

A Democratic Peace Revisited

Measuring Democracy in International Relations

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Lars Wilhelmsen

1. Introduction

Democracy is good. I say this because other systems are worse.

-Jawaharlal Nehru

Over the years, philosophers and scholars alike have placed a great deal of importance on the concept of democracy. The word itself has its origin in Greek and literally means ‘rule of the people’. In its modern sense, the term came into use in the nineteenth century to describe a form of government characterized by having its representatives chosen in free competitive elections where most¹ citizens had the right to vote (Birch 1993:45–46).

Democracy is important in western cultural history and has increasingly been upheld as a virtue when defined in this modern way. Hence, public political claims are often made as to the superiority of the democratic form of government over any other, and leaders have used the concept to legitimate their actions – even violent ones – much in the same way as religion has been used throughout history. This importance begs the question: What exactly are the virtues of democracy and what are the defining characteristics of the countries embodying them? Does the concept itself have intrinsic value or does this form of rule also bring tangible advantages to its people that other forms of government cannot deliver and if so, which?

The primary goal of this thesis is not to attempt to answer such questions directly. Instead, its purpose is to assess and expand upon the analytical tools available for those who do².

One of the important possible consequences of democracy is postulated in the theory of the democratic peace – that being democratic reduces the chance of a country

¹ This, of course, up until the first quarter of the 20th century predominantly meant male citizens.

² The dataset and associated computer code described later in this thesis are available from <http://home.no.net/larsbw/thesis/>

experiencing armed conflict with other democracies. Despite the fact that some still disagree with its basic findings on either a methodological or a theoretical basis, others have asked whether the observation that democracies rarely, if ever, go to war against one another could be considered the closest thing we have to a scientific law in the social sciences³ (Levy 1989:270; Ray 1998). Nevertheless, there is no consensus among researchers on how to explain the democratic peace. A correlation between two variables – no matter how strong it may be – can not be considered a causal relationship without at least a basic understanding of, and agreement on, a coherent theory explaining the connection. With this in mind, many have called for an improvement of the theoretical foundation for the democratic peace (Gleditsch & Hegre 2004).

The concept of a democratic peace is interesting on several levels: First, it falls close to the philosophical discussion on the natural state of the human condition, whether it is competitive or collaborative and if the expected societal organization is closer to nihilism than the rule of law. Does the liberal notion that democracy is morally superior to other forms of government have any merit? If there are bona fide inherent virtues of democracy, as are often associated with freedom and liberty, then is peace in itself such a virtue?

Secondly, there are a wealth of empirical studies seeking to understand the connections between peace, prosperity, economic growth and trade⁴. Scholars with vastly differing research agendas are all tapping into the notion that democracy is not only morally superior, but also practically better than other forms of rule.

Third, it is an observation that has obvious policy implications. One of the most debated and controversial is whether the international community could and should stimulate or incite the acceleration of democratic processes in the world – and if so by

³ Although, not always arguing that the answer to such a question is ‘yes’ (Beck and Tucker 1998).

⁴ See Schneider et al. (2003) for an overview of the literature along with several recent empirical contributions. See also Gartzke (2005a) for a more condensed critical view.

what means. This issue has recently been revived by The Orange Revolution in Ukraine, in which the perseverance of nonviolent civil resistance in succeeded in establishing free and fair elections. The notion of a peaceful spread of freedom and democracy still competes with the argument that non-democracies need ‘liberating’ as exemplified by the US-led invasion of Iraq in 2003.

A further consideration regards the dynamics of conflict escalation. If there are factors that make democracies more peaceful, then how do they come into play? Will a leader when dealing with a potential military dispute act differently whether the opponent is a democracy or a non-democracy? It has been argued that democracies are both more risk-adverse *and* more committed than non-democracies, which for studies in international relations can lead to interesting insights into who chooses to instigate armed conflict and the conditions that can facilitate such a decision. Finally, knowledge about the relationship between democracy and peace could prove important to democratic regimes interested in conflict prevention and conflict intervention. Is intervention possible at all? For whom should they use the carrot, and who needs the stick? Some countries may be ‘ripe’ for democratization, and understanding which conditions are desired for a peaceful transition towards democracy leads to the question of what – if anything – can be done to manipulate them. Such knowledge is of obvious interest to policy makers⁵.

And the reason why I'm so strong on democracy is democracies don't go to war with each other. And the reason why is the people of most societies don't like war, and they understand what war means.

– *George W. Bush*

(The White House, Office of the Press Secretary 2004)

The examination of any hypothesis regarding the correlation between two variables necessitates reliable and valid data on both of them. Consequently, to assess the

⁵ Many European leaders, for one, would like an easy answer to the radically different political development in some of the former Soviet republics.

proposition that democracy is related to peace – the absence of war – there is a need for good data on both democracy and armed conflict. However, as is common in the social sciences, there is a problem in that the ‘object’ under scrutiny may not be readily observable, either because it is a socially structured phenomenon or due to the massive cost of collecting the necessary data.

This is also the case with the democratic peace. Due to the sheer enormity of the issue, any one researcher could hardly aspire to gather all the necessary information for even one of the two variables by him or herself without making the task a virtually career-long mission. Accordingly, individual scholars looking into the subject matter concerning democracy and the causes of armed conflict would most plausibly find him- or herself ‘best’ served by submitting to the use of existing datasets on both conflict and democracy that are already established and readily available.

Given that democracy in itself is much discussed both in structural and normative terms, and that the relationships between democracy and other variables holds a high interest in both political, economical and scholarly circles, one might expect an abundance of structured regime-type data to be available. Curiously, this is not the case. Rather, the focus in writings on democracy – such as Huntington (1991) on the three waves of democratization – has been predominantly focused on the causes and conditions of democracy rather than its consequences. The process of democratization, the factors that may help the transition to democratic rule, and the factors sustaining it are prominent, while quantitative approaches with a large temporal scope are scarce. The best-known contemporary journal on the subject, *Journal of Democracy*, also focuses more on qualitative issues regarding stimulating, creating, and sustaining democracy rather than the quantitative and methodological exercise of defining and measuring it.

When looking specifically at scholarly reviews of the democratic peace theory, Ray (1998) notes that there are some controversy focused on the problem of defining democracy but does not cite any sources where this criticism can be explored further. Similarly, Gates et al. (1996) briefly mention operational difficulties of the measures

deployed by researchers for defining what constitutes a democracy as well as a lack of coherent theory to explain why such a relationship would exist in the first place. More recently, other researchers (Vreeland 2003; Treier & Jackman 2003) have called for improvements and changes to the indicators used to compose a measure of democracy without necessarily agreeing on what improvements are sought. In general, there is little research that questions the choice of data in the testing of the democratic peace⁶, at least when it comes to empirical studies using time-dependent quantitative statistical methods. Recent research activity has been markedly greater when it comes to the compilation of better data (re)classifying conflict. An example of which is provided by the continuing improvements to the increasingly adopted Armed Conflict Dataset, a joint project between the Department of Peace and Conflict Studies, Uppsala University and the Centre for the Study of Civil War at the International Peace Research Institute, Oslo (PRIO) (Gleditsch et al. 2002; Harbom & Wallensteen 2005).

A possible reason for this discrepancy could be that one data project, the Polity dataset, has become predominant. Initially originated in 1974 (Gurr 1974), the Polity data have been regularly updated and maintained, currently in its fourth incarnation with the latest release containing data through 2003, and are freely available to researchers from the project website⁷ (Marshall & Jaggers 2002). The most frequently cited variable from the dataset is an additive index of several component indicators of democracy; political participation, competitiveness of executive recruitment, the openness of such recruitment, and constraints on the executive; and autocracy; basically the inverse of the democracy indicators. These indicators result in on two 0–10 scales, and combining them gives a continuous measure of ‘Polity’ on a 21-point measure ranging from –10 to 10 by subtracting the autocracy score from the democracy score.

⁶ Though, the suitability of the chosen data for a particular purpose is more frequently discussed.

⁷ <http://www.cidcm.umd.edu/inscr/polity/>. However, registration is required for access to the data.

The Polity data have been applied to the relation between democracy and peace in different ways. Some scholars (Gleditsch & Hegre 1997) have used the data to construct a dichotomous variable of democracy, while others (Jagers & Gurr 1995) have ventured to use autocracy and democracy as ‘pure’ regime-types along with a middle ground transitional category (often referred to as anocracy) for countries that do not fall into either of the two archetypes. Others again (Hegre et al. 2001) have used the complete twenty-one step Polity-scale as a continuous measure ranging from very autocratic to very democratic. For the first two categories, there seem to be a case of ‘pick a number, draw the line’ and consequently, not all applications of the data have drawn that line in the same place. As such, there is a possibility of differing results based on when the researcher chooses to decide that a country is ‘democratic enough’ to be called a democracy, a process that, on occasion admittedly, can be somewhat arbitrary (Gleditsch & Hegre 1997; Collier & Adcock 1999).

Whether the absence of widely adopted competing datasets have been due to the size of the perceived task of collecting such information, the lack of viable conceptual alternatives, or simply the desire to build on an existing body of knowledge easing comparison between different studies, is hard to answer. The Polity dataset may have reached the state where it has become a *de facto* standard – and considered at least conceptually ‘good enough’ – when thinking about democracy in the social sciences. If this is true, efforts may have gone more into adapting the Polity data for special purposes and discussing their proper application to any particular study, rather than improving or replacing them. Well-regarded is not the same as trouble free, however, and there seems to be a reasonable amount of agreement in the research community that the Polity data are far from a perfect fit for all studies and that they have been used in ways that may give dubious results that are open to misinterpretation. In addition, Polity is based on a definition and conceptualization of democracy that is but one among many. Not always do researchers examine whether their inferences conform to this definition, thereby potentially causing a disassociation between theory and data (Gleditsch & Ward 1997; Vreeland 2003; Munck & Verkuilen 2002).

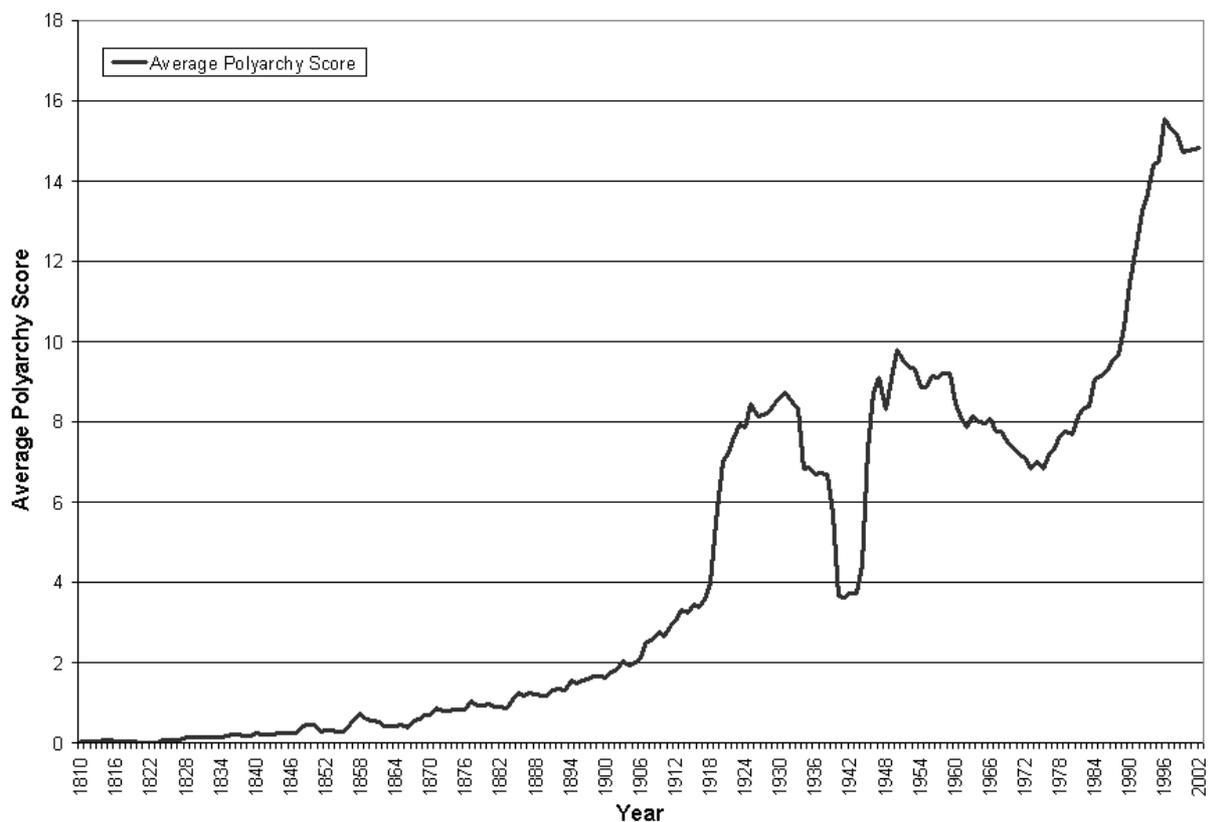
The fact that other datasets have not found widespread use does not necessarily imply that no alternative data exist. In particular, one alternative may prove a viable addition to the toolset for scholars doing quantitative analysis in international relations research: Vanhanen's Polyarchy dataset (2000; 2003) builds on his earlier research on democracy and democratization, in particular the book *Prospects of Democracy* (1997), and results in a seductively simple, yet theoretically well-founded and compelling continuous measure. Comprised of only two indicators combined into a single index of democracy, Polyarchy includes 187 countries extending back as far as 1810 and updated through 2002⁸. It has the historical and spatial range needed for many statistical applications that often exclude measures other than Polity, and has other properties that could make it a suitable alternative for such tasks.

Figure 1.1 shows the average democracy score for all countries measured by Vanhanen each year for the entire period with Huntington's (1991) three waves of democratization readily observable in the data. The details of the Polyarchy index will be covered in Section 2.2.3 and Chapter 4, so for now it is sufficient to note that the main threshold value for a country to be considered a democracy in Polyarchy is to have a value above 5.0 on the combined scale. The average democracy score first exceeded this value in 1919 and keeps rising sharply the following decade until it starts trailing off in the lead-up to World War II. After this, it declines steeply, once more dropping below the threshold with a value as low as the one observed previously in 1917. The second marked rise in average democracy occurs in the aftermath of World War II, before it again starts to decline during the first half of the Cold War. Finally, the third wave has seen the average democracy score in the world rise almost uninterrupted since 1975.

The Polyarchy data will be discussed in detail later in this thesis and form the principal alternative to Polity in the analysis.

⁸ The 2001–02 revision of the dataset (Vanhanen 2003) is unpublished at the time of writing. Digitizing and error checking the manuscript for this update has been part of the work undertaken for this thesis. See also Section 4.3.

Figure 1.1 Average Polyarchy Score 1810–2002



My basic premise will be the assumption that – as long as they are derived from a valid concept of democracy based on the same theoretical foundation – the choice of indicators should not matter when it comes to determining the relationship between democracy and other phenomena, for example when using the concept of democracy as an explanatory variable for peace.

The main research hypothesis is stated as follows:

$H_0 =$ Different measures of democracy will not significantly alter the significance of the relationship between democracy and other variables.

The subsequent parts of the thesis will be structured in this way: Chapter 2 will deal with the concept and definition of democracy in both philosophical and scholarly literature. It will also review existing research efforts and associated datasets aiming to quantify or measure democracy. Chapter 3 then proceeds to discuss some of the history behind the theory of the democratic peace, along with what role, if any,

different conceptualizations on the idea of democracy itself have had on this literature. Following up on the preceding discussion, Chapter 4 will discuss in further detail the viability of adopting a different measure of democracy for international relations research. Potential advantages and disadvantages of the Polyarchy dataset are considered and the coding decisions made in bringing out a previously unavailable version of the data (updating them through 2002) are presented. Chapter 5 will then form concrete supplementary hypotheses to the null-hypotheses based on previous findings in the democratic peace literature as well as the theoretical and practical concepts for measuring democracy covered in the previous chapters. Also outlined is a research design intended to resolve these hypotheses. The analyses is based on replication of studies that have been considered important and/or influential to the democratic peace literature while adopting different measures of democracy in place of the Polity-based ones used in the original research. Finally, Chapter 6 will present the results of these empirical tests.

As noted, this thesis does not aspire to definitely answer any questions concerning the viability of a particular model or measure relating to the themes discussed herein. It will, however, try to explore whether the availability of data on democracy have an impact on the study of the democratic peace. Through the exploration and adaptation of new data, it seeks to provide the research community with a wider selection of tools to choose from in the examination of the core findings of the democratic peace proposition. This is in the spirit of the replication movement in political science⁹ (King 1995; Gleditsch et al. 2003a,b; Gleditsch & Metelits 2003).

⁹ See also the replication section on the homepage of Gary King: <http://gking.harvard.edu/projects/repl.shtml>

2. The concept of democracy

The world crisis has given new urgency to the question of the ‘meaning’ of democracy. If democracy is indeed to be the hope of the future, we know now that we must have its lineaments clearly in mind, so that we the more surely recognize it and the more responsibly act upon it.¹⁰

– Arthur Schlesinger

The still ongoing third wave of democratization (see Figures 1.1 and 2.2) has presented scholars with a significant conceptual challenge. As an increasing number of countries move away from authoritarian regime types, the concept of democracy has been applied to many new settings where the term may not traditionally have had the same foothold as it does in the cultural and political roots of its Western Europe origins. In addition, there is the question whether democracy is a ‘fixed’ concept, or a transient societal construct. The latter will require looking for models can contribute to redefining democracy. Markoff (1999:689) argues that this ‘democracy of the future’ could be different from what we currently recognize, and that such extensions may not come from the same countries that have fashioned our current perception of the term. “We need to consider the possibility that somewhere there may be still further innovations in what democracy is, innovations that will redefine it for [future] historians [...]”.

Although the new national political regimes in Latin America, Africa, Asia, and the former communist world share important attributes of democracy, many of them have differed from the ‘traditional’ democracies in advanced industrial countries, and it is widely agreed on a popular level that some of them should at various times not be considered fully democratic. Others are often viewed as meeting minimal criteria for democracy, yet still exhibit features that researchers find problematic. (Collier & Levitsky 1996; Sen 1999)

¹⁰ Quote adapted from Reiter & Stam (2002:1).

Collier & Levitsky (1996) have argued that this presents scholars who endeavor to deal analytically with the concept of democracy with several, potentially contradictory, challenges. First, there have been efforts to increase conceptual differentiation in order to identify diverse emergent forms of democracy, a trend that could make such definitions too specific to be analytically useful. On the other hand, there is also a need avoid ‘conceptual stretching’, wherein applying the concept of democracy to cases that exhibit attributes not corresponding to our definition can weaken the substantial interpretation of the measure making it equally unsuitable.

When dealing with measurements of democracy the first of these concerns are of the least importance. Unless we define democracy as only existing in the eyes of the beholder, a definition should ideally be kept uniform in time and space for an analytical dataset. The second concern is relevant to the degree that the indicators deployed by researchers must be robust enough to classify these regime-types along the dimensions already included in the measure, lest they face the risk of either introducing measurement error or violating the consistency requirement. Thus, researchers employing such data should be clear on how potentially different definitions of democracy are related to their models and how well the measures they use adhere to these definitions.

2.1 Defining democracy

2.1.1 Democracy in history and philosophy

Ancient views on democracy

“Our constitution does not copy the laws of neighboring states; we are rather a pattern to others than imitators ourselves. Its administration favors the many instead of the few; this is why it is called a democracy. If we look to the laws, they afford equal justice to all in their private differences; [...] But all this ease in our private relations does not make us lawless as citizens. Against this fear is our chief safeguard teaching

us to obey the magistrates and the laws, particularly such as they regard the protection of the injured, whether they are actually on the statute book, or belong to that code which, although unwritten, cannot be broken without acknowledged disgrace.” (Thucydides ~400BC/2002:38–39)

This excerpt, from some of the earliest writings mentioning democracy, stem from the height of the ancient Athens in the 5th century BC. At the time, it was the dominant of the Greek city-states and during this period, it wielded its influence to encourage democracy abroad. This led to the adoption of democratic or quasi-democratic forms of government in several of Athens’ allies and dependent city-states until the outbreak of the Peloponnesian War. The war caused a divide among the Greek, between an alliance led by Athens and their adversaries led by Sparta. The Spartans prevailed in the conflict and democracy was abolished in all the Greek city-states that had adopted it. The Athenians themselves restored their democracy in less than a year, but were no longer in a position to promote it abroad. Thucydides even cites a democratic peace of sorts, in the context that democracies said to be lacking the strength for conquest and empire. When discussing a period when Athens was an outward aggressor, he also touches upon concepts that in modern political theory have been operationalized as an indicator of autocracy, closed executive recruitment. “Our city at that juncture had neither an oligarchical constitution in which all the nobles enjoyed equal rights, nor a democracy, but that which is most opposed to law and good government and nearest a tyranny – the rule of a close cabal.” (Thucydides ~400BC[2004]: X,13)

Some hundred and fifty years later, Greece saw the emergence of what is the most prominent work discussing different forms of governance in the Ancient Greek city-states: *The Politics* by Aristotle. *Politics* is the second half of a single treatise by Aristotle covering all aspects of social life – his *Ethics* was the first. In essence, both volumes deal with the same subject, one that Aristotle refers to as the ‘philosophy of human affairs’¹¹. In what could be the first survey done in comparative politics

¹¹ This can be seen as analogous to the modern terms of social- and political science.

Aristotle supposedly collected and studied the constitutions of over 150 city-states when writing *Politics*. In the text, he likens the politician or statesman to the constitution, in much the way that medical science concerns the work of the physician. He states that “a constitution is the arrangement of magistracies in a state, especially of the highest of all. The government is everywhere sovereign in the state, and the constitution is in fact the government. For example, in democracies the people are supreme [...]” (Aristotle ~330BC/1914[2004]; ~330BC/2002:69) and goes on to further define and discuss a six-part classification of different constitutions. The forms of rule were differentiated by the number of rulers: one, few, or many and whether he considered the rule ‘correct’ or ‘deviant’. Democracy is classified as the deviant form of a rule by many, while the correct form of the same is the polity. Aristotle reasons that: “Now, a tyranny is a monarchy where the good of one man only is the object of government, an oligarchy considers only the rich, and a democracy only the poor; but neither of them have a common good in view” (Aristotle ~330BC/1914[2004]:VII, 3).

