| ☐ g) When governments aim to reconceptualise their responsibilities and interests with respect to biosecurity threats | ☐ h) When governments anticipate high sovereignty costs and expect domestic opposition to an international agreement. | ☐ i) When Health officials wish to build coalitions with like-minded peers from other governments to strengthen its position within their own government. |
| ☐ j) Among strongly committed and capable states | ☐ k) When actors trust each other | ☐ l) When actors wish to exclude spoilers |
| ☐ m) When the reform process within relevant Intergovernmental organization is stuck or progress is limited. | | |
| ☐ n) Other (Please Specify) <div></div> | | |

6. When dealing with public health emergencies of international concern, who should coordinate global response?

- ☐ a) G7
- ☐ b) G20
- ☐ c) BRICS
- ☐ d) World Health Organization (WHO)
- ☐ e) United Nations Security Council
- ☐ f) The WHO together with regional transgovernmental networks
- ☐ g) Other (Please Specify)

7. What would be the institutional strengths of the following organizations?

Note: Please check the boxes that apply to the organization in question. If your country does not belong to that organization or if you have not formed an opinion about it please do not check the box(es).

	Flexibility	Rapid reaction	Influential	Connectedness	Legitimacy	Information sharing
A) Global Health Security Initiative(G7+Mexico+EU)	☐	☐	☐	☐	☐	☐
B) NACOBPI (Mexico/Canada/USA)	☐	☐	☐	☐	☐	☐
C) APEC Health Working Group	☐	☐	☐	☐	☐	☐
D) BRICS Health Network (Brazil, Russia, India, China, South Africa)	☐	☐	☐	☐	☐	☐
E) South American Institute of Governance in Health-UNASUR	☐	☐	☐	☐	☐	☐
F) World Health Organization	☐	☐	☐	☐	☐	☐
G) Panamerican Health Organization	☐	☐	☐	☐	☐	☐
H) Community of Portuguese Language Countries	☐	☐	☐	☐	☐	☐
I) Foreign Policy and Global Health Initiative (Brazil, Indonesia, Norway, Senegal, Thailand and France)	☐	☐	☐	☐	☐	☐

Country of origin:

8. How effective are following organizations?

Note: If you have not formed an opinion about a certain organization you may leave the space blank.

A) Global Health Security Initiative (G7+Mexico+European Union)



B) NACOBPI (Mexico/Canada/USA)



C) APEC Health Working Group



D) BRICS Health Network



E) South American Institute of Governance in Health-UNASUR



F) World Health Organization



G) Panamerican Health Organization



H) Community of Portuguese Language Countries (CPLP)



I) Foreign Policy and Global Health Initiative (Brazil, Indonesia, Norway, Senegal, South Africa, Thailand & France)

1 2 3 4 5
Not effective ☐ ☐ ☐ ☐ ☐ Very effective

Why are the selected organizations effective?

9. How important are the following organizations for your country?

Note: Please just grade the organizations your country belongs to.

A) Global Health Security Initiative (G7+Mexico+European Union)

1 2 3 4 5
Not Important ☐ ☐ ☐ ☐ ☐ Very Important

B) NACOBPI (Mexico/Canada/USA)

1 2 3 4 5
Not Important ☐ ☐ ☐ ☐ ☐ Very Important

C) APEC Health Working Group

1 2 3 4 5
Not Important ☐ ☐ ☐ ☐ ☐ Very Important

D) BRICS Health Network

1 2 3 4 5
Not Important ☐ ☐ ☐ ☐ ☐ Very Important

E) South American Institute of Governance in Health-UNASUR

1 2 3 4 5
Not Important ☐ ☐ ☐ ☐ ☐ Very Important

F) World Health Organization

1 2 3 4 5
Not Important ☐ ☐ ☐ ☐ ☐ Very Important

G) Panamerican Health Organization

1 2 3 4 5
Not Important ☐ ☐ ☐ ☐ ☐ Very Important

H) Community of Portuguese Language Countries (CPLP)

1 2 3 4 5

Not Important ☐ ☐ ☐ ☐ ☐ Very Important

I) Foreign Policy and Global Health Initiative (Brazil, Indonesia, Norway, Senegal, South Africa, Thailand & France)

1 2 3 4 5
Not Important ☐ ☐ ☐ ☐ ☐ Very Important

10. How influential are the following organizations?

Note: If you have not formed an opinion about a certain organization you may leave the space blank.