*Towards a modern view of democracy*¹²

After the decline of the Greek city-states, writings and theorizing on democracy largely went dormant for millennia, at least when it comes to adding new insights to the concept. Nevertheless, many of the procedures used by modern democracies are not in themselves recent inventions. At some point, most societies have had their leaders approved, or at least accepted by the citizens. Similarly, history has several examples of early institutions providing for consultation with an assembly of the people (or their leaders) when it comes to changing and creating the laws and ordinances governing society.

¹² This section is assembled from a variety of introductory history texts and encyclopedic entries, including the Encyclopædia Britannica. Direct citations are unpractical and the information should be widely available regardless of source.

These assemblies, such as the Nordic tradition of ‘things’ from the 8th century and Italian city communes from the 11th, have existed in Europe in various times, and modern democracies are often derived or inspired by them or what remained of them. Even though the direct result of these institutions was not always ‘democracy’, modern democracies owe much of their existence to such establishments because the ideas they were founded on gradually led to the formation and steady expansion of the governance structures we today regard as democratic institutions.

The idea of a parliament (from the French *parler*, lit. to speak) started to evolve during 12th century in the monarchies of Western Europe. Its origins can be traced to the feudal court *curia regis*, or ‘council of the king’, where the monarch would make legal judgments and discuss important issues of state with the prominent nobles and members of the clergy. Historically, such councils would be summoned where and whenever the king required, and a crucial step for the evolution of the *curia regis* into parliament was the inclusion of citizens representing the wealthy towns of the period, thus establishing the third estate.

The formation of parliamentary rule in England had a particularly strong influence on modern institutions, and the British Parliament is frequently referred to as the ‘mother of parliaments’¹³. The English system has indeed provided several important milestones (at least in the European tradition), such as the length of the unbroken parliamentary tradition, the Magna Charta (1215), the idea that power holders are responsible to an electorate (1265), the Habeas Corpus Act (1679), and the British Bill of Rights (1689), declaring ‘the Rights and Liberties of the Subject’. It was also the first parliament to establish a level of independence from the monarch.

Later, after the US war of liberation had made a clear break from the dominant tradition of monarchy in western governance, the adoption of The Constitution of the United States of America in 1788, provided the world's first formal outline for a

¹³ A term attributed to the British liberal John Bright (1811-1889).

modern democracy¹⁴. In Europe, the fall of monarchy was brought about by the French revolution, and after a period of turmoil on the continent including the Napoleonic wars, many countries saw a gradual extension of the political rights we now associate with modern democracy.

Radical and Liberal thinkers argued vocally that everyone¹⁵ should have a vote. Still the prevailing view was that only those having a material stake in the economy should be able to assert any influence over political decisions. However, once it was accepted that the level of this stake could be altered, the slide down a slippery slope towards general political representation had begun. The 1832 British Reform Act along with similar movements in other countries thus started the gradual progression towards the universal suffrage now taken for granted in 20th-century democracies.

2.1.2 Democracy in political science and international relations

Of the early works tackling the subject of democracy in modern political science, Schumpeter (1942) is by far the most commonly referenced. He argued that the most prominent characteristic of modern day democracy is elections, and observed that the fundamental feature that distinguishes the political systems of the United States and Western Europe from any other political system previously in existence was that important government offices were filled by ‘competition’ for the public’s ‘approval’. That: “[...] the democratic method is that institutional arrangement for arriving at political decisions in which individuals acquire the power to decide by means of a competitive struggle for the people’s vote” (Schumpeter 1942:269).

Other works proceeded to follow Schumpeter closely, but it was also expanded upon by scholars such as Lipset, whose definition of democracy added a dimension involving the breadth of political participation. Lipset defined democracy as a

¹⁴ Although George Washington was unopposed when elected to the presidency in 1789.

¹⁵ Again, at the time this predominantly meant adult male citizens.

“political system which supplies regular constitutional opportunities for changing the governing officials, and a social mechanism which permits the largest possible part of the population to influence major decisions by choosing among contenders for political office” (Lipset 1960:45). This dimension is also included by Dahl (1971), who first introduced the concept of ‘polyarchy’. Taking issue with Schumpeter’s minimalist view, Dahl articulated two primary criticisms of the minimalist notion. First was that regimes can vary in their extent of public contestation, and second that the dimension of ‘competitive struggle’ (Dahl called this ‘public contestation’), while necessary, was not sufficient to define democracy. In his view, the missing condition was the one of ‘inclusiveness’, or ‘the right to participate’.

Huntington (1991:7) also defined democracy in a similar vein when he stated that a “twentieth-century political system [is] democratic to the extent that its most powerful collective decision makers are selected through fair, honest, and periodic elections in which candidates freely compete for votes and in which virtually all the adult population is eligible to vote”. In Huntington’s definition, there is also another requirement common in definitions of democracy, that it “also implies the existence of those civil and political freedoms to speak, publish, assemble, and organize that are necessary to political debate and the conduct of electoral campaigns”. Ray (1993:257–259; 1995) has put emphasis on ‘peaceful transition of power’. A country, other democratic indicators present notwithstanding, should not be considered a democracy until one such transition has taken place under the ‘democratic rule’. This requirement is inspired by Popper’s (1971:124) statement that “we may distinguish between two main types of government. The first type consists of governments of which we can get rid of without bloodshed – for example, by way of general elections; that is to say, the social institutions provide means by which the rulers may be dismissed by the ruled, and the social traditions ensure that these institutions will not easily be destroyed by those who are in power. The second type consists of governments which the ruled cannot get rid of except by way of a successful revolution – that is to say, in most cases, not at all”.

After the end of the Cold War, writings attempting to tackle a definition of democracy received a new boost due to the emergence of several young political entities. These new states did not always conform to the (perhaps less nuanced) representations of the different types of governance that had grown dominant in the public perception during the preceding decades. As a consequence of these endeavors, the literature on democracy and democratization has been virtually littered with a propagation of alternative interpretations of the concept, including an astonishing number of subtypes. Among them are inventions such as ‘authoritarian democracy’, ‘neopatrimonial democracy’, ‘military dominated democracy’, ‘illiberal democracy’, ‘semi-authoritarianism’, ‘authoritarian democracy’, ‘competitive or electoral authoritarianism’, and ‘protodemocracy’. An examination of this literature by Collier & Levitsky (1996) revealed over 550 such examples of regime-classifications. Hence, they were able to identify many more subtypes of governance than there are countries in the international system. This observation highlights the dual conceptual diversification/stretching problem faced by researchers attempting to capture the possibly more varied nature of such ‘new’ cases of democracy. Collier & Levitsky venture to rectify this difficulty by making an effort to classify the contributions into five broader layered categories of conceptual content. Here, democracy in its most basic form, defined in the tradition of Schumpeter and Dahl, form the lowest or ‘minimalist’ category. Thus, “conceptual stretching is to be avoided by moving up a ‘ladder of generality’, in the sense of shifting to concepts that have fewer defining attributes and, correspondingly, refer to a larger number of cases. Moving up a ladder based on this pattern of ‘inverse variation’ between the number of defining attributes and number of cases yields concepts that may be less vulnerable to conceptual stretching. Yet precisely because they are more general, such concepts have the drawback of providing less, rather than more, differentiation” (Collier & Levitsky 1996:4). The outcome of their survey and resulting classifications are presented in Table 2.1.

Table 2.1 *Definitional and conceptual contributions in research on democratization*

<i>Terms Used to Designate Alternative Definitions and Conceptions</i> ¹					
	(1)	(2)	(3)	(4)	(5)
	Minimalist/ Electoralist Definition	Procedural Minimum Definition	Expanded Procedural Minimum Definition	Prototypical Conception of Established Industrial Democracy	Maximalist Definition/ Conception
<i>Associated Meanings:</i>	These are the principal definitions employed in the literature; often presented and applied with considerable care			Not defined; plays important role in forming subtypes	Often not explicitly defined
Reasonably competitive elections, devoid of massive fraud, with broad suffrage	Yes	Yes	Yes	Yes	Often not included
Basic civil liberties: Freedom of speech, assembly, and association		Yes	Yes	Yes	Often not included
Elected governments have the effective power to govern			Yes	Yes	Often not included
Additional political, economic, and social features associated with industrial democracy				Yes	Often not included
Socioeconomic equality and/or high levels of popular participation in economic, social, and political institutions					Yes

¹Shaded cells indicate those definitions that form an ordered scale in increasing complexity.

Table adapted from Collier & Levitsky (1996).

2.2 Measuring democracy

Based on the preceding discussion it is obvious that democracy is a broad concept encompassing a wealth of possible attributes. An acceptable measure should therefore both stay within the confines of ordinary or ‘popular’ usage as well as encompass the core meaning of the term: rule by the people. In addition, to be analytically useful a definition should endeavor to include the essential aspects of whatever theoretical argument the concept is intended to test. Measurements on the fundamental concepts of interest to political science have a huge bearing on our knowledge about politics and on how we relate to it. In fact, it influences the way we perceive the world around us, and consequently the very questions we deem significant enough to study. Even more importantly, it affects the guidance that political science research offer on policy issues. “Yet it is remarkable how little attention is given to the generation of data and the methodology of measurement” (Munck & Verkuilen 2003:2).

2.2.1 The Polity dataset

Where the definitions of democracy set forward by Schumpeter and Dahl could be said to have its basis in a *procedural* characterization, the Polity IV data project (Marshall & Jaggers 2002) is coding authority characteristics of the states in the international system with a focus specifically on *institutional* authority patterns. The data, originally designed by Ted Robert Gurr (1974) in works preceding the first Polity study, contain annual information on regime and authority characteristics for most independent countries in the world with a population greater than 500,000. It currently covers the years 1800–2003.

The original unit of analysis was the ‘polity’ or political system, each of which was described in terms of six dimensions of authority patterns. When a polity was transformed by an abrupt, major change on one or more of these authority characteristics, the change was treated as the termination of the old polity and the establishment of a new one. For the Polity II study, these general categories were

disaggregated to six expert coded component variables to be able to capture greater detail, and to provide increased transparency in coding the complexities and idiosyncrasies of governance. At this time, Polity also shifted the unit of analysis from the Polity to the ‘polity year’.

Today, Polity IV provides two suites of regime authority characteristics. The first include six component variables (XRREG, XRCOMP, XROPEN, XCONST, PARREG and PARCOMP) and the second suite contains three conceptual variables corresponding to the three ‘salient norms’ of regime legitimacy, from which the categories were drawn (EXREC, EXCONST, and POLCOMP). The six component variables are employed in designing three composite scales of regime authority characteristics, for democracy, autocracy, and a combined Polity indicator. Both the democracy variable and the autocracy variable are constructed as an additive index yielding two 0–10 scales. Combining these two measures gives the combined measure of ‘Polity’ on a scale of –10 (strongly autocratic) to 10 (strongly democratic) by subtracting the autocracy score from the democracy one. Table 2.2 gives a breakdown of the component indicators included in the measures.

Democracy is conceived as three essential, interdependent elements. One is the presence of institutions and procedures through which citizens can express effective preferences about alternative policies and leaders. Second is the existence of institutionalized constraints on the exercise of power by the executive. Third is the guarantee of civil liberties to all citizens in their daily lives¹⁶ and in acts of political participation. Other aspects of plural democracy, such as the rule of law, systems of checks and balances, freedom of the press, and so on are not coded directly, as they are means to – or specific manifestations of – these general principles rather than indicators of democracy in their own right.

¹⁶ While civil liberties ‘in the daily life’ are mentioned in the definition and are alluded to in the description of some auxiliary concept variables, it is unclear how, and to what extent, this dimension of democracy is represented in the coding. Polity does explicitly not include civil liberties in the coding of the component variables.

Table 2.2 Overview of the Polity IV component variable matrix

<i>Indicator</i>	<i>Democracy modifier</i>	<i>Autocracy modifier</i>
<i>Competitiveness of Executive Recruitment (XRCOMP):</i>		
1. Selection		+2
2. Transitional	+1	
3. Election	+2	
<i>Openness of Executive Recruitment (XROPEN)¹:</i>		
1. Closed		+1
2. Dual/designation		+1
3. Dual/election	+1	
4. Election	+1	
<i>Constraints on Chief Executive (XCONST):</i>		
1. Unlimited authority		+3
2. Intermediate category		+2
3. Slight to moderate limitations		+1
4. Intermediate category	+1	
5. Substantial limitations	+2	
6. Intermediate category	+3	
7. Executive parity or subordination	+4	
<i>Competitiveness of Political Participation (PARCOMP):</i>		
1. Repressed		+2
1. Suppressed		+1
2. Factional	+1	
3. Transitional	+2	
4. Competitive	+3	
<i>Regulation of participation (PARREG):</i>		
1. Restricted		+2
2. Sectarian		+1
Maximum Totals	+10	+10

¹Democracy modifiers apply only if XRCOMP is coded 'Election' or 'Transitional', autocracy modifiers only apply if XRCOMP is coded 'Selection'. Table adapted from Marshall & Jaggers (2002:14–15).

Institutionalized Autocracy is defined operationally in terms of the presence of a distinctive set of political characteristics. In a mature form, autocracies sharply restrict or suppress competitive political participation; their chief executives are chosen in a

regularized process of selection within the political elite, and once in office they exercise power with few institutional constraints. (Marshall & Jaggers 2002:10–15)

Polity was originally designed to facilitate the study of regime persistence and change, but transitioned away from this origin in its second and third incarnations. It was later, in a project known as Polity IIIId, augmented for use in longitudinal studies of political behavior by adding the timing of polity changes. In addition to improving to the precision of the data, this again brought them closer to the definition of ‘the polity’ as the true unit of analysis and not the ‘polity year’ (McLaughlin et al. 1998). The dates collected by the Polity IIIId team have been merged with updated and revised Polity III data with the release of Polity IV, and are now recorded with the regular updating cycles for polity regime characteristics.

The Polity IV includes all independent members of the international system, as defined in the Correlates of War project (Russett et al. 1968; Correlates of War Project 2005), although with several modifications so that the data are not strictly based on an explicit list of the universe or population of units. For example, the Polity data lack information about the characteristics of various independent states for some periods (such as Switzerland 1816–47) and they include observations for Polities that are not independent states (like Norway before independence in 1905). To make it easier to use Polity IV data in analyses where the universe is the population of independent states, Gleditsch (2003) has created an alternate version of the data, P4 and P4D, which conform to the system definition in the Gleditsch & Ward list of independent states (1999)¹⁷.

One thing the Polity dataset does not provide is a clearly defined threshold value for deciding that a country is democratic enough to be called a ‘democracy’. A problem with the additive nature of the Polity scale is that there are numerous ways for a

¹⁷ These modified Polity IV data will be used in this thesis where they will facilitate less data transformation and better compatibility – i.e. a smaller loss of observations due to missing data problems – when combined with other datasets. A notice of what particular data is used will be included where appropriate.

country to arrive at the same Polity score¹⁸, in particular for the middle values. Consequently, there is no way to know exactly what separates a country with a given Polity score from another when using only the combined measure. Given the diverse and somewhat subjective nature of the indicators used in the coding, one could argue that subjectively two countries might be equal overall, yet one of them could be a democracy while other one is not. Various researchers have operationalized the Polity data into dichotomous measures dividing countries in a variety of ways, most commonly by choosing a threshold on the combined Polity scale.

2.2.2 Freedom House

Freedom in the World

The Freedom House data has its basis in the democracy index first gathered by Gastil (1978–89). Freedom House took over responsibility of updating the data in 1990, which are published annually in its report *Freedom in the World*. This publication, as the name implies, attempts to provide a measure of the degree of freedom in the countries of the world, including scores indicating the level of political rights and civil liberties in each state. In 2005, the report contains information on 192 independent countries and on 14 related and disputed territories.

Freedom House defines Freedom as “the opportunity to act spontaneously in a variety of fields outside the control of the government and other centers of potential domination” (Freedom House 2005a¹⁹). Political rights enable people to participate freely in the political process, including through the right to vote, compete for public office, and elect representatives who have a decisive impact on public policies and are accountable to the electorate. Civil liberties allow for the freedoms of expression and

¹⁸ Although Gleditsch & Ward (1997) argue that the combined Polity score is highly dependent on a single variable, executive constraints, and that in fact all the component indicators are highly correlated. In a similar vein, Treier & Jackman (2003) demonstrate how the high correlations cause the pseudo-continuous Polity scale to gravitate heavily towards the highest and lowest possible values. See also Section 4.1.6.

¹⁹ Quoted from the online edition. See: <http://freedomhouse.org/template.cfm?page=35&year=2005>

belief, associational and organizational rights, rule of law, and personal autonomy without interference from the state.

The political rights and civil liberties categories contain numerical ratings between 1 and 7 for each country or territory, with 1 representing the most free and 7 the least free. The way the Freedom House definition of political freedom is worded may initially sound a bit like Schumpeter's concept of democracy, but the way the measure is actually coded involve an overabundance of factors. The ratings process is based on expert coding derived from a varying checklist of (currently) 10 political rights questions and 15 civil liberties questions, each of them being evaluated on a 0–4 'raw' point scale. This process giving literally millions of possible combinations is then tabulated into the two dimensions of freedom based on the checklists. Individual indicators are not reported directly. In addition, the liberty scales are used to assign a categorical overall measure giving an overall value of freedom to every country and territory. Each pair of political rights and civil liberties ratings is averaged to determine an overall status of 'Free', 'Partly Free', or 'Not Free'. Those whose ratings average 1.0–2.5 are considered Free; 3.0–5.0 are Partly Free; and 5.5–7.0 are Not Free. In previous years, countries with a combined average score of 5.5 could be either Partly Free or Not Free depending on the total number of raw points that they received (Freedom House 2005a).

Freedom House has not published extensive results predating the start of their annual updates, but did release a turn of the century review (1999) attempting to provide a succinct assessment of trends in the development of the worldwide political system during the twentieth century. Applying the Freedom House methodology to 1900 and 1950 as well as referencing later works, it (somewhat inconsistently) categorizes countries by type of political system – including democracy, monarchy, empire and totalitarian regime. The numbers and trends for each regime-type are charted over the course of the period. The most noteworthy claim in the report is that there were no true democracies as late at the beginning of the twentieth century. While some

countries, such as the United States and Britain, of course did have electoral systems they were regarded as countries with ‘restricted democratic practice’.

Electoral democracy

In addition to the measures for political and civil liberties and their associated ‘freedom index’, Freedom House also publishes a list with the designation ‘electoral democracy’. This term is derived from factors concerning how the national leadership is chosen.

To qualify as an Electoral Democracy, a state must have:

- A competitive multi-party political system.
- Universal adult suffrage for all citizens. (With exceptions for restrictions that states may legitimately place on citizens as sanctions for criminal offenses.)
- Regularly contested elections conducted in conditions of ballot secrecy, reasonable ballot security, and in the absence of massive voter fraud that yields results that are unrepresentative of the public will.
- Significant public access of major political parties to the electorate through the media and through generally open political campaigning. (Freedom House 2005a)

The electoral democracy designation reflects a judgment about the last major national election(s). In the case of regimes where there are both significant presidential and parliamentary elections, ‘concurrent powers’ to use Vanhanen’s (2003:11) term, all elections for the key offices must have been free and fair on the basis of the above criteria. In a parliamentary dominant system, the last nationwide elections for the national legislature must have been free and fair. A country will not qualify as an electoral democracy if it reflects the continuous and overwhelming dominance of a single party or movement over a period of numerous national elections. Such states are considered ‘dominant party states’. Nor can a country be an electoral democracy if a significant authority for national decisions resides in the hands of an unelected

power such as a monarch or a foreign or international authority. A country is removed from the ranks of electoral democracies if its last national election has failed to meet the criteria listed above or if changes in law since the last election significantly erode the public's possibility for electoral choice (Freedom House 2005a).

Figure 2.1 Freedom House Electoral Democracies 2005²⁰



Map adopted from Freedom House (2005a).

Problems

The Freedom House data do not lend themselves easily to comparisons with other datasets. First, the indicator checklists, aggregation rules, and classification criteria are poorly documented and have varied over time, thus making the suitability of comparisons questionable. Second, although when dealing with the ratings in tabulated form it might be easy to make this mistaken assumption, the data does not reflect the state of the countries the year that is included in the report title²¹. For

²⁰ This figure is licensed under the GFDL. See <http://www.gnu.org/copyleft/>

²¹ Many studies referencing the Freedom House data use 1973 as the starting point, while in fact the observations actually start in 1972, thereby systematically using the data from the year before the intended time of observation.

example, *Freedom in the World 2005* (Freedom House 2005a) could be more accurately titled ‘Freedom in the World 1 December. 2003–30 November 2004’. The period under review does not necessarily follow the calendar year, and this fact has previously been poorly documented. Not all reports cover the same period as far as the start and end dates are concerned, and neither does Freedom House attempt to accurately time changes to the civil and political liberties indicators (polity changes). Lagging all observations by one year would improve comparability matters somewhat, but given the significant uncertainties outlined, this might not be sufficient. Manual transformation would be needed to ensure that country year data coincide with the last day of the calendar year, as is the most common choice for country-year observations. Hence, there are considerable difficulties that need to be overcome if one is to apply the Freedom House data to statistical analysis. The way many have currently adopted the data for such purposes introduces systematic and unsystematic errors that could be detrimental to the reliability of the results. Finally, the limited time-period covered by Freedom House compared to Polity and Polyarchy will exclude it from use in projects seeking to analyze data before 1972. This makes it less useful for tracking trends over a longer period, perhaps especially when dealing with a concept such as conflict where the number of observations is limited.

Another criticism leveled against Freedom House is one of bias or lack of neutrality. Freedom House is admittedly an advocacy organization, and it has been argued that their ratings are limited in their usefulness because they are highly subjective (Bollen & Paxton 2000; Munck & Verkuilen 2002; Vreeland 2003) and that they may hold an inherit predisposition towards a traditional US libertarian view of democracy²².

²² Recently a controversy arose regarding a report on various official and religious Saudi-Arabian publications present in U.S mosque libraries said to disseminate ‘hate propaganda’ (Freedom House 2005b). This interpretation was seen as problematic in the context of the US’ ongoing War on Terror, and may have been aggravated by the fact that the Freedom House chairman at the time, James Woolsey, was a former director of the CIA.

2.2.3 The Polyarchy²³ dataset

The first chapter of this thesis made the somewhat offhand remark that no single researcher could aspire to gather complete data on a concept such as democracy without making it a virtually career long mission. This was intentional, because, in a way, this is exactly what Vanhanen has done with his research on worldwide democracy and democratization. These studies later resulted in the conception of the Polyarchy dataset, first published in *Journal of Peace Research* (Vanhanen 2000).

Vanhanen claims to have deliberately not attempted to redefine democracy because “I think that traditional definitions express the idea sufficiently well”. He argues that the same criteria of democracy should apply to all countries because it is a reasonable assumption that human nature is similar across all human populations. Democracy measured by the Polyarchy dataset is thus defined as:

[...] a political system in which ideologically and socially different groups are legally entitled to compete for political power and in which institutional power holders are elected by the people and are responsible to the people. (Vanhanen 2003:2)

Based on this definition, Vanhanen built the Polyarchy Index of democracy with the belief that most existing measures used by researchers are too complex; have too many indicators; or depend too much on subjective and poorly documented evaluations. Adoption of a copious concept of democracy makes gathering empirical data from all countries of the world somewhere between very difficult and impossible, and makes it much less likely that other researchers will be able to agree on the relative importance of the various indicators used.

Polyarchy was originally designed to facilitate Vanhanen’s own studies of regime change and the process of democratization (see Vanhanen 1997). At first limited to an

²³ The dataset is not explicitly named in the publication describing its first public release (2000). The title was agreed upon between Vanhanen and *JPR* when the dataset was first made public in electronic form, and Vanhanen uses the name in later auxiliary works (2003).

evaluation of 114 countries during the 1960s, it has been gradually expanded to the point where it today includes comprehensive data on 189 countries ranging from 1810 to 2002 covering a total of 14,157 country years.

Indicators of democracy

Asserting that competition and participation “represent the most crucial aspects of democracy and that, therefore, their combination may constitute the most realistic measure of democratization”, Vanhanen (2003:8) developed his indicators in parallel with the contemporary Dahl’s (1971) two theoretical dimensions of democracy. Central for both was the elements of public contestation (competition) and the right to participate (participation). An operationalization of these theoretical dimensions was first described in Vanhanen (1971) using two simple quantitative indicators primarily based on electoral data. Through his later works, this effort evolved into the current dataset with the eventual adoption of Dahl’s now popularized term: Polyarchy.

Inter-party competition in elections is widely considered to represent the most significant form of legal competition and power sharing, but if only one party is entitled to take part in elections, power is restricted to that party. Concentration of power in the hands of one group represents the opposite of democracy, because power sharing is a crucial characteristic of democracy. The same apply if power holders are not elected at all or if organized groups are excluded from taking part in elections. The smaller parties’ share of the votes cast in parliamentary and/or presidential elections is used to indicate the degree of competition. It is calculated by subtracting the percentage of votes won by the largest party from 100. If data on the distribution of votes are not available, the value of this variable is calculated based on the distribution of seats in parliament. The distribution of seats is also used in cases where it seems to indicate power relations more realistically than the distribution of votes. The percentage of the population that actually voted in the same elections is used to measure the degree of participation. This percentage is calculated from the total population, not from the adult or enfranchised population. The total population is used as the basis of this calculation because more statistical data are available on total

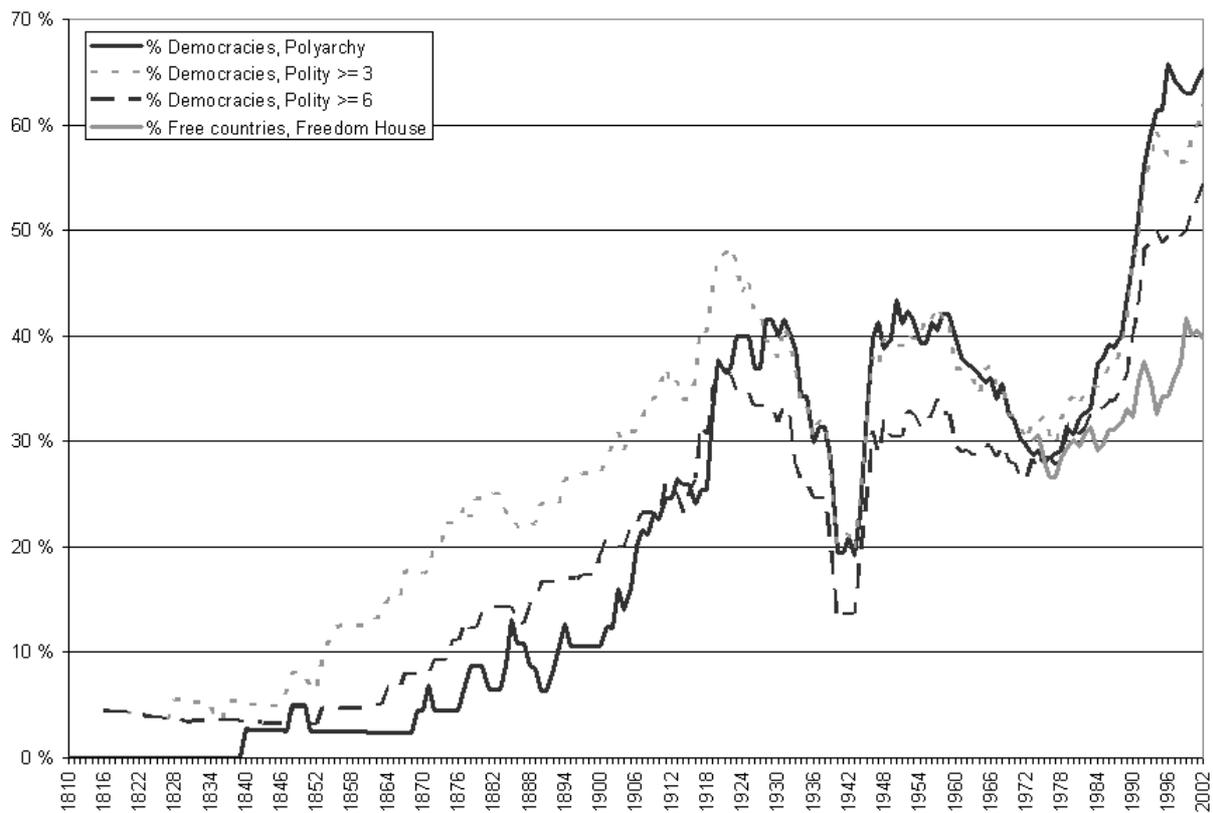
populations than on the age structures of the electorate. Competition, when measured in this fashion, does not take into account the variation in the degree of competition caused by differences in electoral systems. The indicator is biased to produce somewhat higher values for countries using proportional electoral systems compared to those using majority systems. When calculating the index it is therefore set an upper limit for the impact of competition at 70% (Vanhanen 2003:7–8).

A combined index of democracy

The two basic indicators of democratization can be used separately to measure the level of democracy, but because they are assumed to indicate two separate dimensions of democratization, a combination of them should be a more realistic indicator than either one of them alone. Vanhanen expresses some uncertainty whether one of the dimensions are more important than the other one, and if so, how much more important. Consequently, he elected to weigh them equally in the Index of Democratization (ID). The indicators are combined based on the assumption that both dimensions are *necessary* for democracy and that neither of them is *sufficient*. Therefore, the two individual variables – Competition and Participation – are combined by multiplying them and dividing the outcome by 100.

This decision signifies that a low value for either one of the two variables is enough to keep the total value of the index low as well. A high level of participation cannot compensate for a lack of competition or vice versa. Multiplication of the two percentages also correct one fault in the Participation variable, namely, that participation in itself does not make a distinction between significant and ‘sham’ ceremonial elections. There have been and still are countries where the level of electoral participation is high but the level of democracy low, because the elections are not free and competitive. Multiplication of the two percentages cancels out the misleading information provided by the participation indicator in such cases, causing the ID to stay low. The same correction takes place in opposite cases, when the level of competition is high but the degree of electoral participation low, suggesting an elite-dominated society.

Figure 2.2 Share of democracies in the world 1816–2002¹



¹Data on Polity scores adapted from Gleditsch (2003), data on free countries from Freedom House (2005), and Polyarchy scores from the dataset described in Vanhanen (2003) prepared for this thesis.

Threshold values of democracy

Empirical data on the two basic variables and the Index of Democratization make it possible to compare countries (and to rank them) according to their level of democracy. However, because this ranking range from very high values to zero, it does not directly indicate at which point a political system ceases to be democratic and begins to be an autocracy. It is reasonable to assume that countries with very high index values are democracies and countries with very low index values are non-democracies, but the problem lies in deciding exactly what criteria should be used to distinguish them from each other. Vanhanen admits that there is no natural or clear index level for making this differentiation using his indicators and that the threshold level of democracy has to be selected more or less arbitrarily. However, once the selection has been made, the same criteria can be applied to all countries uniformly

without introducing subjectivity to the coding of the individual cases (Vanhanen 2003 18–19). The suggested threshold is set as 5.0 points on the Polyarchy scale.

In addition, Vanhanen sets a limit for each of the individual indicators. Considering competition, if the share of the smaller parties is low, then the dominance of the largest party is so overpowering that it is doubtful whether such a country could be regarded as a democracy. The threshold value for competition is set based on the argument that “any group or leader that regularly receives 70% or more of the votes indicates a weak opposition and the probable existence of undemocratic barriers in the way of its further success” (Vanhanen 2003:19). Therefore, a reasonable minimum threshold for a country to be considered a democracy is set at 30% for competition.

When it comes to the participation indicator, there have been some ambiguities as to what value should be chosen. In his earlier works, Vanhanen employed a value of 10% as the minimum threshold of democracy because, as he states, “historically it was difficult for many countries to reach the 10% level of electoral participation” (Vanhanen 2003:34). This threshold was raised to 15% in later studies covering the period 1980–93. Furthermore, Vanhanen argues that now that nearly all countries have adopted universal suffrage, it seems reasonable to raise this threshold to 20%, in part also because the average life expectancy in the world has more than doubled since the 19th century. It is unclear, however, when this adjustment should take effect.

Due to this lack of operationalizational guidelines along with the fact that such an adjustment would add another layer of subjectivity to the coding and invalidate the Polyarchy index as universally applicable²⁴, the data described in this thesis have – unless otherwise noted – retained the threshold value of 10 for participation for all countries in all years. This is in line with what is noted in the original publication

²⁴ As Vanhanen himself stresses the aspect of universality in space (2003:2), we should also seek to employ a criterion of universality in time.

describing the complete dataset (Vanhanen 2000:257) as well as the current publicly available version of the data²⁵.

Figure 2.2 above show the development of democracy in the international system – as the share of independent countries that fulfill the criteria – for four different dichotomous measures. The three main datasets discussed in this chapter including two different threshold values for Polity. Note the considerable difference in the asserted level of democracy between the lower Polity threshold and Polyarchy for the period leading up to 1928 and the lessened difference by increasing the Polity threshold. The systematic divergence between the measures are in large due to countries, that had institutionalized electoral systems but not yet meeting the minimum threshold for participation until the gradual spread of women suffrage in the first quarter of the 20th century. Later discrepancies, with the Polyarchy measure ‘overtaking’ the Polity based ones, are likely due to ‘reverse order democratization’ (Mansfield & Snyder 2005) where the presence – or perhaps pretense – of contested elections have preceded the institutional factors captured by the Polity index.

2.2.4 Other contributions

In addition to the three data efforts described above, over the years there have been several attempts made – differing wildly in methodology and scope – at classifying and quantifying the characteristics of political regimes and democratic development. Among the early contributions were Lipset (1959), who classified regimes as democracies or dictatorships based on his own judgment. Lipset thought that the criteria for democracy might differ in different political areas, thus making analytical use of data resulting from such a classification problematic due to the lack of both operationalizational transparency and universality. Most researchers’ early classifications of democracy were based on similar dichotomous classifications with the notable exception of Cutright (1963). His index of political development covering

²⁵ See http://www.prio.no/page/Project_detail/Replication_Datasets/9649/42472.html

77 countries over a period of 21 years was probably the earliest (semi)continuous measure constructed. Improving current technique of measuring democracy, each country was given from zero to 63 points based on the characteristics of its legislative and executive branches of government. Later, Chan (1984) developed a dichotomous ‘Comparative Assessment of Freedom’ indicator. In this dataset, each state was classified based on Chan’s estimation of several political freedoms-derived institutional and electoral indicators. Another attribute of this dataset is that Chan introduced a more demanding set of criteria for ‘freedom’ after 1946, although he explicitly avoided arguing that the criteria of democracy should differ in time. Instead, he stated that the choice was driven primarily by data availability. For that reason he also did not name his categories ‘free’ and ‘unfree’, instead settling on ‘comparatively free’ and ‘comparatively unfree’. Chan’s dataset included data for the Correlates of War (COW) state system (Russett et al. 1968) from the date of independence up to 1980, and later found use in other much-cited studies such as Bremer (1992).

Another noteworthy dataset was created by Przeworski et al. (2000)²⁶ in an effort to study whether economic development is beneficial to the development of democracy and whether democracy itself fosters or hinder material welfare. This dataset contains several variables classifying political regimes, including a dichotomous variable distinguishing between democracies and dictatorships. Their variable follows Schumpeter’s basic principle, that democracy is a political system in which key government offices are filled through contested elections. Their definition has two parts: ‘key government office’, (i.e. the executive and the legislature) and ‘contested’, meaning that there are more than one party (i.e. there is a probability of alternation in power). This data include a system of up to of 135 countries measured from 1950–90. In addition Golder (2005) have created a dataset further building on the work in Przeworski et al. that covers the electoral institutions used in all of the democratic legislative and presidential elections in 199 countries between 1946 (or independence)

²⁶ This dataset has later been expanded upon by Cheibub & Gandhi (2004).

and 2000. The dataset aims to provide a consistent classification and systematic description while covering a wide range of institutional features, including regime type and information on the effective number of electoral and legislative parties.

Other efforts have sought to augment or transform existing measures without undertaking the project of reconceptualizing and collecting new data for all the indicators. Among these are Moon et al. (2005) who argue that the measures of democracy commonly used in empirical research suffer a major limitation in that they, and primarily the Polity data, are missing the dimension of public participation. As a result, they claim, statistical studies may misstate the effect of democracy on important social outcomes or misinterpret the aspect of democracy that is responsible for said effect. They propose and test two different variants of a new indicator dubbed the 'Participation Enhanced Polity Score'. This measure aims to combine institutional factors with citizen participation by using Polyarchy and other data as secondary data sources to augment Polity. Similarly Gates et al. (2005) use a three-tier measure with the indicators 'Executive recruitment', 'Participation' and 'Executive constraints'. Here, the first two are institutional in nature and coded on the basis of the Polity dataset, whereas the constraints dimension once more is based on the Polyarchy data.

Other data than Polity and Polyarchy have been reexamined as well. Vreeland has sought to create: 'A Continuous Schumpeterian Conception of Democracy', and define democracy as: "[...] the probability that key government offices are filled through contested elections" (2003:1). He operationalize this probability using the aforementioned data from Przeworski et al. and attempt to demonstrate that his measure might be applicable in identifying a 'middle level of democracy' given the assumption that democracy is indeed a continuous variable (Vreeland 2003:17).

2.2.5 Summary

In an overview of existing data sets on governance, Munck & Verkuilen (2002) are critical of the majority of data efforts that are of widespread use in political science. They caution against the fallacies of both 'maximalist' and 'minimalist' definitions of

democracy, which, in their view, typically include either too many or too few theoretically significant characteristics. In another work, the same authors also claim that the “standard practice in most quantitative research is to draw upon readily available data sets that have been used to the point that little new insight can be drawn from them and that [they], to begin with, are fairly poor measures of the concepts that are used in theorizing.” They somewhat sarcastically initiate their argument by proclaiming the mainstream view in the social sciences to be that measurement, regrettably, is a necessary task that should best be quickly negotiated or, if at all possible, skipped altogether. Hence, researchers’ energies could be focused on the ‘much more important task of testing ones causal hypotheses’ (Munck & Verkuilen 2003:3).

One would have expected core methodological issues such as universality, transparency, and objectivity to well covered on such a topical issue, but this appears not to be the case, at least not among the quantitative scholarly contributions. Here, quests for better data and better concepts do not always pull in the same direction (but they may both be equally neglected). On the one hand, conceptual contributions tend to explore, expand and subdivide the idea of democracy into several ‘new’ categories, thus muddling the water for those seeking a universally applicable measure. On the other hand, if a measure of democracy does not measure what is commonly understood by the term – if the term is indeed commonly understood at all – then either the measure itself is flawed or the terminology used to describe it is. One does not design using millimeter precision when the only measure available is an unmarked yardstick. In addition, different results can emerge depending on which cut-point is employed in creating a dichotomous measure of polyarchy or if employing a more graduated measure. Restricting the analysis to any single dichotomous cut-point can thus obscure potential findings (Collier & Adcock 1999).

Arguably, some key characteristics are desirable in a measure of democracy to be useful for quantitative research with a broad temporal and spatial scope. At the very least, it should include a definition of democracy regarded as the ‘lowest common

denominator’ in the writings attempting to tackle the subject – namely the presence of contested elections with broad suffrage. This is following the procedural dimensions of Schumpeter and Dahl, and similar in scope to the category Collier & Levitsky (1996:8) term ‘Electoralism’ as well as the Freedom House definition of ‘Electoral Democracy’. Moreover, it should also allow for some notion on how the included dimensions can be operationalized to a degree where they can be used as a practical starting point from a data-gathering perspective. Finally, one should be able to apply such a measure consistently in time and space²⁷ so that the results can be aggregated into a dataset giving researchers the opportunity to gauge the level of democracy in a(ny) given country at a particular moment in time.

While these guidelines may to some extent exclude the more abstract notions of democracy, such as the civil liberties dimension that is prominent in many writings on the subject, this is probably an advantage on both a conceptual and practical level as long as this ‘inadequacy’ is clearly recognized. Some assessments (Hadenius & Teorell 2005:17, 19–21) have dismissed Polyarchy for lack of ‘construct validity’ and argued in favor of compound measures such as Freedom House because they encompass more components that “would appear to be relevant from a conceptual standpoint”. However, it is exactly these features that make such measures less suitable for testing specific causal hypotheses. A more limited, yet conceptually appropriate, measure can potentially be augmented with supplementary data for particular analytical purposes and makes substantial interpretations of results more reliable. This should be preferable to, for example as Munck & Verkuilen (2002:28) describe the Freedom House data²⁸: an index “which [demonstrates] problems in all areas of conceptualization, measurement, and aggregation.”

²⁷ Although some theories may rely on differences in the substantive interpretation of democracy over time or in space, decisions of this nature are best left to each particular study. Data-gathering efforts designed to produce a measure of democracy should – if at all possible – avoid making such distinctions. An indicator that *can* be applied equally in time and space is more flexible in this regard than an indicator that cannot. A choice of applying different criteria can then be performed on a per-application basis.

²⁸ To be fair, they have more or less equally strong objections to Polyarchy.

3. The democratic peace

Ultimately, the best strategy to ensure our security and to build a durable peace is to support the advance of democracy elsewhere. Democracies don't attack each other.

– Bill Clinton (1994:132)

3.1 Level of analysis and type of conflict

What do we mean by a democratic peace? The obvious implication is that there at some level exists a positive causal relationship between the two variables, i.e. that democracy in some substantial way is a cause of peace. It is also a question of what kind of relationship this would be. Under which conditions are this effect active, and how does it function? Seeking to explain how democracy can influence the presence or absence of war, four distinct levels of analysis are available:

1. Subnational: Do democracies more frequently keep peace within their borders?
2. Monadic: Are democracies more peaceful than other regimes in general?
3. Dyadic: Do democracies more frequently maintain peace among themselves?
4. System: Is a world with a high proportion of democracies more peaceful?

Research has pointed to several empirical patterns involving the behavior of democratic states with respect to war and peace, with no evidence having been as strong as the near nonexistence of war between democracies. This thesis will therefore focus on the most prominent – and consequently most focused upon and argued claim of the democratic peace proposition: That democracies are significantly less likely than other pairs of states to fight *each other*. The later empirical analysis and the following discussion will relate to inferences drawn from this principal focus, although any methodological points relating to the definition and measurement of democracy itself should also in a broader context be applicable to, for example, the relationship between democracy and conflict on the subnational level – civil war.

3.2 Democratic peace in history

Kant stated that the state of ‘peace among men’ in a society is not the natural state, which is rather the one of war (1795/2002:436). This sentiment, that the natural state of affairs in a society is competitive and not cooperative, has indeed been acknowledged by political thinkers and philosophers both before and after Kant. In a more contemporary analytical context, however, this view may be counterproductive since war, at least war between states, is a relatively rare occurrence. Therefore, the study of the democratic peace may in effect be best served not as the study of peace at all, because peace itself can be seen (rather uninterestingly) as long periods of time where nothing in particular happen. Leaving aside the methodological consequences of this point²⁹, the obvious implication is that a study of a democratic peace is in fact also the study of war. In modern political science more specifically, the policies related to the causes of war and the policies counteracting them³⁰. Carl von Clausewitz perhaps best exemplifies this observation with his statement in the introduction to *On War* that: “War is only a continuation of state policy by other means” (1832/1874[1999]: I, 24). Hence, if war is an instrument suited to advance political interests then war is also inherently political. This in turn implies that to understand peace, we must also be able to recognize the reasons why leaders sometimes choose military force rather than the other options available to them when determining how to best accomplish their policy goals.

²⁹ Beck, King & Zeng (2000) argue that common statistical methods employed in the field are less than desirable because they ignore that “the effects of most explanatory variables are undetectably small for the vast majority of dyads, but they are large, stable, and replicable when the ex ante probability of conflict is large.”