A) Global Health Security Initiative (G7+Mexico+European Union)

1 2 3 4 5
Not influential ☐ ☐ ☐ ☐ ☐ Very influential

B) NACOBPI (Mexico/Canada/USA)

1 2 3 4 5
Not influential ☐ ☐ ☐ ☐ ☐ Very influential

C) APEC Health Working Group

1 2 3 4 5
Not influential ☐ ☐ ☐ ☐ ☐ Very influential

D) BRICS Health Network

1 2 3 4 5
Not influential ☐ ☐ ☐ ☐ ☐ Very influential

E) South American Institute of Governance in Health-UNASUR

1 2 3 4 5
Not influential ☐ ☐ ☐ ☐ ☐ Very influential

F) World Health Organization

1 2 3 4 5
Not influential ☐ ☐ ☐ ☐ ☐ Very influential

G) Panamerican Health Organization

1 2 3 4 5
Not influential ☐ ☐ ☐ ☐ ☐ Very influential

H) Community of Portuguese Language Countries (CPLP)

1 2 3 4 5
Not influential ☐ ☐ ☐ ☐ ☐ Very influential

I) Foreign Policy and Global Health Initiative (Brazil, Indonesia, Norway, Senegal, South Africa, Thailand & France)



11. For dealing with Public Health Emergencies of International Concern, how flexible are following organizations:

Note: If you have not formed an opinion about a certain organization, you may leave the space blank.

A) Global Health Security Initiative (G7+Mexico+European Union)



B) NACOBPI (Mexico/Canada/USA)



C) APEC Health Working Group



D) BRICS Health Network



E) South American Institute of Governance in Health-UNASUR



F) World Health Organization



G) Panamerican Health Organization



H) Community of Portuguese Language Countries (CPLP)



I) Foreign Policy and Global Health Initiative (Brazil, Indonesia, Norway, Senegal, South Africa, Thailand & France)

1 2 3 4 5

Not flexible ☐ ☐ ☐ ☐ ☐ Very flexible

Why are the selected organizations flexible?

12. When dealing with biosecurity threats which organization learns faster? (rank from 1 to 9)

	A) Global Health Security Initiative (G7+Mexico)								
	B) NACOBPI (Mexico/Canada/USA)								
	C) APEC Health Working Group								
	D) BRICS Health Network								
	E) South American Institute of Governance in Health-UNASUR								
	F) World Health Organization								
	G) Panamerican Health Organization								
	H) Community of Portuguese Language Countries (CPLP)								
	I) Foreign Policy and Global Health Initiative (Brazil, Indonesia, Norway, Senegal, South Africa, Thailand & France)								

13. What would be the weaknesses of the following organizations?

Note: Please check the boxes that apply to the organization in question. If your country does not belong to that organization or if you have not formed an opinion about it please leave the space in blank.

	Bureaucratic	Slow reaction	Limited resources	Undemocratic	Hierarchical	Opaque
A) Global Health Security Initiative (G7+Mexico+European Union)	☐	☐	☐	☐	☐	☐
B) NACOBPI (Mexico/Canada/USA)	☐	☐	☐	☐	☐	☐
C) APEC Health Working Group	☐	☐	☐	☐	☐	☐
D) BRICS Health Network	☐	☐	☐	☐	☐	☐
E) South American Institute of Governance in Health-UNASUR	☐	☐	☐	☐	☐	☐
F) World Health Organization	☐	☐	☐	☐	☐	☐
G) Panamerican Health Organization	☐	☐	☐	☐	☐	☐
H) Community of Portuguese Language Countries	☐	☐	☐	☐	☐	☐

I) Foreign Policy and Global Health Initiative

14. How capable are following organizations?

Note: If your country does not belong to that organization or if you have not formed an opinion about it please leave the space in blank.