³⁰ Measurement of democracy and theorizing on the democratic peace is not, however, exclusively the domain of social scientists. Historian Spencer R. Weart concludes that his historical review leads to the classification of only one war between well-established oligarchic republics and no wars between well established democratic republics. The argument is based on the stipulation that “the suppression of a crucial domestic ‘enemy’ political group as a body distinguishes oligarchies from democracies” (Weart 1998:121). This is operationalized as states: in which political decisions are made in competitive processes by citizens having equal rights, being republics. Where these groups of people consist of at least two-thirds of the male population the state is also democratic, otherwise the republic is oligarchic. A republic is well-established if it has been in existence for three years, and a war is organized violence between political units across boundaries that leads to at least 200 deaths. (Weart 1998; Ray 2000)

Despite the fact that research on the democratic peace is relatively young, the study of war is literally ancient. Ever since Sun Tzu (~514BC/1910[2005]) wrote his treatise on *The Art of War* during the 6th century BC and Thucydides (~400BC/2002) related his account of the Peloponnesian War a century later, researchers from a variety of scholarly disciplines have studied the phenomena of war, often (re)discovering connections that was first pointed out several millennia earlier. Goals and motivations for such efforts has been varied, but whatever their objective, several of the insights into the mechanisms of war provided throughout history may be as valid in the world of today as they were in China and the Greek city states as much as 2,500 years ago³¹. This is equally true whether it was to understand war in order to guide policy through the virtues of law, as with Kant and Montesquieu (1748/2002); to know how to fight them and win them, prominent with Sun Tzu and von Clausewitz; or the idea that knowledge of war could help to mitigate its consequences and prevent its occurrence.

More recently, the democratic peace in its modern incarnation originated with a short article by Babst (1964) in a journal called *Wisconsin Sociologist*, somewhat outside mainstream international relations research, and his findings were restated eight years later in an article in *Industrial Research* (Babst 1972). The peripheral nature of these journals might have caused his (1972:55) statement that: “no wars have been fought between independent nations with elective governments between 1789 and 1941” to pass the rest of the research community by, if not for being cited by scholars such as Rummel (1983) and Small & Singer (1976). The latter of which attempted to discredit Babst’s finding, although they tested his claim mainly on the monadic level. Babst made his assertion about the peaceful nature of relationships between democracies utilizing data from Wright (1942:841), who had previously concluded that: “Statistics can hardly be invoked to show that democracies have been less often involved in war than autocracies [...] probably there are tendencies toward both peace and war in

³¹ See Russett & Antholis (1993) who discuss Thucydides account of the Peloponnesian War in the context of the modern idea of a democratic peace, finding support in the narrative for several of the rationales suggested as explanations for the, by any measure, relative absence of armed conflicts between our contemporary democracies.

democracies as there are in autocracies [... that] render the probabilities of war for states under either form of government about equal". Ray (1998) points out the significance of this data source because its use made the distinction between the monadic and the dyadic relationship clearer. This separation was important, because the monadic notion that democracy caused peace in general had been around for a long time and was, as the quote from Wright demonstrates, largely debunked by analysts (Chan 1997; Ray 1998 29–30).

3.3 Explaining the democratic peace

In the following decades, an ever-increasing number of researchers have sought theoretical explanations to the observation that democracies rarely (if ever) fight each other. However, the emergent consensus over this strong empirical regularity is not accompanied by much agreement concerning the best theory to explain it. Several competing as well as complementing hypothesis have been put forward, many of them with a focus on the different aspects of democratic rule as explanatory factors. Others again have sought alternative rationalizations for the observation altogether, believing the democracy-war connection to be spurious.

Normative explanations

Kant held the notion that people have a duty to work for peaceful international relations, and he strongly emphasized the absolute character of this moral imperative. This normative element notwithstanding, he was not an idealist who believed in a peaceful human nature. Quite the contrary, Kant thought that society should evolve to exploit intrinsic processes of self-interest that would compel both individuals and states to act in ways that would eventually culminate in the establishment of the 'perpetual peace'. Democracies³² were in the Kantian view generally thought to be

³² To be accurate: The republic, defined by the separation of the executive and legislative power: Kant believed that democracy in its truest sense was a despotic rule because the people in a democracy make decisions *by all*, and yet these same decisions may be *against some* making it inconsistent in nature and going against the idea of freedom. He argued that

characterized by a rule of law, and the populace would therefore be predisposed towards resolving disputes through settlement rather than force. He argued that democratic societies are inherently averse to war, not because their citizens are inherently more moral, but because establishing ‘the republic’ would take advantage of the of innate processes within human nature. Internal dissent would cause the public to freely submit to coercive laws protecting them from each other, while external dissent would give them cause to protect themselves from the outwards ambitions of the state. The republican constitution is therefore regarded as natural and ‘pure’ by Kant, while the government and its subjects are not (1795/2002:437–444).

Similarly, Montesquieu argued that the establishment of society implied an inherent element of conflict that could only be curbed by the ‘virtuous’ rule of law. This was to be considered a political right, both between men (civil rights), between the citizens and the state (political rights), and between states (the right of nations). Not imparting an explicit ideal form of government, he separated between the ‘rule of one’ and the ‘rule of many’: dismissing the notion that the rule of one was the most ‘natural’. His view (1748/2002:401) was rather conversely that: “It is better to say that the government in most conformity with nature is the one whose particular arrangement best relates to the disposition of the people for whom it is established.” Civil and political laws were seen as essentially the same phenomena, and his guidance was to follow the natural order – the ‘spirit of the laws’. Montesquieu also provided a rationale for the observation that democracies are about as war-prone as other states when dealing with non-democracies. He viewed offensive force primarily as a measure that should be regulated by international law, ruling out any natural right of conquest. Offensive capabilities should primarily be used as a deterrent founded upon the natural right of defense. He did however provide an exception that could give cause for a ‘just’ offensive war. Because, “[...] the right of natural defense sometimes carries with it the necessity to attack, when one people sees that a longer peace would

put another people in a position to destroy it, and that an attack at this moment is the only way to prevent such destruction” (1748/2002:402). Such a sentiment can be found again in modern theories linking the liberal and political ideals of freedom to the existence of peace between democracies. This theory suggests that a democracy would not consider another democracy a threat because of an imperative not to pursue violence except for self-defense. This observation, augmented by recent conflicts in Yugoslavia and Iraq and the political statements made regarding their motivation, has led to some seeing a ‘democratic crusade’ predilection. Such a conjecture has partially been supported in a finding by Raknerud & Hegre (1997) who demonstrate that the empirical observations of democracies being more peaceful towards each other, and yet as war-prone as autocracies, can be conciliated by a tendency for democracies to support each other in war.

Also on the normative persuasion, Rummel (1995) argues that a better theoretical interpretation of a regime’s ‘warlikeness’ not the incidence, but the ‘severity’ of war and how a country acts in war. By this definition, the degree to which a regime is ‘libertarian’ (i.e. democratic) is inversely correlated with the severity of its wars and its general propensity for violence. Once a libertarian state is involved in an armed conflict, domestic forces will usually coalesce against increased violence and pressure for a peaceful settlement of some sort. “The underlying theoretical variable was the freedom of people to govern their own lives as reflected in their civil liberties and political rights. In democracies people ordinarily have the most freedom, under totalitarian regimes the least³³”. The ‘free peoples’ will, if possible, abstain from violence.

The normative explanations cause some problems for quantitative research in that shared norms and ideals are not only hard to measure, they could also be fleeting and transient. Maoz (1997) holds that the standards of democracy has changed, and will continue to change over time. Thus, perceptions about what constitutes an ideal, or

³³ Quoted from online version at Rummel’s website: <http://www.hawaii.edu/powerkills/DP95.HTM>

even acceptable, level of political and civil freedoms are hardly the same today as it was in the nineteenth century. This in turn raises the question of what standards a measure of 'liberal' democracy should adopt, and whether it should be adopted equally in time and space. This problem can be illustrated by Woodrow Wilson's proclamation of the US entrance into World War I as a 'crusade to make the world safe for democracy'. Conversely, both Wilson and prominent social scientists in the US had in fact perceived Imperial Germany/Prussia as one of the select most progressive polities in the world, held in higher regard than both England and France right up to the time of war. Germany had changed much less than the explicit preferences and perceptions of its observers. (Layne 1994; Gates et al. 1996)

A possible bridge between this normative perspective and the structural explanations is the view that it is not shared values itself that make democracies peaceful towards another, but rather that it is the perception of the other state in a time of crisis that is the deciding factor. Both states must believe that the other one is a democracy for the pacifying effect to take place, indicating that it is the democratic norms at the actual time of the observation that is relevant and not the norms contemporary to the researcher. Such views, that institutional qualities do not 'speak for themselves', indicate a constructivist outlook on the democratic peace. Constructivist theories often also imply that actual capabilities are of lessened importance relative to social interaction and perception, and even that struggles over the meaning of democracy can provoke conflict: The democratic peace is what states make of it (Peceny 1997; Widmaier 2005).

Institutional explanations

An extension of this argument leads to another possible explanation for the democratic peace, namely that democracies have a greater degree of transparency in their preferences and decision-making processes than non-democracies. This signifies a better signaling capacity when it comes to clearly communicating intent. Accordingly, a pair of democracies has a reduced risk of misinterpreting the potential adversary's intentions in a crisis situation, thus reducing the likelihood of

misconstrued precautionary aggression. In addition, democracies are said to make decisions at a slower pace than non-democracies. The choice of whether or not to engage in an armed conflict is often not the purview of a single executive power, but subject to layers of institutional delay where the regime must gather legitimate domestic support for their policies. Such delays then increase the opportunity for peaceful solutions to be reached in the interim (Maoz & Russett 1993). An additional institutional factor is that democracies to a greater degree than non-democracies tend to be involved in transnational structures. The individual autonomy *within* democratic states causes linkages to form between groups *across* state borders. Nongovernmental organizations, intergovernmental cooperation, and transnational commercial interests can help resolve international incidents before they become critical. Such groupings often have a vested interest in peaceful foreign relations to protect the networks in which they are part, and for that reason, they may work to inhibit their own domestic governments from acting violently towards each other (Russett & Antholis 1992).

Fearon (1994) has pointed to a supplementary explanation that is also based on constraints being placed in the options available to democratic leaders due to domestic pressure. In his view these constraints are not strictly structural (as in institutionalized checks and balances on the executive power), but rather that an elected leader to a greater degree than an autocratic one face what he terms 'audience costs'. Reversing the realist expectation that such restrictions can diminish a democratic state's ability to play a 'realpolitik' foreign policy game, Fearon states that if other states know that a democracy is constrained in this way, this will allow them signal resolve with less effort than the autocratic leader. The logic is that the point of escalation where the audience costs will jeopardize the democratic leader's position will be lower than in an autocracy. Therefore, a position can be committed to if it is conveyed that domestic pressures would make further concessions unacceptable. Unlike a normative explanation, where clarity in signaling games is derived from 'trust' in shared beliefs and ideals, the ability to clearly and believably signal room to maneuver is here defined by the constraints imposed by domestic political pressure.

Following the notion of audience costs, Bueno de Mesquita et al. (1999) have formulated an alternative institutional explanation for the democratic peace: According to the theory, leaders take into account the chances of being punished if they lose, and the fear of punishment (i.e. the loss of office³⁴) affects their behavior in crisis situations. Consequently, if a war does occur between democracies it would be in cases where the democratic leaders have discounted the chances of such consequences becoming a reality. If we assume that democratic leaders who lose a war are more likely to be removed from office than autocratic ones (Bueno de Mesquita & Siverson 1995; Goemans 2000) it can be deduced that democratic leaders, if they get involved in conflict, will elect to initiate only wars they think they are likely to win. Therefore democracies would also have a tendency to win the wars they fight (Reiter & Stam 2002).

These inferences are based on the definition of two fundamental groups and two types of available resources: The groups in the game are the ‘winning coalition’ and the ‘selectorate’, which are both drawn from the general population of a state. The winning coalition is a subset of the selectorate, and the selectorate is again a subset of the overall population: The selectorate is defined as those empowered by the existing franchise, i.e. those within the state that have an influence in deciding policy outcome, for example by being eligible to vote. The winning coalition is those who benefit directly from said policy outcomes. The two resources are public goods and private goods: A public good is a resource that is non-exclusively available to everyone, such as public schools, defense, and infrastructure. The public goods here are education, security and transportation provided by the state to its citizens. A private good, on the other hand, is enjoyed by a select group and cannot be shared without diminishing the value of the good for those privileged to it (or reducing the share of public goods).

³⁴ The loss of power due to loss at war or drawn out war is not by any means a recent theory. Book II of *The Art of War* (Sun Tzu ~514BC/1910[2005]: II, 3–4, 20) deals extensively with this issue: “Again, if the campaign is protracted, the resources of the State will not be equal to the strain. Now, when your weapons are dulled, your ardor damped, your strength exhausted and your treasure spent, other chieftains will spring up to take advantage of your extremity. [...] Thus it may be known that the leader of armies is the arbiter of the people's fate, the man on whom it depends whether the nation shall be in peace or in peril.”

Everyone in the selectorate has access to public goods, but only those in the winning coalition benefit from private goods.

The theory states that a leader has the greatest chance of political survival when the selectorate is proportionally large and the winning coalition is small (i.e. an autocracy). In contrast, a situation where the winning coalition is large (and therefore the selectorate even larger) provides the least amount of stability for political survival. In the first instance, the leader has the possibility of providing supporters with private goods to prevent defections, but with a large winning coalition, such appeasement is not possible and previous supporters leaving the 'coalition' (for example through elections) is likely to occur. The selectorate theory thus attempts to consolidate many of the alternate theories and observations put forward within the institutional context of the democratic peace, because all political leaders must satisfy a winning coalition to remain in power. This need to please supporters affects how leaders fight wars and what wars they choose to fight. The larger the winning coalition on which they depend to remain in office, the more important successful foreign policy becomes for a leader's survival in office. Autocratic leaders, who generally depend on a small winning coalition, can reserve resources from the war effort to distribute as private benefits to their cohorts so that they can ensure their position in office regardless of the outcome. Leaders of democracies normally rely on a large coalition for their hold on power, so they commit state resources towards victory even at the expense of private benefits for their supporters. This is the rationale for leaders with a large winning coalition to only go to war only when they believe they have an excellent chance of winning. By contrast, leaders who answer to a small winning coalition can choose to accept less favorable chances of victory because of their ability to placate their current supporters with private goods. All else being equal, democratic leaders will therefore choose their wars more carefully and try harder to win than autocrats do. Different regime type creates different incentives for their respective leaders. (Bueno de Mesquita et al. 1999; 2004)

Spurious effects and alternative explanations

Farber & Gowa (1995; 1997) observe that much of the data used to infer an absolute democratic peace consists of Western democracies not going to war with each other while allied against the Soviet bloc. They argue that this offers only a limited hope that non-allied democracies will remain at peace indefinitely because the democratic peace observation is in their view a ‘Cold War peace’, where the chance of peace is better predicted by the presence of common interests rather than common policies. Such findings should indeed not be dismissed, but more recent studies using alternative and more contemporary conflict data (Gleditsch et al. 2002) have suggested that the democratic peace holds up well when including more of the post-Cold War era. In addition, theories and conclusions drawn from large-*n* research are usually expressed in probabilistic terms rather than definitive terms. Statements like ‘the probability of war between democracies is lower when [a certain condition is present]’, as opposed to ‘the absence of war is due to [a certain condition is present]’, indicate that there need not be a direct competition between the democratic peace proposition and many of the alternative theories. As stated in the beginning of this chapter: Peace may be viewed as essentially the absence of war, and there may very well be several complementary – or even necessary, but not sufficient – influences acting simultaneously.

Expanding on the notion that democracy cause peace, some scholars argue that a theory of a democratic peace drawn upon Kant is incomplete because it ignores the pacific benefits of the other liberal elements in Kant’s schematic for the perpetual peace: the development of international institutions and an increase in economic interdependence. Here all three factors in the Kantian triad are considered interrelated and potentially mutually reinforcing, a theory often referred to as the ‘liberal peace’ or simply the ‘Kantian peace’. In this view, global economic interdependence has increased the costs of conflict while at the same time reducing its benefits, thus leaving the most effective path to prosperity in modern economies through increasing productivity and international trade rather than expansionist conquest for land and raw materials. The existence of an increasingly open global market signifies that it is

likely to be cheaper to buy resources than using force to acquire them. Disruption of these interdependency mechanisms through conflict is prone to incur costs not directly related to the conflict itself, so such actions are avoided. In addition, increased involvement in international governmental organizations can help reduce the incidence of conflict. Several potential rationales for why these institutions have an influence have been put forward, including the liberal emphasis on the potential of institutions for communicating information, facilitating bargaining, and building global norms that encourage the peaceful settlement of disputes. They can also benefit security indirectly by promoting democratization and interdependence. Democracy, economic interdependence and international integration all work together to reduce the risk of armed conflict. (Oneal & Russett 1999; Russett & Oneal 2001)

Others again have taken the liberal arguments even further claiming to show that: “Economic development, market integration, and similar interstate interests all predict reductions in dispute behavior. [...] This ‘capitalist peace’ subsumes the effect of regime type in standard statistical tests used in democratic peace research” (Gartzke 2005b:1) and that “absence of motives for conflict, as well as market transparency, supplant the potential impact of liberal institutions, audiences, or norms” (Gartzke & Hewitt 2005:1). Here, economic development discourages territorial conquest because it is cheaper to acquire the sought after resources through other means for the *developed* countries. This leads, for example, to a system – with a decline in the economic utility of war – where those who have already gained power do not covet territory, while those who do, does not have the power to pursue such goals aggressively. (Gartzke 2005a,b; Gartzke & Hewitt 2005)

3.4 Democracy and the democratic peace

The preceding discussion is by no means meant to be an exhaustive review of the theories put forward for explaining the democratic peace, rather it is intended to serve the purpose of demonstrating the diversity of possible causal links between

democracy and peace. This leads us back to the concept of democracy itself. When attempting to test such a variety of potential explanations for the same phenomenon, the choice of definition and operational measure of democracy is not inconsequential. Whether democracy is seen as a universal value, a transient blend of liberal qualities, a combination of procedural requirements, or as a recognizable set of institutional characteristics will impact both the inferences that can be made from the observation of ‘democracy’ as well as the suitability of additional explanatory variables one may wish to use in a model.

To take South Africa as an apparent example: During the South African involvement in the civil war in Angola for the year 1988, while South Africa remained under apartheid rule, the country has a coding of 5 for political rights and 6 for civil liberties in the Freedom House data. On the combined Polity scale, the score is 4. A closer look reveals that this is due to a 7 on the democracy scale and a score of 3 for autocracy. The democracy-deductions are due to PARREG and PARCOMP being coded restricted end suppressed, respectively³⁵. Due to the low electoral participation, South Africa is not regarded as a democracy in Polyarchy even though competition is high. At that point in time, South Africa was ostracized from the international community due to its rejection of western democratic ideals. Yet, with a limited franchise, causing overall participation to stay low, the country *had* well-developed ‘democratic’ institutions and – as long as one was a member of the aforementioned franchise (i.e. white) – there was genuine competition for power (even though the National Party won all elections during the Apartheid period).

While neither of the measures would by the most frequent operationalizations designate South Africa as a democracy in 1988 (using a dichotomous classification),

³⁵ This raises another issue: To what extent does the Polity coding rely on the extent of the existing franchise? Seeing as the exclusion of certain groups does not by itself imply a deduction on these two indicators; an abundance of countries score ‘perfect tens’ before universal suffrage and the US does so during the height of slavery. This would indicate that neither exclusion by sex nor exclusion by race is by itself ‘undemocratic’ in Polity. Without reviewing the actual coding decisions, it could be argued that South Africa has been too harshly judged by Polity standards. Another possibility is that Polity is inconsistent in their application of the coding rules as they apply to these issues. See Marshall & Gurr (2002:71).

the difference in how they get to that result is striking. While we should not draw any general conclusions from a single example, this illustrates the point that the choice of data can have an impact when testing theories about the potential causes of the democratic peace. Some inferences may apply to ‘liberal democracies’ that are not valid for ‘institutional democracies’ or ‘electoral democracies’ and vice versa. The effect of participation may not be independent of competition; the right to organize may be ineffective if certain groups are excluded from various aspects of the franchise; purely systemic indicators may not reflect the presence of personal freedoms; and the effective power to govern may have an opposite effect to those that imply institutional or structural executive constraints.

Inferences of a democratic peace such as “Because we believe in human dignity, peaceful nations must stand for the advance of democracy”, and “we have the historic chance to [...] achieve a true peace, founded on human freedom” (United States mission to the UN 2004) are often heard from policy makers. Conversely, in the most basic conception of the ‘demos’, rule by the people, there is no provision that the people will necessarily choose to be peaceful. That additional factor must be justified either by a choosing a measure with a broader conceptualization of democracy or it must be accounted for elsewhere. Even if not providing complete disambiguation, a review of the component variables, coding rules of the available measures, and how they relate to the research question at hand should be undertaken before accepting ‘off the shelf data’. One should not simply presuppose their suitability.

4. Applying Polyarchy to international relations analyses

4.1 Advantages to the Polyarchy dataset

4.1.1 A parsimonious measure of democracy

Vanhanen argues in describing the Polyarchy dataset (2003:18) that it is scientifically more justified to use simple quantitative indicators than more complicated indicators “loaded with weights and estimates based on subjective judgments”. The implied reasoning is that of *parsimony* (from *parsus*, lit. to spare), which in science is the preference for methodological reductionism, i.e. selecting the least complicated explanation for an observation.

The ideal of parsimony is exemplified by the principle of ‘Ockham’s Razor’, attributed to the 14th-century English logician, philosopher and Franciscan friar, William of Ockham, who is probably among the most prominent figures in the history of philosophy during the High Middle Ages. The saying, *numquam ponendo est pluritas sine necessitate*, often expressed as ‘don’t multiply entities beyond necessity’ will in modern methodological terms articulate the sentiment: Given two equally predictive theories, choose the simpler. Most other measures of democracy include more indicators, often use elaborate ways of aggregating them, and have a higher degree of subjective judgment involved in the coding process. Consequently, Polyarchy should be the preferred data set when investigating the Democratic peace simply because it is the less complex measure. The caveat is that the imperative hinges on the central assumption made with the null hypothesis: That the simple participation and competition indicators are as valid measures of the phenomenon as the more complicated data sets currently in use, and as such will have the same explanatory power.