A) Global Health Security Initiative (G7+Mexico+European Union)



B) NACOBPI (Mexico/Canada/USA)



C) APEC Health Working Group



D) BRICS Health Network



E) South American Institute of Governance in Health-UNASUR



F) World Health Organization



G) Panamerican Health Organization



H) Community of Portuguese Language Countries (CPLP)



I) Foreign Policy and Global Health Initiative (Brazil, Indonesia, Norway, Senegal, South Africa, Thailand & France)

1	2	3	4	5
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Uncapable ☐ ☐ ☐ ☐ ☐ Very capable

Why are selected organizations capable?

15. In the biosecurity domain, under what circumstances are transgovernmental networks (TGNs) more effective than intergovernmental organizations (IGOs)? You may select more than one option.

- | | | |
|---|---|---|
| ☐ a) When dealing with a new strain of virus/bacteria | ☐ b) When confronting biological terrorism | ☐ c) When dealing with a specific threat (e.g. influenza, biological terrorism, etc) |
| ☐ d) When fighting regional threats | ☐ e) When the TGN is small (3 to 10 members) | ☐ f) When time horizons are short |
| ☐ g) When speed is a priority | ☐ h) When TGN members have similar interests and values | ☐ i) When there is uncertainty concerning the state of the world |
| ☐ j) When health civil servants expect domestic political opposition | ☐ k) When the TGN is mainly integrated by strongly committed and highly capable states | ☐ l) When the TGN collaborates closely with the World Health Organization |
| ☐ Other (Please Specify) | <input type="text"/> | |

16. Why a transgovernmental network to deal with biosecurity threats (Public Health Emergencies of International Concern)?

17. Under what conditions transgovernmental networks are supplementary to intergovernmental organizations?

18. The 2009 influenza pandemic and the 2014-16 Ébola epidemic in West Africa revealed several institutional shortcomings/challenges. **What can we do to improve the institutional design of current organizations working in this field (both TGNs and IGO's).** In other words, how can we increase the effectiveness of those organizations?

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APPENDIX 4: PHOTOGRAPHIC EVIDENCE



Interview with Ambassador Celso Amorim, Minister of External Relations (2003-2010) and Minister of Defence (2011-2014) of the Federative Republic of Brazil.



Interview with Alessandra Ambrossio General Coordinator of cooperation with the CPLP, Brazilian Development Agency (ABC).



Interview with Carina Vance, General Director of the South American Institute of Governance in Health (2016-2019), Minister of Health of Ecuador (2012-2015).



Interview with Felix Rigoli, Specialist on Systems and Health Services (left) and Eduardo Hague (right) Specialist in Health surveillance at ISAGS



Interview with Marise Ribeiro Nogueira Head of the Social Affairs Division
at the Ministry of External Affairs, Federative Republic of Brazil.



Interview with César Vermiglio Bonamigo,
Head of the Financial Policy Division at the Ministry of External Relations
Federative Republic of Brazil.

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I would like to thank the following persons for their cooperation in the series of expert interviews substantiating this research:

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Ambrosio, Alessandra. General Coordinator of Cooperation with the Community of Portuguese Language Countries (CPLP), Brazilian Development Agency (ABC), Ministry of Foreign Affairs, Federative Republic of Brazil.

Amorim, Celso. Member of the United Nations High-Level Panel on Access to Medicines (2016); Minister of External Relations (2003-2010), Minister of Defense (2011-2014), Federative Republic of Brazil.

Arrington, Helena. International Policy Advisor of the Secretary of Health (2014-2016); Advisor for International Affairs, Under secretariat for Prevention and Health Promotion (2012-2014); Director for Multilateral Affairs (2008-2011), Secretariat of Health, United Mexican States.

Avilés-Mendoza, Guillermo. International Program Coordinator, Office of Emergency Management ascribed to the Department of Health and Human Services, United States of America.

Azar II, Alex: Secretary of Health and Human Services (2018-present); President of the U.S. division of Eli Lilly (2012-2017); Deputy Secretary of Health and Human Services (2005-2007), United States of America.

Beingolea More, Luis Francisco. Coordinator of the Andean network for Epidemiological Surveillance and Environmental Health. Andean Health Organization (ORAS-CONHU); Executive Director of Research and Systems Development (1999-2002) General Office of Epidemiology, Ministry of Health, Republic of Peru.

Coitiño, Andrés. Director of International Relations and Cooperation, Ministry of Public Health, Oriental Republic of Uruguay.

Coronado Martínez, Esther. United Mexican States. Subdirector of Financial cooperation and Emerging threats, Secretariat of Health, United Mexican States.

Da Nobrega, Kenneth F. Ministry of Foreign Affairs, Ambassador, Secretary of Bilateral Negotiations in the Middle East, Europe and Africa; Director of interregional mechanisms (2016-2018), Advisor to the foreign minister's office (2013-2015), Head of the Intellectual Property Division (2008-2013), Federative Republic of Brazil.

Dávila Chávez, Hilda. General Director of International Relations, Secretariat of Health, United Mexican States.

- De Almeida**, Celia María. Coordinator of Global Health and Health Diplomacy at the National School of Public Health Sergio Arouca (2008-present); Director of the regional office of the Oswaldo Cruz Foundation (Fiocruz) in Africa (2008-2011); Member of the Social, Economic and Behavioural Research Committee (2000 a 2006) and of the Health Systems and Services Research Committee (2009-2010) at the WHO; Vice-president of the NGO *Centro Brasileiro de Estudos em Saúde* (1986-1987), Federative Republic of Brazil.
- Engelhardt**, Rainer. Assistant Deputy Minister of the Infectious Disease Prevention and Control Branch and Chief Science Officer (2011-2015) of the Public Health Agency of Canada.
- Fernández**, José. Senior Civil Servant at the Health and Human Services Agency, United States of America.
- Frazao**, Letizia. Ministry of Foreign Affairs, Federative Republic of Brazil.
- Frenk** Mora, Julio. President of the University of Miami (2015-present); Dean (2009-2015) of the Harvard School of Public Health; Secretary of Health, United Mexican States; Director of Evidence and Information for Policy at the WHO (1998); Founding Director General of the National Public Health Institute of Mexico (1987-1992).
- Hague**, Eduardo. Specialist in Health surveillance at the South American Institute of Government in Health (ISAGS)-UNASUR. Member of the Panel of Experts of the International Health Regulations and ad hoc adviser of the WHO. He was in charge of the Communicable Diseases Surveillance Department in the Secretariat of Health Surveillance of the Brazilian Ministry of Health.
- Heredia**, Nila. Executive Secretary (2016-present), Andean Health Organization (ORAS-CONHU), Minister of Health (2006-2008; 2010-2012) Plurinational State of Bolivia.
- Howard** Avery, Donald. Canada. Professor Emeritus at University of Western Ontario. Specialist in Health Security, Biodefence, Chemical Weapons Control and Border Issues.
- Kirton**, John J. Canada. Co-founder and Director of the G7 Research Group, Founder and Co-Director of the G20 Research Group, Co-Director of the BRICS Research Group; Interim Director of the International Relations Program, Munk School of Global Affairs and Public Policy, University of Toronto.
- Kuri** Morales, Pablo Antonio. Under-secretary of Prevention and Health Promotion (2011-2018), Secretariat of Health, United Mexican States; Scientific director (2009-2011) Sanofi-Aventis Mexico; General Director of the National Center for Epidemiological Surveillance and Disease Control (CENAVECE), Mexico.
- Lawley**, Sarah. Assistant Deputy Minister Communications and Consultations, Ministry of Finance Canada (2019-present); Director General (2015-2019), Office of International Affairs for the Health Portfolio, Public Health Agency of Canada.
- López** Gatell, Hugo. Under Secretary of Prevention and Health Promotion (2018-present), Secretariat of Health, United Mexican States. Has also served as Director General of Epidemiology and National Focal Point for the International Health Regulations, as well as Director of Innovation in Infectious Disease Surveillance and Control of the Research Center on Infectious Diseases (CISEI).