In the same spirit of parsimony, Ray (2003) has recently set out to establish guidelines intended to make the results of multivariate models more intelligible and credible³⁶. “Most multivariate models aimed at evaluating the impact of democracy on interstate conflict contain a set of control variables sufficiently large to have a confusing impact. Partly for that reason, the potentially confounding impacts of such variables as wealth, political stability, and political similarity on the relationship of democracy to conflict have still not been evaluated in a definitive manner. In other cases, multivariate models contain intervening variables that are likely to produce misleading results” (Ray 2005:277). In this regard, the simpler nature of the Polyarchy measure would be an advantage, because it could be easier to establish the nature of potential causal relationships with other explanatory variables using Polyarchy than with the compound alternatives that are Polity and Freedom House.

4.1.2 An objective measure of democracy

In a review of available governance data sources³⁷, Besançon (2003) found that among the forty-seven data sets surveyed, only nine were in part based on objective indicators and only five were completely objective. Most datasets, including Polity and Freedom House, are subjective in nature, which frequently mean that they are ‘expert’ coded. This may indicate anything from ratings that are ‘arbitrarily’ selected based on a single researchers best judgment, via aggregated collective opinions, to the multi-faceted and complex coding regimes of Polity and Freedom House. The major problem for all such measures is that they can fall easy pray to claims of source bias, and although both Freedom House, Polity and others have taken steps to improve transparency and reliability, such subjective measures can not escape the fact that there are opaque elements to their coding process where indicators are assigned rather

³⁶ See the Winter 2005 issue of *Conflict Management and Peace Science*, Volume 22:(4), which, among several other contributions, includes an answer to Ray by Oneal & Russett (2005).

³⁷ This survey, while apparently thorough, is geared more towards identifying contemporary ‘good governance’ (and the direct policy implications of such rankings) than quantitative studies; cautioning against a perception of superiority for objective over subjective measures, instead suggesting the alternative terms ‘perceptual’ and ‘structural’.

than measured. Ideally, one would like subjective measures to be substituted with objective ones, i.e. replacing opinion with fact. Thus, the challenge is to identify the indicators that can capture the conceptual essence of the object under scrutiny and receive a sufficiently broad level of acceptance so that the *need* for opinion is lessened or eliminated.

This is in essence what Vanhanen claims for Polyarchy: The advantage of his ‘ID’ measure is that it makes use of only two simple quantitative indicators based on electoral data and other empirical evidence on political systems. Indeed, it stays away from attempting to directly gauge aspects of a wider conceptualization of democracy that may be problematic with regards to gathering accurate and reliable data. On the other hand, such data as are included are available from a range of sources, and statistical data on elections are (in most cases) both exact and reliable. Accordingly, Polyarchy is able to sidestep an often-raised concern about subjective democracy measures: that they do not confront the substantial potential for measurement error (Treier & Jackman 2003:5).

4.1.3 Transparency

While the source data for the Competition and Participation are purely objective in nature, some subjective judgments are made in the coding, in combining them into the ‘ID’, and the choice of threshold values of democracy. An advantage of the Polyarchy dataset over other measures in this regard is that it is always possible for other researchers to see from the dataset what those subjective interpretations have been. As a companion to the pre-calculated dataset Vanhanen provides the chronological coding sheets for each separate county, directly citing the original sources for every individual observation. See appendix A for an example of a Polyarchy country report/coding sheet.

4.1.4 Ease of maintainability

Consequently, as Polyarchy is based on quantitative data and with the sources of the dataset being transparent – the flow of available data in and about the world is also increasingly accessible. As the ‘global information society’ has evolved, the cost and difficulty involved acquiring information has been reduced significantly. In industrialized societies, detailed electoral data are often available on-line within hours of the last polling station being closed. Additionally, the political focus on ‘fair’ elections have seen the frequent use of international election monitoring efforts which have improved the availability and reliability of data from regions where they previously may not have been as easy to get hold of. This prevalence of data along with the low complexity of the measure suggests that virtually anyone could feasibly update the Polyarchy index. On the other hand, ‘competing’ datasets such as Freedom House and Polity rely, due to their higher methodological complexity, on an established research community to ensure continuity and adequate resources to facilitate updating their figures. Polyarchy therefore has potential advantages in both resource efficiency and lead times – from the actual time of observation to the availability of data in the research community.

4.1.5 Flexibility of application

Another consequence of being based on documented electoral and demographic data is that the Polyarchy dataset is also particularly flexible. The simplicity of the measure allow for a broad coverage in both time and space making Polyarchy applicable to a wide range of analyses. Additionally, those willing to challenge any of the assumptions made in aggregating the measure are able to do so with ease. They may “classify governmental systems differently or interpret the nature of non-elected governments and the significance of civil wars and various other political events differently. [Because] this dataset is not inextricably linked to my interpretations, but can provide data for many alternative formulations” (Vanhanen 2000:262).

By making the digitized source data table available (see Section 4.3) along with the source code created to calculate the index, this thesis can hopefully contribute towards improving this matter further by lowering the level of time-investment required from researchers in order to modify or reinterpret the data.

4.1.6 A continuous measure of democracy

Methods of analysis in international relations have developed rapidly since the late 1990s: Research has moved from the most straightforward correlations via “simple logistic regression analysis” to significantly more advanced statistical methods correcting for heteroskedasticity, interdependence among observations in the time series, and other problematic issues (Oneal & Russett 2001:470). Following the adaptation of more complex models, researchers have also theorized that there may exist more complex relationships between democracy as an explanatory variable and armed conflict³⁸ (Gleditsch & Ward 2000). This raises the question about what kind of variable democracy is. According to Munch (2005): the literature on regimes, governance, and democracy has created a divide that have caused scholars to make a choice between analyzing democratization with dichotomous or continuous measures, and that this choice has led to the development of two literatures that do not talk to each other very much. Nevertheless, and regardless of which school of thought one subscribes to, there should be a broad agreement as for the desire to be able to rank qualities of government for analytical purposes regardless of terminology. As pointed out by Vreeland (2003:1): “Political scientists often require a continuous conception of democracy to test hypotheses about the effects of political regimes. Yet, the so-called continuous measures of democracy we use in large-*n* studies are either highly subjective [...] or not really continuous at all.”

³⁸ See also Hegre et al. (2001) who find an inverted U-shaped relationship between democracy and internal armed conflict, showing that countries on the middle level of the autocracy-democracy scale face a significantly increased risk of experiencing civil war.

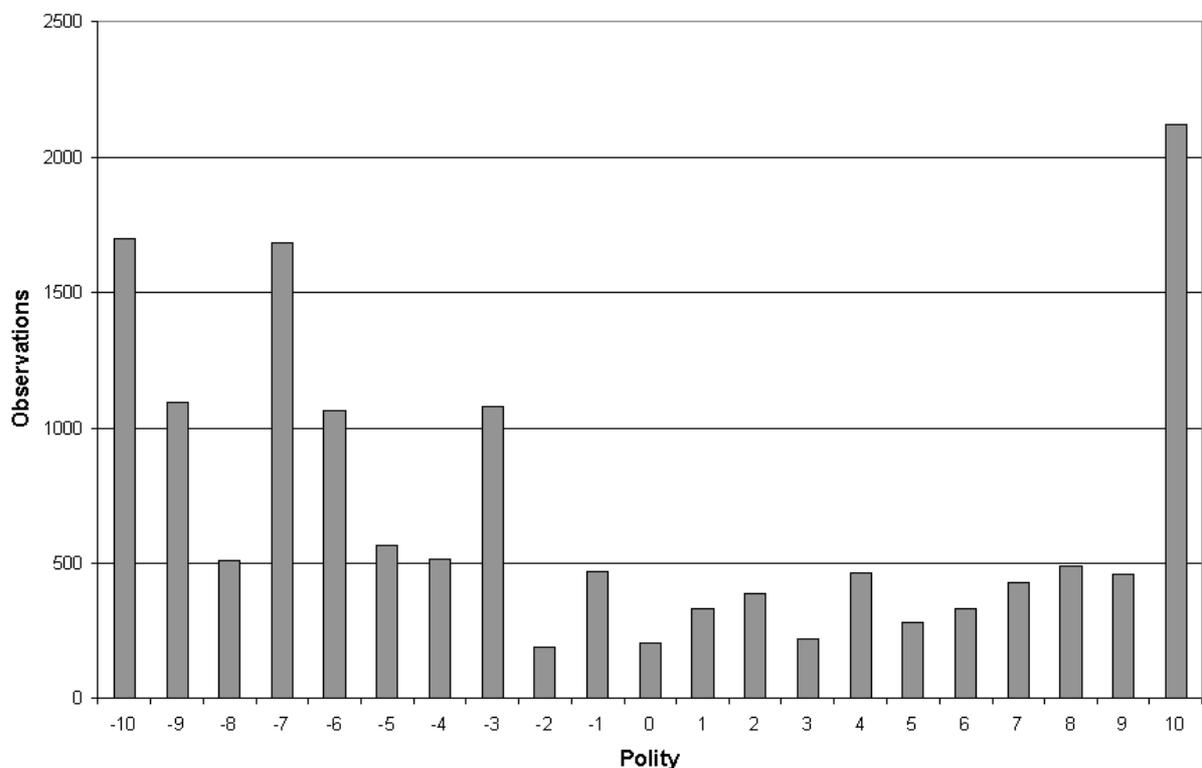
A prominent example of this is given by Gleditsch & Ward (1997), who demonstrate that the Polity data are categorical in nature but that much of the literature using them has ignored this fact. While there are a large number of possible ways to arrive at the aggregated scores included in the Polity measure³⁹, only a fraction of them are actually found in the data. Among the pathways that *are* used, a single indicator, the degree of constraint on the executive (XCONST), is largely determining the outcome on both the democracy and autocracy indexes as well as the combined Polity index. This tendency is somewhat higher for the democracy scale, which, as demonstrated by Treier & Jackman (2003:17), causes the Polity scale to skew towards the extreme high end due to measurement inaccuracy. This trend is particularly strong for the later years, where increased democratization in the world has started ‘crowding’ the maximum value. The correlations between democracy-XCONST, autocracy-XCONST, and Polity-XCONST are .96, .86 and .95 respectively for 2002. An appropriate analogy would be a test where a disproportional fraction of the students receives a perfect score: It could be that all the students are perfect, but if the objective was to differentiate between them, it is a reasonable assumption that the test was too easy. This effect can be seen in Figure 4.1, illustrating the total distribution of values on the Polity during the years 1816–2002. Due to the different levels of measurement a direct comparison to Polyarchy is not possible here without making arbitrary categorizations, and the differences between them should be adequately illustrated using complementary illustrations rather than forcing one to comply with the assumptions of something that it is not.

The Polyarchy dataset is indeed continuous, i.e. it is theoretically possible to rank an infinite number of observations according to their level of democracy if given a high enough precision on the two separate indicators. In addition, the indicators are both ratio variables, although, due to the multiplicative nature of aggregation and auxiliary

³⁹ Maoz (1997) points out another problem with using the Polity data in this way. The middle scores on the Polity scale indicate mixed regime characteristics that are not different in degree, but essentially different in kind from democracies and autocracies – therefore needing unique conceptual exploration.

democracy thresholds, the combined ID is not. The ID is an interval measure, where the transition point from non-democracy to democracy is arbitrary, and a ‘natural’ score of zero could mean either that no one voted or that a dominant party received all the votes. Therefore, it does not make sense to say that a country is twice as democratic as another when using the Polyarchy ID alone, while stating that a country had twice the participation on the other hand does. The distribution of Polyarchy scores can be seen in Figure 4.2, which plots the value pairs for all countries in 2002. The two indicators are somewhat correlated, .66 for all observations and .37 when excluding the 24 countries where both indicators are zero. Removing the joint zero observations cause the incline to more than halve ($y = 0.30x + 24.9$). Finally, Figure 4.3 plots the ordered ascending scores of the combined Polyarchy ID measure and the Polity scale for the year 2002, giving an idea about their abilities to differentiate between observations. However, Vanhanen (1997:37) cautions against overestimating the success of his index in identifying qualitative differences in the ‘degree of democracy’ at the higher end of the scale.

Figure 4.1 Overview of Polity IV¹ scores, 1810–2002



¹ Figure based on the modified Polity 4 data (Gleditsch 2003).

Figure 4.2 Spread of Polyarchy: Competition and Participation values, 2002

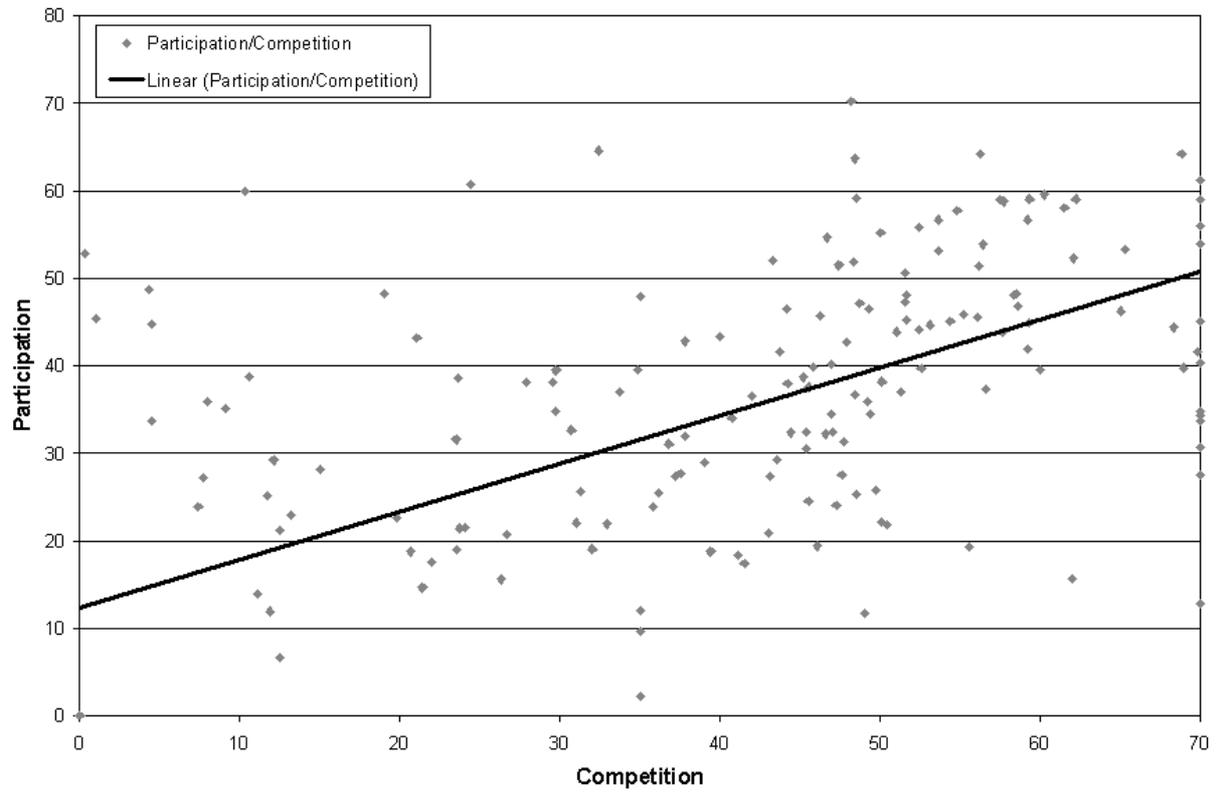
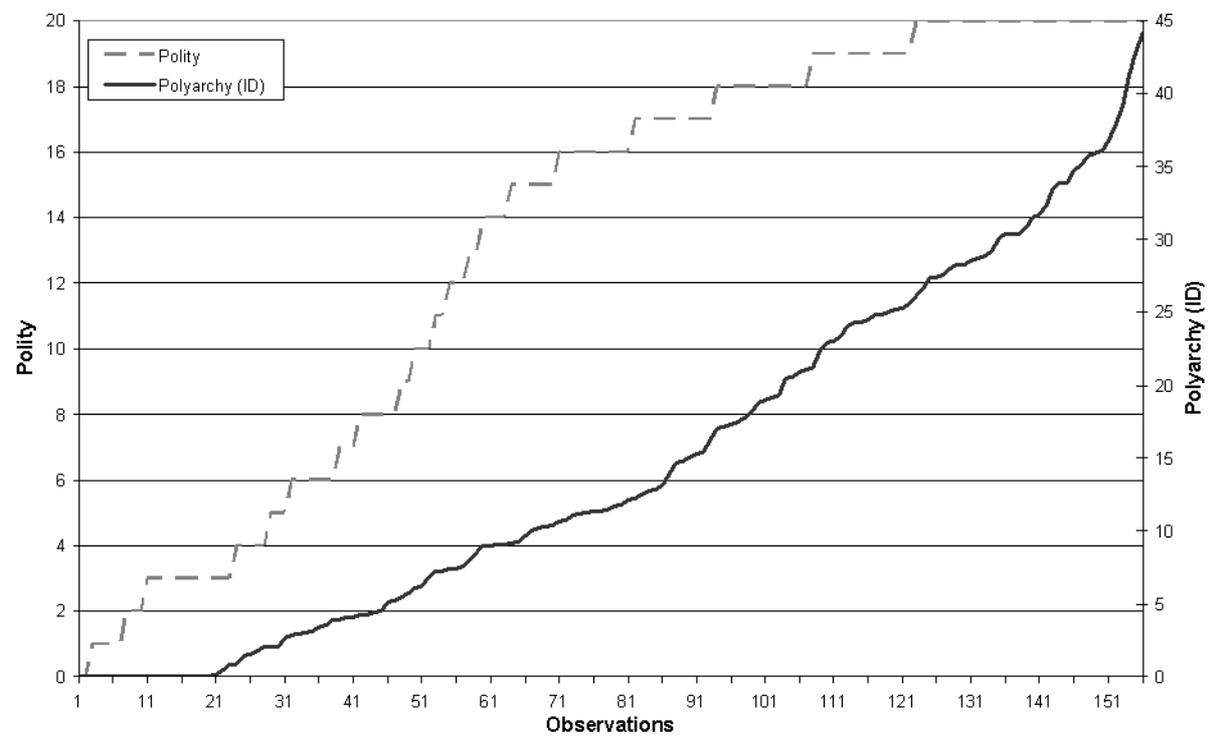


Figure 4.3 Polity¹ and Polyarchy distribution of observations, 2002



¹ Polity figures adapted from the modified Polity 4 data (Gleditsch 2003).

4.2 Possible problems and discussion

Arguably, Vanhanen has overemphasized the contrast between subjective and objective indicators and neglected to expand upon some subjective judgment calls that have influenced the selection of his own ‘objective’ indicators. Most prominently, while the focus on objectivity avoids some problems of conceptual logic, this is “only because [it] forgo[es] the opportunity to flesh out the concept analytically and to provide a bridge between the abstract concept of democracy and its more concrete attributes” (Munck & Verkuilen 2002:15).

On the issue of conceptualization, Polyarchy notably omits the ‘liberal’ aspects of the democracy literature, not including separate measures on civil and/or political freedoms. In his ‘defense’, in addition to noting the problem of finding reliable indicators measuring this dimension, Vanhanen (1997; 2000; 2003) attempts to deflect this criticism by asserting that: “The existence of legal opportunity to compete for the control of political institutions through elections indicates that people and their groups are free to organize themselves and to oppose the government. It also indicates the existence of political rights and liberties in the sense that different groups can legally compete for power” (2003:7) and that “It is [...] difficult to imagine a country where individuals and groups enjoy civil and political liberties but political power is concentrated in the hands of one group” (2000:256). The presence of civil and political liberties is therefore – although in themselves important features of democracy – sufficiently indicated indirectly through participation and competition.

Additionally, Vanhanen’s choice on how to operationalize his two indicators has been criticized. It has been raised issues with them for being too simplistic – so that they constitute (at best) poor measures of the relevant concept – and that they also introduce a degree of undesirable systematic bias into the measurement (Bollen 1980; Munck & Verkuilen 2002). Among the researchers that have recently employed the Polyarchy dataset for analysis purposes Gates et al. (2005:12) have articulated some of these concerns in that: “(i) [Polyarchy] is biased in favor of extremely fragmented

party systems – political systems with many political parties are considered more democratic than systems with few parties and (ii) it underestimates some democratic qualities in semi-democratic societies, especially in the 19th century”.

A similar issue, although somewhat alleviated by the way the indicators are combined, lies with the fact that the participation measure does not account of the possible use of mandatory voting⁴⁰. Nor does it correct for the fact that the percentage of the population eligible to vote can be markedly lower in countries with a comparatively young population, hence biasing the participation measure against many developing countries. An example of the former could be Italy where the electoral system⁴¹ causes the country to score consistently among the highest ranked states on the Polyarchy ID scale. At the same time, it could feasibly be argued that the Christian Democratic coalitions that held power for decades after the Second World War were in fact a virtually dominant permanent political fixture. Vanhanen acknowledges these issues in discussing the definition of a ‘party’ – both in the abstracted terms of the data and in actual political party composition: “Party alliances are problematic. It is not always clear whether the alliance or its individual member parties should be regarded as ‘parties’. In such cases, a party’s behavior in elections is used as the decisive criterion. If a party belongs to a larger alliance permanently, we are not justified in regarding it as a separate party. The alliance should then be treated as a separate ‘party’, because the purpose is to measure the relative strength of competing and independent groups.” (2003:9) It is, however, somewhat unclear to what extent this approach is reflected in the actual coding of the data.

Equally unclear are some of the decisions that are made with regards to balance of power. Vanhanen arbitrarily assigns the weights of parliamentary and presidential

⁴⁰ Moon et al. (2005) found that nations with mandatory voting had turnout rates ~3% higher than those which did not, but that neither the overall effect nor a further differentiation into ‘strict’ and ‘loose’ voting regimes was statistically significant.

⁴¹ Participation is among the highest of the developed countries and voting is ‘mandatory’ in that it is declared a *civic duty* (instead of merely a *right*) in the constitution. Competition is high with no single party ever getting a complete majority in parliament.

elections to three main institutional power arrangements: (a) parliamentary dominance (100%/0%), (b) executive dominance (0%/100%), and (c) concurrent powers (75%/25%, 50%/50%, or 25%/75%). No rationale is given in the country chronologies as to how these weights are decided, and researchers might wish to challenge some of these choices. For instance, the classification of the US as a case of ‘executive dominance’ may underestimate the importance of the Congress. In the absence of documentation it is only possible to speculate, but one might suspect that some of these coding decisions have initially been made due to a lack of information or ease of maintainability – and have remained due to legacy reasons. Such problems should be of a lesser importance for future updates or enhancements, however, now that all the data are available in electronic form.

Furthermore, with regard to some of these concerns, Vanhanen argues that one of the other disadvantages of participation to some degree may diminish the effect of age demographic bias. The relative importance of elections in society is not measured by participation, and the act of participating in elections in developing countries may not be as significant as in the more developed ones: It is also feasible to assume that voters in poor countries are less independent in elections than the voters in more economically prosperous ones. The reason given is that poor voters may not have a vested interest in their own organizations, that voting to some degree may be controlled by local power holders, and that voting may be only a formality (or a kind of ritual). Therefore, the lower degree of measured electoral participation caused by the relatively smaller share of adult population in poor countries may also reflect differences in the nature and importance of elections. (Vanhanen 2003:14)

Finally, there is an issue with the Polyarchy data when it comes to the differentiation of observations. Whereas Polity, especially in the later years, is biased towards the extreme high end of the scale and Polyarchy faces a similar problem at the lower end⁴². The Polyarchy ID is inherently better suited to indicate significant differences

⁴² See also Section 4.1.6.

between political systems from the perspective of democracy (and to some degree in the ranking of countries that fulfill the minimum criteria) than it is in identifying differences among non-democracies. Because political systems below the threshold of democracy can differ from each other to a great degree, the Polyarchy indicators are not able to indicate differences between different types of non-democratic systems for which ID value is zero (or close to zero). Such political systems include absolute monarchies, despotic autocracies, military governments, de facto one-party dictatorships, and provisional/transitional (non-elected) governments (Vanhanen 2003:20). This effect is clearly visible for the first 21 observations in Figure 4.3.

Summing up, Polyarchy has been criticized with some justification on the three core methodological concerns of conceptualization, operationalization, and aggregation. As far as conceptualization goes, Bollen (1980) and others have challenged attempts to measure democracy for their exclusion of political liberties. Even so, more recently he has criticized the available ‘subjective measures of liberal democracy’ and discussed the possibility of returning to ‘objective’ measures of democracy, as exemplified by Vanhanen (Bollen & Paxton 2000). The other two methodological concerns are to a degree alleviated by the advantages of objectivity and transparency. Because Polyarchy provides not only the component index itself, but also all individual variables included in the index and the detailed coding chronologies for each individual country: any researcher wishing to challenge or modify the *ad-hoc* decisions that are made are at liberty to do so⁴³. In fact, Vanhanen (2003) explicitly stresses this possibility, and is reasonably straightforward about mentioning many of the criticisms leveled against the data in the form of its original publication (Vanhanen 2000) and the earlier works it was based on.

⁴³ See also Section 4.3 for technical details on the available version of the dataset.

4.3 The coding process for the Polyarchy data set

The Polyarchy data presented here are based on Vanhanen (2003), a yet-to-be-released update of the current Polyarchy dataset (Vanhanen 2000). Previous versions of the index were predominantly based on manual calculations and are no longer recommended for use other than in replication of previous works where backwards compatibility is needed. These versions have several known deficiencies, some of them quite severe. Such issues relate equally to Vanhanen's reevaluation and access to better sources for the later editions as well as clerical errors made in the aggregation and presentation of the data.

In addition to the data published in Vanhanen 2000, an update covering the years 1999–2000 along with some error corrections and modifications to previous years was released in 2003⁴⁴. The dataset as described in Vanhanen (2003) further updates the data with observations for the years 2001–02 and incorporates additional enhancements to the years covered in previous editions⁴⁵. This release also consolidates the preceding coding sheets for 1810–1998 and the 1998–99 update into new separate chronologies for each individual country, alleviating the need to cross-reference several documents when consulting the data sources. The information included in these country tables have been entered into a resource database table that is subsequently used as the basis for calculating the values in the combined Polyarchy Index. Some of the observations have been randomly verified by double-checking the listed sources and electronic consistency checks have been performed to reduce the probability of errors.

⁴⁴ The 1999–2000 update, and further expanded upon in the later update, also introduces referendums as an (optional) modifying factor to participation. A national referendum adds to participation by 5 points and a state referendum by 1 point for the year the referendum took place. The impact of referendums is limited to 30 points a year. There is some uncertainty as to the completeness of this coding; however, thus I have not included the referendum modifier in this thesis.

⁴⁵ Work on the 1999–2000 update was undertaken while employed at The Centre for the Study of Civil War (CSCW), housed by the International Peace Research Institute Oslo (PRIO), who serve as the host for the published data. The 2001–02 update has been completed as part of writing this thesis.

For many purposes, adaptation of the main index will be sufficient. However, several choices have been made in aggregating the data, and some users may want to alter them⁴⁶. The variables in the complete country-year Polyarchy Index (ID) are described in Table 4.1, and the source code created for generating them – including user configurable options – is included along with the downloadable data. The availability of Polyarchy in this form should facilitate researchers who have raised issues with the data to change many of the coding decisions made by Vanhanen with relative ease. For example, to lessen the concerns regarding age-demographic bias, one could replace or augment the participation variable by adding data for a country's adult population⁴⁷ using the *World Population Prospects* (UN 2005) as a secondary data source (Vanhanen 1997:36–37). A transformation matrix to construct such a variable, covering members of the Gleditsch & Ward state system (1999), has been included for the years 1946–2002. The matrix includes the variable 'share of adult population' where 'adult' is defined as persons 15 years and above. A modified participation score would be generated by dividing the original participation by this value⁴⁸. The variable is based on data adapted from Urdal (2004) who used an earlier version of *World Population Prospects* as his primary data source. The UN data is provided in five-year intervals starting in 1950, and values between these observations have been estimated using linear interpolation. Similarly values for 1946–1949 have been estimated using the succeeding two data points, and for 2001–2002 using the preceding two. The UN data does not have observations for Tibet, Taiwan, and East Timor, and these countries have been approximated using numbers from respectively China, Hong Kong, and Indonesia.

⁴⁶ See also Sections 2.2.3 and 4.1.2–4.1.5.

⁴⁷ See Section 4.2 for the rationale.

⁴⁸ This again causes an additional problem: Should there be a limit on the influence of participation on the combined ID. The section on referendums in Vanhanen's manuscript (2003:15–16) would appear to indicate so, as it states that "The value of the combined degree of participation cannot be higher than 70%, although the sum of Participation and referendum variables were higher than 70." This was not an issue in the original dataset as no countries had as high a share of participation when calculated based on the whole population. I will leave this decision to individual users of the data.

Table 4.1 Variables included in the main Polyarchy Index (ID) table¹

<i>Variable</i>	<i>Description</i>
COW country number	See Russett et al. (1968) and Correlates of War Project (2005).
Vanhanen country number	Sequential numbering of the countries used in the individual country chronologies/coding sheets.
Year	The year of the observation. Countries are sampled on 31 December all years.
State name	
Competition	As per Vanhanen (2000; 2003). See Section 2.2.3
Alternative Competition	Competition calculated <u>without</u> the maximum value of 70% or with an alternative limit. See Vanhanen (2000; 2003) and Section 2.2.3.
Participation	As per Vanhanen (2000; 2003). See Section 2.2.3
Index of Democracy (ID)	Participation * Competition / 100
Democracy	Dummy variable coded on the basis of user configurable thresholds for the two indicators and combined ID. Defaults as outlined in Section 2.2.3.
Event	A comma separated list of numbers referencing the unique indicator [Case Number] of observations in the source data table. The coding of this variable indicates that an election or disruption (i.e. foreign occupation, coup de coup d'état, revolution or similar) event have taken place the year of the observation.

¹The Polyarchy data described in this section, including the source data table and computer code for generating the index are available from <http://home.no.net/larsbw/thesis/>

Although dates are not yet available in the publicly released version of the dataset, some effort has been made to date regime changes as accurately as possible and indicators for the confidence in precision are included in the source data employed to calculate the country-year based index. Thus, with some adaptation Polyarchy could feasibly also be used in duration analysis and other forms of longitudinal analysis requiring precise information on the time dimension.

The following precision codes are used:

1. Both day and month are precisely coded based on reliable information.
2. Day and month are assigned, year is precisely coded. There is uncertainty regarding the dating of an event, or it can be an event that different sources claim occurred on different dates. Day and month are assigned based on subjective judgment.
3. Month and year are precisely coded, day is unknown. The exact day is known to be in a given month, but there are no data available. Day is set to the first day of the month.
4. Both day and month missing; only year is known and coded precisely. The start date is assigned to 1 January of that year.
5. Censored observation. This can either be the first or last day, month and year covered by the dataset.

Problems in this regard primarily relate to the dating of transitions. In some cases, the dates listed in the sources indicate the election date, while in others it may indicate an inauguration, seating of parliament or otherwise exact date for transition of power. Often this will be natural due to the difference between election event and irregular events, but the data is not entirely consistent, and in some cases entirely missing. For instance: In the United States there are no exact dates indicated, which results in the observation being coded as starting 1 January of the election year, whereas data on US election dates are available and the presidential term does not start until 20 January the year after the election (4 March until 1937). No clear guidance is given in how to resolve such cases, and no attempts to augment the data supplied in the country chronologies have been made. Subsequent enhancements to this aspect of the data should indeed be possible⁴⁹.

⁴⁹ Another enhancement could be possible for studies interested in the effects of the electoral institution on conflict. The source material could feasibly be used to provide an assessment of whether an election (or irregular event) has caused a transition of power (Ray 1993:257–259). This could be of interest for studies attempting to evaluate theories of democratic consolidation and how processes between the establishment of elections and the transition to ‘stable’ democracy can affect the risk of war.

5. Theoretical implications and research design

5.1 Expectations based on the literature

When studying the connections between complex social phenomena it does not necessarily follow that all the parts are related to our observations in the same way as the whole. Some elements that may be necessary (but not sufficient) parts of what we desire to study could very well have no effect at all, or indeed pull in different directions when considered individually. The parts could also have an effect on *each other*, obscuring our ability to interpret the mechanisms affecting the ‘object of interest’ correctly. In other words, that there may be interaction among the indicators used to compose a measure. For example, Mansfield & Snyder (2005) have put forward a comprehensive argument outlining the dangers associated with incomplete ‘vote first reverse-order’ democratization. In their view, although no mature democracies have ever fought a war against each other, countries that have recently ‘democratized’ (i.e. started to hold free elections) may lack the proper institutional mechanisms for executive accountability. There, politicians have a motivation to engage in policies that make it more likely that their countries will start a war: “In the short run, however, the beginning stages of transitions to democracy often give rise to war, not peace. [...] Trying to take a shortcut to democracy before institutions of public accountability are in place risks playing into the hands of those who would foment nationalist violence.” (Mansfield & Snyder 2005:2)

As Polyarchy is based on electoral indicators, this insight appears to weaken the null hypothesis, especially when contrasted to the institutional focus of Polity. It also raises the question of how the individual Polyarchy indicators are related to peace. As previously discussed, Vanhanen consider both factors to be equally important in weighing them together for the index and have chosen multiplication as his means of combining them. Thus, a high value on one of the two indicators will be cancelled out

if the other indicator is low. Competition and participation may therefore be individually associated with peace quite differently than the Polyarchy ID as a whole, and there is a varying degree of theoretical explanations available to connect either of the two individually to the absence of conflict.

Making the argument that if those forced to bear the cost of war had a say in deciding whether or not to pursue the option in the first place, Kant (1795/2002:437) ascertained that under a constitution where “the consent of the citizens is required to decide whether or not war is to be declared, it is very natural that they will have great hesitation in embarking on so dangerous an enterprise”. However, the extent of public participation is seldom mentioned in recent writings on the democratic peace, and the Polity dataset does not include an indicator for breadth of popular participation in their democracy measure⁵⁰. One may speculate as to the relationship between lack of theory and the lack of data, as it could be either that the dominant dataset does not have this information due to a lack of theoretical significance, or it could be that the absence of theories stem from there being no readily available data to test them on. Some contributions, such as Moon et al. (2005) do stress the aspect of broad participation, arguing that statistical studies omitting it may misstate the effect of democracy on social outcomes or misinterpret the aspect of democracy that is responsible for that effect. However, they do not include any examples from international relations studies in their exploration, and neither have I been able to find other well-known works explicitly stating such a connection in this field. Nevertheless, of the theories that have been put forward for explaining a democratic peace the ones implying public-imposed constraints would appear to be the most conducive to breadth of participation having an impact. It is possible that if there does indeed exist a shared democratic identity of nonviolence between countries and peoples this effect might be more persuasive to policy makers where there to be broad public participation. Broad participation may also indicate a high public awareness

⁵⁰ Although they do venture to measure whether or not the institutional *right* to participate in organized politics is restricted.

and interest in policy-issues in general, and may thus also increase ‘audience costs’ (Fearon 1994). By contrast, the findings of Mansfield & Snyder (2005) indicate that recently democratizing states face a gap between rising demands for broad participation in politics and inadequate institutions to manage those demands. This is, in their view, conducive to an increased risk of armed conflict.

Effective competition for power, on the other hand, is more prominent in the literature and several of the institutional explanations for the democratic peace relies explicitly or implicitly on the assertion that elected leaders wish to stay in office. It has been claimed that democracies are not intrinsically ‘nicer’ (Russett & Starr 2000; Russett & Oneal 2001; Reiter & Stam 2002), but instead that the observation of the democratic peace is due to democratic leaders being more careful about how they go about their business. The assumption of a dyadic democratic peace here lies on the (self) imposed constraints on a democratic regime in pursuing non-peaceful options. When considering how this factor will relate to the individual indicators in Polyarchy, the theory would suggest that it is likely more important for competition than for participation⁵¹. Finally, analyzing the effects of the individual Polyarchy indicators should also prove interesting in view of Rosato’s (2003) debate-sparking⁵² article challenging the ‘logic of the democratic peace’. Whether or not one is willing to accept the claim that most of the casual logics underpinning the democratic peace proposition are flawed, performing empirical tests on alternative measures of democracy – and their individual components – could help clarify these relationships and possibly improve theory regarding *why* democracies rarely fight each other.

Summing up: The theory is divided as it relates to the pacifying effects of participation but favorable when it comes to competition. For ease of formulation, and based on the core assumption of a *democratic* peace, that it is democracy as a whole

⁵¹ Competition could also help explain differences between types of democracies. It has been noted that parliamentary systems may be less war-prone than presidential ones (Schjølset 1998), and this difference could possibly be explained by the higher competitive pressures in the often more fractionalized parliamentary systems, both in and in-between elections.

⁵² See the Forum section in *American Political Science Review* 99(3): 453–472.

and not any particular aspect of it that is conducive to peace; the following will assume that there is a positive relationship between both the Polyarchy indicators of democracy and peace on the dyadic level.

H1. Each of the individual variables in the Polyarchy dataset has a significant relationship with peace.

H1a. Competition has a significant relationship with peace.

H1b. Participation has a significant relationship with peace.

A cursory review of the Polyarchy data show that several of the countries that are classified as non-democracies do have elections with a high level of participation that are void or almost void of competition. The leadership in an autocratic regime might arrange hollow elections, or right out invent the results, to show that the regime has ‘the support of the people’. On the other hand, competition, even if somewhat limited to elites and with a relatively low level of participation, may impose sufficient restraints on the executive power to inhibit the pursuit of violent options. Even though the competition indicator is not institutional in nature (as XCONST is in Polity), it may tap into a similar underlying mechanism: The fear of losing power may prevent rash decisions and effectively *constrain* the options available to a democratic leader when deciding whether to engage in an armed conflict. In a highly competitive situation, such considerations may weigh more heavily than for a leader supported by a more homogenous power-base, regardless of the extent of public participation⁵³. Conversely, on the relative importance of participation, Gleditsch & Ward (1997:376) observe that when using the Polity data: “what many would promote as a hallmark of democratic societies, namely the extent and character of popular participation in selection of leaders, is either totally absent or relatively unimportant in determining the degree of democracy”. Although this is again based on the institutional *right* to participate and not as in Polyarchy the *extent* of actual participation, the relationship

⁵³ For example, in a fragmented parliamentary system a leader can be punished instantly by defections from a coalition relying on more than one party to remain in power. Such a situation could remain highly competitive even in-between elections where the leader’s electorate during the term is effectively reduced to the members of parliament.

between the Polity and peace that is observed in the literature should indicate that neither aspect of participation is a prerequisite for the democratic peace. Based on the preceding discussion in this section an additional hypothesis can be formulated:

H2. Competition is more strongly correlated with peace than Participation.

Finally, Vanhanen (2000:262) states that the combined Polyarchy Index of Democratization (ID) is “a theoretically better measure of democracy than either of its two components separately, because it combines the two crucial dimensions of democracy”. This leads us to the final hypothesis in this section:

H3. The combined Polyarchy ID is more strongly correlated with peace than either Competition or Participation alone.

5.2 Research Design

5.2.1 Qualitative versus quantitative methods

In deciding whether to apply qualitative or quantitative research method to a study of a phenomenon there are obvious trade-offs to be made. Qualitative research yields the potential for high internal validity and opportunities to get a ‘close-up’ of the factors constituting the phenomenon and the mechanisms that are connecting them. However, “the fundamental problems of descriptive and causal inference are often more difficult to avoid with a small-*n* rather than a large-*n* design.” (King et al. 1994:226) While in an ideal world, conducting in-depth research on any and all possible observations would be desirable, the reality of the matter is rather that it will often prove cost prohibitive, both in time and resources, to obtain the number of qualitative observations that are needed in order to establish external validity by avoiding case selection bias.

That is not to say that quantitative research does not have its own share of problems, since large-*n* empirical studies are tackled with several methodological obstacles.

King et al. (1994:85) stress the importance of scientific inference in that “any coherent account of causality needs to specify how the effects are exerted”, and even though the extent of inference from statistical analyses using hypothesis testing methods is inherently high, the potential for folly is just as high or even higher.

In its purest form, my research question could be reduced to a simple question: ‘Do data matter?’ The answer to this query is methodological and not empirical, because for all the presence of readily available quantitative data, researchers constantly face the issue that their variables must be consistently conceptualized and measured across the breadth of observations for their results to have any value. Erroneous assumptions caused by conflicting terminology, inaccurate measurements⁵⁴ and leaps in conceptual logic, may obscure consistent relationships or indicate the presence of a relationship where there are none. Faults in conceptualization and measurement can cause errors that add up to insurmountable problems depending on the sources used and the methods of collecting data. In all avenues of science, it is certainly possible to achieve extremely consistent (i.e. reliable) measurements that due to methodological errors bear little or no relation to the phenomenon one intended to observe in the first place. I hope to have sufficiently addressed such concerns as they relate to the Polyarchy dataset in the previous chapter. Now, let us assume for a moment that the answer to ‘Do data matter?’ is an unqualified yes. The next concern as this postulation relates to the democratic peace then becomes ‘How?’ The answer to this question is empirical.

The upcoming part of this thesis is quantitative, but it has been the limited ‘case study’ on datasets attempting to quantify the concept of democracy that has allowed me to get there. Thus, there need not be any conflict when choosing between qualitative, quantitative, or indeed purely methodological contributions in the study of democracy; they all bring their separate, yet connected insights. Observation will give us information on what to count; methodological studies will teach how to count it

⁵⁴ See Adcock & Collier (2001) for a discussion on measurement validity in the social sciences.

once we have conceptualized it; and finally, the quantitative analytical studies will make it clear what the numbers actually mean once we are finished counting them.

5.2.2 Replication

The good scientific project is by definition one that advances knowledge, and by using replication data as a starting point have several advantages. Making a substantive and improvement to certain aspects of-, or adding to findings already established in previously published research has the upside of being able to stipulate to the project of the original work since it is already part of the published record and is the recognized state of the art. “Academia is a social enterprise that is usually most successful when individual researchers compete and collaborate in contributing toward common goals. In contrast, when we work in isolation on unrelated problems, ignoring work that has come before, we lose the benefits of evaluating each other's work, analyzing the same problem from different perspectives, improving measurement techniques and methods, and, most important, building on existing work rather than repeatedly reinventing the wheel” (King 1995:445).

The replication approach makes sense for this thesis because I am equally interested in how the alternate democracy indicators compare to the predominant existing measure as I am in how it relates to a dependent variable. Therefore, drawing on datasets already in the public record, having undergone the scrutiny of peer review, helps eliminate uncertainty and potential sources of error in how the methods and data employed in the analysis can affect the results. Secondly, it provides an instant source of comparison that should be valid given that any additions, in this case the application of the Polyarchy measures, are defensible. Third, scholarly work is judged by its contribution, so having drawn on existing data, it is only reasonable that the effort of contributing a dataset usable by others is undertaken where it complements the body of information already available. Such data can potentially help advance the field, even if the work for which they were gathered should eventually prove to be less significant (Gleditsch et al. 2003a).

5.3 Choice of studies

I have chosen to a two-tier approach, first examining the correlation between democracy and international conflict in the post-World War II era using a chi-squared test based on the work in Gleditsch & Hegre (1997) to see whether a different indicator of democracy will impact the empirical *observation* that democracies are peaceful towards each other.

Later – to see whether different democracy indicators influence the findings of a *causal relationship* between democracy and peace – I progress to a more complex model with additional explanatory variables covering the years 1816–1993. This section will follow the data collected by Buhaug (2005) in his re-examination of Bremer’s seminal article ‘Dangerous Dyads’ (1992). In replicating and extending Bremer’s study, Buhaug provides an outline for comparison across the application of different statistical techniques. What’s more, not only does Buhaug re-examine and expand upon a much-cited article from the literature, it presents an interesting opportunity to study the possible differentiation of results when comparing different measures of democracy.

5.3.1 Peace and democracy 1946–2002

Hypotheses

Following the null hypothesis and the results outlined in Gleditsch & Hegre (1997), three new hypotheses can be added:

H4a: Democracies have the same likelihood of experiencing conflict as non-democracies.

H4b: Jointly democratic dyads are less likely to experience conflict against each other than other dyads.

H4c: Jointly democratic dyads are more likely to fight on the same side in a conflict than other dyads.

Additional inferences can be extrapolated from *H1a*, *H1b*, and *H2*, both about the relationship between joint high-participation and joint high-competition dyads, and the chance of high-participation/high-competition states experiencing conflict on the monadic level.