- López de Llergo Cornejo, Guadalupe.** Director for Multilateral Affairs (2012-2013) at the Secretariat of Health United Mexican States.
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- Marchiori Buss, Paulo.** Director of the Center of International Relations in Health (CRIS) at the Oswaldo Cruz Foundation; Member of the Executive Board of the WHO (2008-2011); President of the World Federation of Public Health (2008-2010); President of the Oswaldo Cruz Foundation (2001-2008); Director of the National School of Public Health (1989-1992, 1998-2001), Federative Republic of Brazil.
- Marinissen, María Julia.** Director of the Division of International Health Security, Office of the Assistant Secretary for Preparedness and Response (ASPR), Department of Health and Human Services. She is the US Liaison to the Global Health Security Initiative (GHSI) and was founder and chair of the North American Health Security Working Group, United States of America.
- Matute, Jaime.** Director of International Relations, Ministry of Health, Republic of Colombia.
- Muñoz Ledo y Lazo de la Vega, Porfirio.** President of the Mexican Chamber of Deputies, LXIV Legislature (2018-2019). Mexican Ambassador to the European Union, the Kingdom of Belgium and the Grand Duchy of Luxembourg (2001-2004); Senator (1988-1994); Mexican Ambassador to the United Nations (1979-1985), President of the U.N. Security Council and the Group of 77 (1980-1981); Minister of Education (1976-1977); Minister of Labor (1972-1975), United Mexican States.
- Ribeiro Nogueira, Marise.** Head of the Social Policy Division, Ministry of Foreign Affairs, Federative Republic of Brazil.
- Rigoli, Felix.** Specialist on Systems and Health Services (2016-2019) at the South American Institute of Government in Health (ISAGS)-UNASUR; Consultant of the WHO and PAHO; Director of the Public Health & Primary Attention Network in Montevideo (1985-1986), Oriental Republic of Uruguay.
- Roldán, Eduardo.** International consultant; Ambassador of Mexico in Algeria, Libya, Tunisia and Mauritania (2006-2012); General Director of Delegations; Adjunct General Director for American Regional Organizations; Director for bilateral affairs with the United States of America and Canada (1989-2006) at the Ministry of Foreign Affairs, United Mexican States.
- Rosenberg, Felix Julio.** Fio Cruz Foundation. Epidemiologist and researcher; Argentine Republic.
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- St. John, Ronald.** Served as Global Health Security Initiative Director; Director General of the Center for Emergency Preparedness and Response (2003) at Public Health

Agency of Canada. Founder of the Global Public Health Intelligence Network (GPHIN); Incident Manager for PAHO/WHO's coordinated response to Ebola (2014); Served also nine years as a program coordinator and division chief at PAHO/WHO—in public health programs, legislation, and policy development. He also coordinated the Canadian response to SARS.

Sánchez Otero, Luis Francisco. Adviser Social Determinants of Health (2018-present), Panamerican Health Organization sub regional program, Central America; Regional Health Coordinator (2016-2018) at Amazon Cooperation Treaty Organization; Surveillance Coordinator Environmental Risks Factors (2006-2010) at the National Health Institute of Colombia.

Soares Damico, Flávio. Ambassador of the Federative Republic of Brazil in Paraguay (2019-present); Ambassador of the Federative Republic of Brazil in Singapore (2017-2019); Chairperson of the Committee of Import licensing at the WTO (2011); President of the Committee of sanitary and phytosanitary measures at the WTO (2010).

Tobar, Sebastián. Researcher at the Center of International Relations in Health (CRIS) Oswaldo Cruz Foundation, Brazil; National Director of International Relations, Ministry of Health (2010), Argentine Republic.

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Vermiglio Bonamigo, César Augusto. Head of the Financial Policy Division at the Ministry of External Relations of Brazil in charge of G20, IMF and the World Bank Group, Federative Republic of Brazil.

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