Conflict

The source of the conflict variable for this analysis is the PRIO/Uppsala Armed Conflict Dataset 1946–2003 Version 3.0, which has been collected by researchers at the Department of Peace and Conflict Research at the University of Uppsala and the International Peace Research Institute, Oslo (Gleditsch et al. 2002; Strand et al. 2004). The dataset has its origins in an overview of armed conflict for the preceding year that was published annually in *Journal of Peace Research* from 1993 to 2001. This data collection effort was then extended to include a reapplication of the definition used in the annual conflict updates to also include the entire post-World War II era (1946–92), resulting in the publication of the completed dataset (Gleditsch et al. 2002). Subsequent annual updates and refinements continue to be published on an annual basis in *JPR*⁵⁵.

In this dataset, an armed conflict is defined as:

[...] a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths. (Strand et al. 2004:3)

A state is defined as “an internationally recognized sovereign government controlling a specified territory, or an internationally unrecognized government controlling a specified territory whose sovereignty is not disputed by another internationally recognized sovereign government previously controlling the same territory” (ibid:3–4). The dataset also divide conflicts into four separate categories: Extra-state- (also

⁵⁵ The most recent being Harbom & Wallensteen (2005).

known as extrasystemic), interstate-, internal-, and internationalized internal armed conflict, with the obvious choice when considering international conflict to be the second of these categories (ibid:10–11).

Due to the changing nature of international warfare (Harbom & Wallensteen 2005) the choice was made to include not only international conflict (conflict between two or more states), but also the category that the PRIO/Uppsala Armed Conflict dataset calls ‘internationalized internal armed conflict’. This includes conflicts that occur “between the government of a state and internal opposition groups with intervention from other states” (Strand et al. 2004:10)⁵⁶. On the surface this definition does seem to allow the inclusion of conflicts that could commonly be regarded as ‘international conflicts’, but would likely be excluded when dealing purely with conflict between states. Intuitively, at least conflicts where an outside country is overtly assisting an opposition organization with regular troops are international in nature. Examples of this include the conflicts in Afghanistan (both the Soviet involvement in the eighties and the US invasion to oust the Taliban regime from power in 2001) as well several ‘spillover’ conflicts resulting from the Vietnam War. When only the government side receives outside support, conflicts may not fit an image of what is commonly considered international in nature. Such conflicts include Cuban support for Angola in the civil war against UNITA during part of the eighties, but on the other hand, the early stages of the Vietnam War also fall into this category.

To facilitate analysis of the data the PRIO/Uppsala project has split the participating countries in a conflict into two separate sides, A and B. For ‘pure’ interstate conflict ‘side A’ and ‘side B’ are assigned arbitrarily and is thus unproblematic, but for internationalized internal armed conflict some additional explanation is necessary. All countries fighting together on the government side are listed on ‘side A’ and all countries aiding opposition groups are listed on ‘side B’. One may safely assume that

⁵⁶ In a similar vein, Gleditsch (2004) points out that many contemporary civil wars display a transnational character, where key actors, resources, and events span national boundaries, even if outside involvement stops short of overt military intervention.

all countries listed under ‘side A’ are fighting together, but this assumption is not necessarily valid for ‘side B’. There might be conflicts where several governments support different opposition groups, which might fight separately against the government or even fight each other. There are no data to record which governments support which opposition groups and this may introduce some errors to the information, especially over-representing the number of countries that are considered allied in international conflict. In addition, there is no measure of the level of foreign participation, so it is conceivable that the inclusion of this category may also overstate the level of international conflict on the monadic level by including conflicts that have had only a limited international involvement or auxiliary participants with only a nominal presence.

Categorization and classifications of conflicts for analytical purposes is obviously not unproblematic⁵⁷, but the potential understating in international conflict that result from examining only ‘explicit’ conflict between states (as defined in the PRIO/Uppsala dataset) will for this thesis be regarded as greater than the problems that are introduced by also counting the category internationalized internal armed conflict. Therefore, both ‘interstate’ and ‘internationalized internal’ armed conflicts are included in this study. Hopefully, better data on the nature of foreign involvement in internal conflicts may in the future alleviate or eliminate these problems⁵⁸.

Democracy

The variable ‘democracy’ is gathered from the modified Polity 4 dataset (Gleditsch 2003). A country is considered a democracy if the Polity variable (democracy minus autocracy) is equal to or above 6 on the resulting scale (–10 to 10). This is different

⁵⁷ It could also be argued that colonial conflicts should also be included when discussing the international war-proneness of countries. This categorization is made in *Human Security Report* (Human Security Centre 2005), they too using the PRIO/Uppsala conflict data set as their data source.

⁵⁸ For flexibility purposes, the ideal situation would be to have all data implicit in the existing categories coded as explicit properties of each conflict and conflict participant in a relational data-structure. Treating all major variables (country, year, conflict) as classes and assigning those methods that could be used to relate the specific instances (observations/objects) to each other based on their properties would tremendously ease the task of data transformation.

from the value used in Gleditsch & Hegre (1997), of which this part of the exploration is loosely modeled. Here a value of ≥ 3 was used, and in a later reexamination of similar data (Gleditsch & Hegre 2003) the threshold was raised as high as ≥ 7 ⁵⁹. The value of ≥ 6 was chosen primarily because it is the used by the current principals of the Polity projects in their own writings on the data such as the biannual Peace and Conflict Series (Marshall & Gurr 2005). In addition, this value also seems to be the most commonly chosen in analysis by other researchers employing the Polity data, at least some of them also following Marshall & Gurr. Admittedly, this choice is somewhat arbitrary, but lowering the threshold to 3 does not introduce many further ‘democratic’ observations of conflict⁶⁰.

Threshold values for democracy in the Polyarchy data are implemented as outlined in Vanhanen (2000) and Section 2.2.3, with the exception of Participation where – following Vanhanen’s (2003:19) argument about raising the threshold value for this indicator in later studies – ‘high’ participation is regarded as equal to or above 25%. This modification brings the number of jointly high participation dyads closer to the number of dyads where both countries meet the threshold for competition. An additional cause for raising the threshold is the disproportionate number of countries that fulfill a participation criterion of 10% but not the other two required for democracy. There are 3,207 democratic country years in the system, 4,474 country years with participation at or above 10%, but only 3,335 with competition at or higher than 30%. Among the observations where participation is larger than zero, only 5.6% of them do not reach the 10% threshold. As previously mentioned, Vanhanen argues that the two indicators are of equal importance, but competition is clearly more determining in deciding overall democracy than participation when applying the default thresholds to the period after the Second World War.

⁵⁹ This threshold is also encountered in Jagers & Gurr (1995) who describe polities with scores of -10 to -7 and 7 to 10 as coherent polities with the intermediate values equally divided into incoherent autocracy and incoherent democracy.

⁶⁰ Syria vs. Israel in 1948 would be a jointly democratic conflict using this value. Syria has a Polity score of 5 for that year, while Israel scores a 10. See Table 6.4 for all jointly democratic using the Polity ≥ 6 threshold.

Time periods covered

The analysis have been performed for the years covered in the PRIO/Uppsala Armed conflict dataset up to the last year of observations included in Polyarchy, giving a period of 57 years 1946–2002. In addition, following Farber & Gowa's (1995:142) assertion that the “conventional wisdom about the relationship between democracies and war applies, in fact, *only* to the Cold War years”, the data have also been ran for the period 1989–2002. For the latter period, the Freedom House classifications of ‘Free’ versus ‘Not Free’ and ‘Partially Free’ have also been included in addition to Polity and Polyarchy.

Missing data problems

The most widely used system membership definition by far is that of the Correlates of War project (2005) based on the work of Russett et al. (1968). Gleditsch & Ward (1999:398) have proposed an alternative operationalization of system membership that include countries with a population of more than 250,000 that have ‘a relatively autonomous administration over some territory’, and is ‘considered a distinct entity by local actors or the state it is dependent on’.

Both the Gleditsch (2003) modified Polity data and the PRIO/Uppsala Armed Conflict data are based on the Gleditsch & Ward international system, and missing data problems when combining the datasets are thus kept to a minimum. Originally, the modified Polity 4 data have preserved the Polity codes ‘-66, -77 and -88’ for those countries where they apply, while there are currently no explicit coding of interruption and transition periods in Polyarchy. As the dataset is based on the presence of electoral variables, periods of breakdown in the governmental system are by definition periods of non-democracy, and therefore a ‘non-interrupted’ Polity-measure is also desired. Facilitating such analytical requirements, the latest official release of Polity (Marshall & Jaggers 2002) does add a modified version of the Polity scale (the Polity2 variable), which converts instances of these special values to conventional Polity scores:

- –66 Cases of foreign ‘interruption’ are treated as ‘system missing’.
- –77 Cases of ‘interregnum’, or anarchy, are converted to a ‘neutral’ Polity score of ‘0’.
- –88 Cases of ‘transition’ are prorated across the span of the transition. For example, country X has a POLITY score of –7 in 1957, followed by three years of –88 and, finally, a score of +5 in 1961. The change (+12) would be prorated over the intervening three years at a rate of per year, so that the converted scores would be as follows: 1957 –7; 1958 –4; 1959 –1; 1960 +2; and 1961 +5. (Marshall & Jaggers 2002:16)

The version of the Polity data used in this thesis does not contain this coding, however, and the category ‘Missing Data or Regime Transition’⁶¹ used in Gleditsch & Hegre (1997) have therefore been disregarded from the review to better facilitate comparison with the Polyarchy results. The Polity codes detailing interruption and transition have been regarded as non-democracies when creating the dichotomous categorization of democracies and non-democracies.

This interpretation is relatively unproblematic for the Polity coding of –66 and –77. Countries occupied by a foreign state are not democracies by Vanhanen’s definition, nor does it seem inconsistent with the Polity project’s conceptualization of institutional democracy as outlined in Section 2.2.1. The same can be said for the –77 coding, and these countries would not be democracies either using the modified Polity2 variable. The –88 coding is somewhat less straightforward, but a cursory review of the data does not reveal any obvious cases where country years experiencing conflict having this coding would transition to the democracy category using a threshold of ≥ 6 on the combined Polity scale. Using a less stringent threshold of democracy would make this category more difficult, and an argument could probably be made for a limited number of observations. Nevertheless, the

⁶¹ Although included in the tabulations, Gleditsch & Hegre (1997:287) did also exclude this data when conducting the significance tests.

central aspects of the Polity democracy-definition are unlikely to be fulfilled in a system in flux, and thus these observations have been regarded as non-democracies as well. Finally, some dyad years at war are not included in the Polyarchy analysis. These are due to the coding of South Vietnam in 1975, which does not have data in Polyarchy because all Polyarchy observations are sampled at the end of the year and the South Vietnamese government surrendered on 30 April 30⁶².

5.3.2 Dangerous dyads revisited – again

Dataset description and time period covered

The full replication dataset includes a total of 533,655 dyad-years for the time period under review, ranging from 1816 to 1993. The dataset description is in large based on Appendix A in Buhaug's article (2005:108–111). I refer to this work for a more exhaustive review of the choices made in compiling the replication data and where they may differ from the ones used in Bremer's original (1992) article. Prior to the multivariate analysis, Bremer recoded all exogenous variables into dummies reflecting the most war prone condition, and consequently, high values for the independent variables in the replication dataset are assigned based on the connection found by Bremer in his exploratory bivariate analysis of the data (1992:326, 334).

Interstate war onset (dependent variable): Buhaug (2005) employs several statistical models where the dyad year is the unit of analysis. The dependent variable is a dichotomous indicator of dyadic war onset based on information from Version 3.0 of the COW project's interstate war dataset (Sarkees 2000). The measure is onset of war rather than incidence, thus censoring consecutive observations of conflict, which reduces the serial correlation between cases. Additionally, only dyads in which both states were original combatants are included. By definition, a state is an original

⁶² As stated in the 'Vietnam, Republic of' coding sheet. See: <http://home.no.net/larsbw/thesis/>. In Polity, South Vietnam is coded as terminated on 31 December 1975.

participant if it is involved on the first day of the war. Hence, for example, Germany vs. Poland is the only dyad involved in the onset of World War II.

Geographical proximity: To explore the impact of proximity on the probability of war, Bremer relied on the COW Direct Contiguity dataset. In this dataset, the states in a dyad are either contiguous by land, contiguous by sea (separated by a maximum of 150 miles of water), or not contiguous. The replication data is based on the current Version 3.0 of the COW contiguity data (Stinnett et al. 2002). The proximity dummy is assigned a value of one if the states in the dyad (at the time of the observation) are contiguous by either land or sea.

Relative power: Using the COW National Material Capability dataset (Singer et. al 1972), Bremer constructed a Composite Index of National Capability (CINC) that gives the joint average score for military, economic, and demographic capability. The relative capability ratios for all dyad-years were calculated and the dyads were classified into three groups. A capability ratio of less than or equal to 3 corresponded to a small power difference, if the ratio was higher than 10 the relative power was considered to be large, whereas a ratio between 3 and 10 implied a medium power difference. The dichotomized relative power variable receives the value of one if there is small or medium (i.e. not large) power difference.

Power status: The power status variable in Bremer's analysis gave the number of major powers in the dyad as defined by the COW System Membership dataset (Russett et al. 1968; Correlates of War Project 2005). The power status dummy variable equals 1 if there is at least one major power in the dyad.

Alliance: The replication dataset uses Version 3.0 of the COW alliance dataset (Gibler & Sarkees 2004). Here, dyads are classified as belonging to one of four groups: a) defense pact, b) neutrality treaty, c) entente, and d) no formal agreement. In the multivariate analyses, Bremer made no distinction between the different levels of formal agreements; hence, the dummy alliance variable is assigned a value of 1 if any security agreement is present and 0 otherwise.

Development: The replication dataset uses the current Version 3.0 of the COW National Material Capability dataset data for the development measure. A simple dichotomous variable is computed, measuring whether each state's share of system-wide economic capability (iron and steel production and energy consumption) was larger than that of demographic capability (urban and total population). The dyads are then assigned to one of three groups: a) both more developed, b) one more developed, and c) both less developed. The dummy development indicator is assigned a value of 1 if both states in the dyad are developed.

Militarization: Following the logic of the development indicator, a state is considered more militarized if its share of global military capability (number of military personnel and military expenditure) is larger than its share of demographic capability. This variable is also based on the COW National Material Capabilities dataset. The dichotomous militarization variable is coded 1 if both states are more militarized.

Polyarchy/Polity 4: The democracy indicators was added by first creating a dyadic dataset for all Polyarchy observations containing dummy variables for two democracies, mixed dyad, no democracies, jointly high competition, mixed competition, jointly low competition, jointly high participation, mixed participation, and jointly low participation. The threshold values for all Polyarchy-derived indicators are set as per Vanhanen's recommendations previously outlined in Section 2.2.3. In addition, following Buhaug's (2005:96) comment that: "the original analysis relied on a rather unconventional proxy for democracies", and the fact that Bremer's other democracy variable was based on the unmodified democracy score – rather than the (now) more conventional Polity index – dummies for jointly democratic, mixed, and non-democratic dyads using the modified Polity 4 (Gleditsch 2003) have also been included. These utilize the same operationalization of democracy previously outlined in Section 5.3.1. As in Buhaug's analysis (2005:98), all regime variables were lagged one time-period before being merged with the replication dataset.

Errors and missing data problems

One error has been discovered in the replication dataset. Five dyads with war onset involving Israel in 1948 has not been assigned as missing for the lagged independent variables. These observations should not have been included as Israel enters the international system in 1948, and does not have information in the source datasets for the preceding year. Correcting this error cause a noteworthy change to the significance of the ‘Both not democratic (Polity)’ indicator in for one of the models (Model 5) in Buhaug’s analysis; it is no longer significant at the $p < .05$ level (-0.397 ; $p = .085$). See Buhaug (2005:104) for the original uncorrected table. This finding further weakens Bremer’s (1992:337) assertion that democracy works as a war-reducing factor in and of itself.

Comparing the Polity-based indicator from the replication dataset to the new Polity 4-based indicator, two observations are lost due to what appears to be a mislabeled or outdated coding in the COW dataset. Yugoslavia is listed as being a participant in the First and Second Balkans war (1912 and 1913) although the country was not a member of the COW state system at the time. Going by the system membership list, that observation should belong to Serbia. One observation is lost from the Spanish-Moroccan war from 1909, because the Gleditsch & Ward international system (1999) does not consider Morocco an independent state after being declared a French protectorate in 1904. On the other hand, several observations are ‘gained back’ from using the modified Polity 4 data, leaving us with 110 valid observations out of the 121 war onsets in the full dataset versus 106 in the analyses performed by Buhaug (101 after correcting the abovementioned error).

Turning to Polyarchy, four observations are gained compared to Polity. Three of them coming from Yugoslavia 1912, 1913 and 1914 (coding Serbia as the same entity up to 1918), and the last coming from the transition from Austria-Hungary to Austria and Hungary, which does not affect Polyarchy (having coded ‘Transleithanian Hungary’ for Hungary and ‘The Habsburg Monarchy of Austria-Hungary’ for Austria up to 1919). Considering the reverse, moving from Polity 4 to Polyarchy, the missing data

problem is more severe and a larger number of observations are inevitably lost than what was gained. A total of 26 war onsets have valid observations for the Polity indicators but not for the Polyarchy ones.

- 15 observations are lost due to not having data for most of the German participant-states in the 1866 Seven Weeks War.
- Three observations are similarly lost for the Franco-Prussian conflict of 1870.
- The Spanish-Moroccan conflict from 1859 is lost in Polyarchy due to Morocco not having data until the ‘second’ Moroccan independence in 1956.
- The Russian-Polish war from 1919 is lost due to Polyarchy only having data recorded from that year on, causing the observation to be dropped after lagging the variable whereas Polity also has data for 1918.
- A further six observations are lost related to the coding of Italy in 1848, 1849, 1859 and 1860. This is caused by Italy not having data until 1861, and Polyarchy not recording anything for the Papal State and Sicily.

Due to the larger amount of missing information, mostly concerning states whose ‘demise’ predates the consolidation of ‘modern’ Western Europe, only 88 war onsets remain to be included in the analyses for the Polyarchy-derived indicators.

Analyzing interstate war onset

As noted, the dependent variable in this analysis is dichotomous, taking the value 1 for years with a conflict onset and 0 for the non-event years with peace. Thus, the use of OLS regression will be inappropriate as it could predict values outside of the valid 0–1 interval. A better approach would be to use logistic regression, a statistical regression model for binary dependent variables, which is therefore inherently more suitable for dealing with dichotomous outcomes such as the presence or absence of war onset. It can be considered a generalized linear model that utilizes the logit as its link function. The logit model takes the following form (Helland 1999):

$$\log\left(\frac{p}{1-p}\right) = \alpha + \beta_1 X_1 + \dots + \beta_k X_k$$

The log of the odds (probability divided by one minus the probability) of the outcome is modeled as a linear function of the explanatory variables, X_1 to X_k . The initial assumption for a logistic regression is independence across all observations but such a postulation is not easily reconciled with the data in this case, because wars do not occur in a vacuum. I.e. it is probable that having experienced conflict in the past will increase the chance of its reoccurrence. Consequently, there is very likely dependence in time between the observations in the dataset (and possibly also in space). Thus, the absence of autocorrelation, the relationship between two values of the same variable at times X_i and X_{i+k} can not be taken for granted. That is to say, autocorrelation occurs when the error terms from observations of the same variable – at different times – are correlated.

Gleditsch et al. (2002:620) note that: “Most quantitative studies of armed conflict use the country-year or the dyad-year as the basic unit of analysis. The dependent variable may be the onset of a new conflict, the onset of new dyadic conflict (a new country joining an ongoing conflict), or the incidence of conflict in a given year. Scholars disagree as to whether or not the onset of war is likely to have a different causation from the continuation of war”. Russett & Oneal (2001:95), for example, hold that leaders will re-evaluate their positions during a conflict and that it is therefore most appropriate to use incidence of conflict as the dependent variable, while others such as Gleditsch & Hegre (1997) report results for onset as well as incidence in order to test if their findings are robust. Bremer (1992:320) is of the opinion that war should be seen as a process rather than an event, and that the causations controlling how a war evolves are separate from those affecting why it begins in the first place. Because, the “question of why wars begin is fundamentally different from the questions of why wars grow in size, duration, or severity”. Hence, the choice of analyzing only the onset of war for the originating states in the conflict. However, using onset does not reduce the dependence over time between observations of peace, so observations on the dependent variable may still be correlated over time. Thus, it would be equally justifiable to remove successive observations of peace, but this solution is obviously not viable as it would “exclude time-varying covariates and thus

remove most of the data that might explain why some dyads are more likely to enter a war than others” (Buhaug 2005:101).

A viable alternative according to Raknerud & Hegre (1997:393) is to control for a decaying function where it is assumed that the risk of experiencing a new conflict is high in the period immediately following an armed conflict, and that this risk diminishes gradually over time⁶³. The effect of a previous conflict is estimated according to the formula $decay = 2^{-(T/\alpha)}$, where T is the number of years since a country experienced an armed conflict, while α decides at what rate the effect of a previous armed conflict is reduced over time. Other solutions put forward include a grouped duration analysis of discrete time as suggested by Beck et al. (1998); general estimation equations (GEEs) as used by Oneal & Russett (1999); as well as Cox survival-time models. The problem of controlling for temporal dependence (and its possible solutions) is comprehensively discussed in quantitative political analyses, and it has led to the application of ever more advanced statistical models in the field of international relations research. For an introduction to this debate, I refer to the articles by Raknerud & Hegre (1997), Beck et al. (1998), and lastly Bennett & Stam (2000) who provide an empirical assessment of GEE to comparable models⁶⁴.

Bremer employed a Poisson regression model where the unit of observation is the dyad type rather than the dyad-year, and in doing so, he bypassed the problem of temporally correlated units (Buhaug 2005:101). In view of the methodological developments and refinement since Bremer’s article, Buhaug included results from four alternative statistical methods designed to reduce the errors introduced by having temporarily dependent observations, thus attempting to assess whether selecting a different statistical approach over an expanded sample would alter the main findings from the original analysis. These are referred to by Buhaug as: Logit w/ cubic splines

⁶³ Raknerud & Hegre used a Cox regression in this article, but in later works, such as Mosseau, Hegre & Oneal (2003), Hegre has applied the same correction to logit analysis dubbing the decay variable the ‘Brevity of Peace’.

⁶⁴ Beck et al (2000) have advocated moving beyond logit, instead proposing the application of neural network theories.

(Beck et al. 1998), Logit w/ decaying function (Raknerud & Hegre 1997), GEE (Liang & Zeger 1986) and Cox proportional hazard (Cleves, Gould & Gutierrez 2004). In the decaying function, following Buhaug, the decay variable is estimated with a half-life of just one year. The GEE model requires the user to specify the underlying distribution of the dependent variable as well as the within-group correlation structure. With a binary dependent variable, the binomial distribution is selected and, following previous works employing the method, a one-year time lag is applied to the autocorrelation structure (Oneal & Russett 1999; Buhaug 2005).

For the purposes of the re-replication of Buhaug's study, Bremer's original multivariate Poisson model is disregarded from the analysis in order to maintain as large a temporal scope as possible. Not only do Buhaug's substitute approaches extend the data from 1965 to 1993, but the methods employed also constitute what today are regarded as more conventional statistical estimation models with regards to correcting for the problem of temporal dependence (Buhaug 2005:101–103). In addition, to keep the number of alternative models within reasonable limits the Cox analysis has also been omitted, as this appears to be the least common of the alternate models for international relations research.

This leaves me with 12 different regime-type dummies to be tested across three distinct statistical approaches: 1) no democracies (Polyarchy), 2) mixed dyad (Polyarchy), 3) both democracies (Polyarchy), 4) jointly low competition, 5) mixed dyad (competition), 6) jointly high competition, 7) no democracies (Polity), 8) mixed dyad (Polity), 9) both democracies (Polity), 10) jointly low participation, 11) mixed dyad (competition), and finally, 12) jointly high participation. The jointly non-democratic (for Polity and Polyarchy) and jointly low (for competition and participation) dummies have been kept as reference categories for comparisons to Bremer's operationalization of Polity ($DEMOC \geq 5$) as used in Buhaug's expanded analyses. Jointly democratic (high) and mixed dyads are estimated in the same model.

The analysis is carried out using the statistical software *Stata 8* (Stata Corp. 2003).

6. Empirical Analysis

To get a general idea of how the different regime type variables are related to armed conflict and if they differ from one another, I start by presenting the bivariate analyses of democracy and incidence of armed conflict outlined in the previous chapter. These results are not suitable for drawing any conclusions regarding causal relationships, but they should give an indication of the characteristics of the variables to see if there are any that differ markedly from the others in their relationship with conflict. Later I move on to the replication models, which study the onset rather than the incidence of war. These models will also control for additional relevant factors.

6.1 Bivariate results: Peace and democracy 1946–2002

First, turning to the monadic relationship between democracy and internationalized conflict, this test seeks to determine whether democracies differ from other regimes in their likelihood of experiencing armed conflict in a given year, and if the choice of indicator has an impact on this relationship. The results are outlined in Table 6.1.

Table 6.1 Monadic democracy and incidence of armed conflict¹

<i>Democracy measure</i>	<i>Democracy</i>	<i>Not democracy</i>	<i>All country years</i>	X^2	p
Polity 4, 1946–2002	9.22 (229)	13.77 (585)	10.79 (814)	24.3	8.3 ⁻⁷
Polyarchy, 1946–2002	8.61 (276)	12.46 (537)	10.82 (813)	28.3	1.0 ⁻⁷
Competition, 1946–2002	8.77 (295)	12.48 (518)	10.82 (813)	25.2	2.6 ⁻⁷
Participation, 1946–2002	7.87 (278)	13.42 (535)	10.82 (813)	60.2	8.6 ⁻¹⁵
Polity 4, 1989–2002	7.88 (89)	10.58 (128)	9.28 (217)	5.0	0.025
Polyarchy, 1989–2002	7.49 (101)	11.74 (116)	9.29 (217)	12.1	4.8 ⁻⁴
Freedom House, 1989–2002	8.12 (70)	10.06 (147)	9.34 (217)	2.4	.120
Competition, 1989–2002	7.47 (103)	11.90 (114)	9.29 (217)	13.1	2.9 ⁻⁴
Participation, 1989–2002	8.15 (117)	11.10 (100)	9.29 (217)	5.7	.017

¹Percentage of country years in armed conflict; number of country years in conflict in parentheses.

Contrary to the *H4a* hypothesis, the monadic tests indicate that democracies are somewhat less war-prone than non-democracies and that the difference is significant. When considering the whole period, the introduction of internationalized internal conflicts and the coding of transitional regime types as non-democracies make the Polity result differ from the findings in Gleditsch & Hegre (1997; 2004), but keeps them in line with the Polyarchy results. A review of the data reveals that long-standing internal conflicts, in predominantly non-democratic countries with predominantly non-democratic incursions, during the Cold War era cause the results to diverge from the expected finding⁶⁵.

Moving on to the post-Cold War period, the results are noticeably weaker and not significant for all measures. This change is in particular caused by multi-participant ‘democratic intervention’ wars in Kuwait and Yugoslavia, along with the coding of certain conflicts related to the ‘War on Terror’. Additionally, conflicts recorded in Afghanistan for 2001 and 2003; and USA vs. Al Qaeda in 2001–02, wherein a large number of democratic states are involved, are regarded as internationalized internal conflicts in the data, thereby – for the post-Cold War-era – reversing the trend of non-democracies being overrepresented in this category in the 1946–2002 period as a whole. While there has been a decline change in the *number of internationalized conflicts* globally since the end of the cold war (Sollenberg & Wallensteen 2005), this trend is less clear when counting *participants in conflict*. As such, the inclusion of internationalized internal armed conflicts has definitely affected these results.

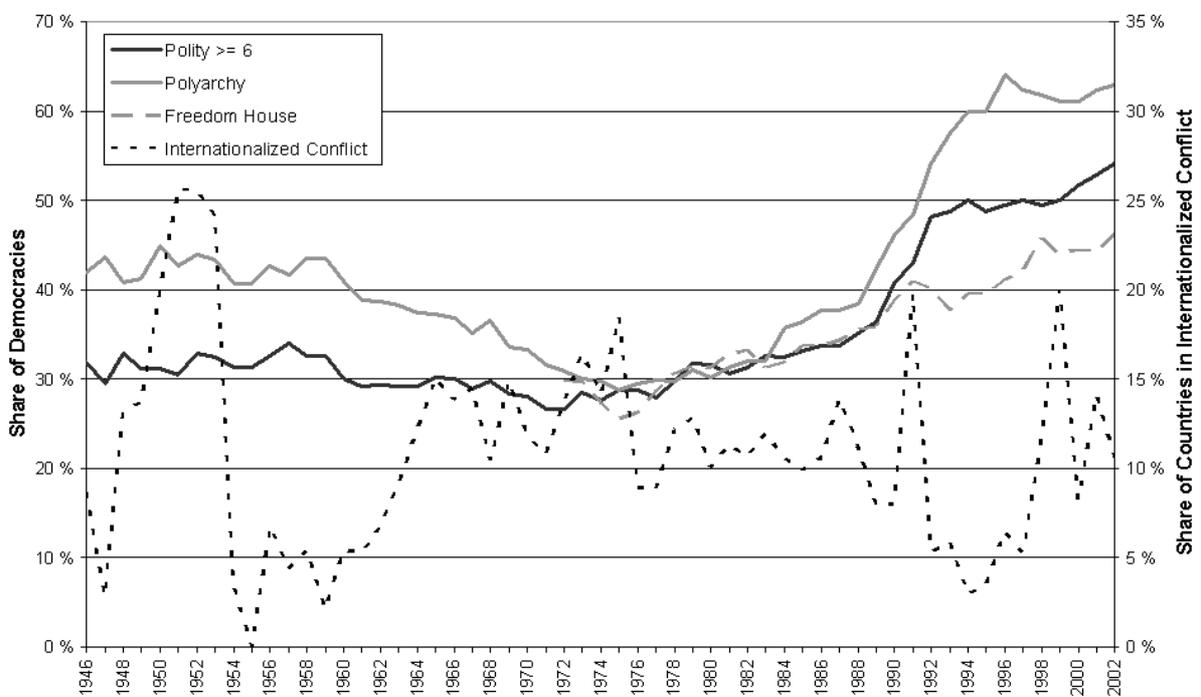
Gleditsch & Hegre (1997) also demonstrated that, depending on the conflict data used, countries missing regime data due to transition or interruption in the Polity dataset had the overall highest chance of conflict, but this group was not included when calculating the significance of the relationship between peace and democracy. Hegre et al. (2001) have pointed out that regime change, regardless of the direction,

⁶⁵ When using only interstate conflicts and excluding the transition- and interruption categories from the Polity data democracies are – as expected – slightly more war-prone for both measures, although the results are not significant; this relationship is also present when using Polyarchy as the democracy indicator.

makes a country more susceptible to internal conflict, and the results in Mansfield & Snyder (2005) indicate that countries in rapid change might be more externally war-prone than other countries as well. My operationalization of the Polity variable may have influenced the finding that democracies are more peaceful, because it dichotomizes between democracies and ‘others’. Thus, some of the difference may stem from the inability to differentiate between stable autocracies, and those that are non-democracies due to political change, internal turmoil or are otherwise lacking coherent political leadership. The latter may be more war-prone than the former. A comparison illustrating the nation-level relationship between the share of countries involved in conflict compared to the share of countries in the system that are regarded as democratic for the various democracy measures is shown in Figure 6.1.

Now, moving on to the dyadic relationship, the tendency is clearer. The results when considering the whole 1946–2002 period under review are outlined below in Table 6.2, and the post-Cold War period 1989–2002 in Table 6.3.

Figure 6.1 Share of democracies and international conflict, 1946–2002¹



¹Democracy data as in Figure 2.2. Conflict data adapted from Gleditsch et al. (2002).

Table 6.2 Dyadic democracy and incidence of armed conflict, 1946–2002¹

Type of relationship	Two democracies*	One democracy*	No democracies*	X^2	p
<i>Polity 4, N=524,503</i>					
At war (662)	.012 (9)	.125 (297)	.168 (356)	108.5	2.8 ⁻²⁴
Allied (1702)	.828 (627)	.290 (689)	.183 (386)	732.5	8.7 ⁻¹⁶⁰
Dyad years	75,793	237,299	211,411		
<i>Polyarchy, N=520,802</i>					
At war (660)	.013 (14)	.147 (358)	.165 (258)	138.2	9.7 ⁻³¹
Allied (1696)	.760 (805)	.252 (610)	.163 (281)	797.7	6.2 ⁻¹⁷⁴
Dyad years	105,907	242,258	172,637		
<i>Competition, N=520,802</i>					
At war (660)	.013 (15)	.160 (392)	.157 (253)	149.6	33.4 ⁻³³
Allied (1696)	.783 (895)	.262 (642)	.098 (159)	1022.7	8.4 ⁻²²³
Dyad years	114,373	244,981	161,448		
<i>Participation; N=520,802</i>					
At war (660)	.043 (55)	.131 (326)	.193 (279)	121.5	4.2 ⁻²⁷
Allied (1696)	.521 (665)	.283 (706)	.225 (325)	209.0	4.1 ⁻⁴⁶
Dyad years	127,519	249,053	144,230		

¹Percentage of dyad years in armed conflict; number of dyad years in conflict in parentheses.

*For competition and participation ‘democracy’ refers to high values on the individual indicators.

The X^2 tests refer to the two 2x3 matrixes that emerge when considering ‘At war’ and ‘Allied’ individually as a binary variable along with the three regime-type categories. d.f.=2.

Democracies are shown to be significantly less likely to be involved in wars against each other and significantly more likely to fight on the same side in a conflict. The coefficients differ to some extent, but all are strong and highly significant. Of the four indicators that are tested, countries with high competition are the most underrepresented when it comes to the incidence of armed conflict. However, the tendency is the same for all measures.

Table 6.3 Dyadic democracy and incidence of armed conflict, 1989–2002¹

Type of relationship	Two democracies*	One democracy*	No democracies*	X ²	p
<i>Polity 4; N=194,510</i>					
At war (119)	.018 (8)	.053 (51)	.116 (60)	55.6	8.3 ⁻¹³
Allied (803)	.936 (428)	.270 (232)	.218 (113)	400.6	3.7 ⁻⁶²
Dyad years	45,710	96,953	51,847		
<i>Polyarchy; N=194,039</i>					
At war (119)	.017 (11)	.051 (49)	.169 (51)	88.7	3.2 ⁻²⁰
Allied (803)	.658 (432)	.275 (257)	.327 (114)	145.6	2.4 ⁻³²
Dyad years	65,611	93,569	34,859		
<i>Freedom House; N=191,871</i>					
At war (119)	.000 (0)	.057 (51)	.090 (68)	26.2	2.0 ⁻⁰⁶
Allied (803)	1.341 (354)	.351 (315)	.177 (134)	655.1	5.5 ⁻¹⁴³
Dyad years	26,389	89,799	75,683		
<i>Competition; N=194,039</i>					
At war (119)	.016 (11)	.055 (51)	.174 (57)	91.2	1.6 ⁻²⁰
Allied (803)	.656 (450)	.269 (249)	.317 (104)	185.4	5.6 ⁻⁴¹
Dyad years	68,558	92,674	32,807		
<i>Participation; N=194,039</i>					
At war (119)	.018 (13)	.078 (71)	.121 (35)	44.0	2.7 ⁻¹⁰
Allied (803)	.570 (422)	.312 (284)	.335 (97)	70.9	4.0 ⁻¹⁶
Dyad years	74,073	91,005	28,961		

¹Percentage of dyad years in armed conflict; number of dyad years in conflict in parentheses.

*For competition and participation ‘democracy’ refers to high values on the individual indicators. The X² tests refer to the two 2x3 matrixes that emerge when considering ‘At war’ and ‘Allied’ individually as a binary variable along with the three regime-type categories. d.f.=2.

Moving on, the results for the post-Cold War era reveal a trend that is not too dissimilar. Democracies are still significantly less likely to be involved in wars against each other and significantly more likely to fight on the same side in a conflict.

Although the coefficients vary somewhat more and are weaker than for the whole time period, there are no significant differences between the measures such as the ones observed on the monadic level. For the dyadic tests, the results are in accordance with the hypotheses derived from Gleditsch & Hegre (1997) as stated in Chapter 5, and support their finding of a relationship between democratic pairs of states and the absence of armed conflict. This correlation is found to be robust across several indicators of democracy.

These two tables make it is clear that conflict between two democracies is a rare event. Consequently, considering the law-like interpretation some researchers and policy makers have given to the democratic peace proposition, it seems prudent to include a brief review of the anomalous dyad years. A list of conflicts between democracies for the Polity and Polyarchy measures is outlined below in Table 6.4. There are no conflicts recorded between free countries using the Freedom House indicator during the 1972–2002 period for which there are data available.

Table 6.4 Incidence of armed conflict between democracies, 1946–2002

<i>States</i>	<i>Year</i>	<i>Type of conflict¹</i>
Syria-Israel*	1949	Intermediate international conflict
Lebanon-Israel*	1949	Intermediate international conflict
Cyprus-Turkey	1974	International war
USA-Panama	1989	Minor international conflict
Croatia-Yugoslavia*	1993	Minor internationalized internal conflict
Ecuador-Peru*	1995	Minor international conflict
India-Pakistan	1989–91; 1996–98	Intermediate international conflict
India-Pakistan*	2002	Intermediate international conflict

¹As categorized in Strand et al. (2004:10–11).

*Only jointly democratic in Polyarchy.

The first couple of ‘democratic’ conflicts highlight some differences in how countries are classified in the two datasets. Polyarchy regards Syria as borderline democratic in

1949, due to somewhat competitive elections with participation just short of 12%. This yields a Polyarchy ID score of 5.1, which is barely above the threshold for democracy. Lebanon had more competitive elections the same year, but participation is relatively low here as well – 14% – giving an ID of 9.9. Polity codes these countries at -7 (having dropped from +5 on December 19 that year) and 2 respectively. Again, Lebanon is considered more democratic than Syria, but the reasoning is different. The drop in the Polity score is due to a (partial) coup that Polyarchy does not count because Shishakli was content to rule within a parliamentary facade until 1951. The next two observations are coded as conflicts between democracies in both datasets, but are both included due to measurement inaccuracies. In the case of Cyprus vs. Turkey, the Turkish invasion was preceded by a Greek Cypriot military coup, whereas in the on 16 December US vs. Panama conflict, the US invasion resulted in the instatement of a democratic regime (presidential elections held earlier that year that had been unilaterally nullified by Noriega). The Ecuador-Peru border clash over the Cordillera del Condor region is again considered a conflict between democracies due to the differences between the datasets. In Polyarchy, the presidential election of Fujimori in Peru fulfills the criteria for democracy while the country is only coded as a 1 on the Polity variable. Similarly, 1992 elections in both Yugoslavia and Croatia – preceding Serb incursions in the Croat civil war the following year – fulfill the criteria for democracy in Polyarchy, while Polity has the countries far from the democracy threshold at -7 and -3 respectively. Finally, and perhaps the least problematic of these cases, is the on-and-off Kashmir dispute between India and Pakistan. Both datasets are in agreement for most of the country years, with the only difference being that Polyarchy considers Pakistan as borderline democratic in 2002 following parliamentary elections and a referendum confirming Musharaf's presidency (counting it as a presidential election) with subsequent consecutive powers that year⁶⁶.

⁶⁶ There is an ambiguity in the source material here that states the concurrent powers as 50%/50%, while Vanhanen's manual calculation of the ID suggests that the division of power should be 75%/25% for the presidential and parliamentary power respectively. In the latter case Pakistan is not a democracy in 2002. This change does not, however, significantly alter any of the results presented earlier in this chapter.

6.2 Multivariate results: Dangerous dyads revisited – again

After running all the models, it was discovered that they did not differ widely from each other with regards to the regime-type indicators depending on the statistical method used. As these are the principal focus of this study, only the results from the logit with a decaying correction models have been tabulated. Any additional or deviating findings are noted in the accompanying text. The choice of what method to present is somewhat arbitrary, and in part based on purely presentational reasons as well as my level of familiarity with the individual methods. Of the two logit approaches, the spline function of the ‘peace years’ (Beck et al. 1988) used to model the temporal dependence, is in practice similar to the decaying function suggested by Raknerud and Hegre (1997). Hence, I have chosen to adopt the latter, more parsimonious model (Mosseau et al. 2003)⁶⁷. Also for space reasons, and due to the replication nature of the data used, I will not discuss the dataset further, except to note that the aforementioned 1974 Cypro-Turkish War is the only war onset observed in the dataset as jointly democratic the year before the conflict, i.e. using the lagged regime-indicators. Results for the twelve regime-type variables are shown in Tables 6.5 and 6.6 below.

Jointly democratic dyads perform about the same regardless of whether Polyarchy or Polity is used as the basis for the coding. In addition, the individual Polyarchy indicators show a robust positive relationship with peace for both jointly high competition and jointly high participation dyads. Ray (2003:8) advises that there should be made a clear distinction between complementary and competing explanatory factors when specifying a model. That “it should be clearly distinguished theoretically, and in discussions or explanations of research findings from the process in which control variables are intended to expose the relationship of key interest as spurious”.

Table 6.5 Dyadic War Onset 1816–1993: Polyarchy and Competition¹

<i>Variable</i>	<i>Polyarchy</i>		<i>Competition</i>	
	Model 1	Model 2	Model 3	Model 4
Proximity	3.620 ^{***} (.284)	3.674 ^{***} (.289)	3.620 ^{***} (.280)	3.677 ^{***} (.284)
Not large power difference	1.037 ^{***} (.281)	1.016 ^{***} (.279)	1.045 ^{***} (.279)	1.005 ^{***} (.274)
At least one major power	1.531 ^{***} (.303)	1.514 ^{***} (.305)	1.570 ^{***} (.302)	1.562 ^{***} (.303)
Allied	-.550 [*] (.313)	-.528 [*] (.317)	-.563 [*] (.312)	-.527 [*] (.315)
Both democracies²		-2.364 ^{**} (1.016)		-2.786 ^{***} (1.024)
Mixed dyad		-.084 (.246)		-.115 (.224)
Both non-democracies²	.356 (.243)		.415 [*] (.223)	
Both developed	-2.279 ^{***} (.729)	-2.054 ^{***} (.727)	-2.225 ^{***} (.723)	-1.832 ^{**} (.723)
Both militarized	.441 (.276)	.404 (.276)	.466 [*] (.270)	.400 (.273)
Decay	1.468 ^{**} (.632)	1.447 ^{**} (.627)	1.443 ^{**} (.645)	1.394 ^{**} (.635)
Intercept	-10.879 ^{***} (.298)	-10.531 ^{***} (.303)	-10.897 ^{***} (.297)	-10.473 ^{***} (.290)
Wald Chi-square	643.93 ^{***}	647.04 ^{***}	653.01 ^{***}	653.86 ^{***}
N	478,105	478,105	478,105	478,105

¹Robust standard errors are listed in parentheses.

²For competition and participation ‘democracy’ refers to high values on the individual indicators.

* p < .1; ** p < .05; *** p < .01, two-tailed tests.

⁶⁷ Regrettably, the two logit approaches in this thesis have employed software enhancements that may not be readily available. An extension to Stata used in the analyses has, at the time of writing, become unavailable from its normal website at <http://www.vanderbilt.edu/~rtucker/programs/btses/>.

Table 6.6 Dyadic War Onset, 1816–1993: Polity 4 and Participation¹

<i>Variable</i>	<i>Polity 4</i>		<i>Participation</i>	
	Model 5	Model 6	Model 7	Model 8
Proximity	3.289*** (.268)	3.316*** (.270)	3.598*** (.277)	3.664*** (.280)
Not large power difference	.659*** (.243)	.662*** (.243)	1.023*** (.281)	1.003*** (.280)
At least one major power	1.369*** (.271)	1.371*** (.274)	1.479*** (.305)	1.436*** (.306)
Allied	-.012 (.244)	.021 (.247)	-.534* (.315)	-.531* (.317)
Both democracies²		-2.371** (1.039)		-1.422*** (.468)
Mixed dyad		-.124 (.231)		-.169 (.235)
Both non-democracies²	.349 (.237)		.460* (.229)	
Both developed	-1.121*** (.420)	-.878** (.413)	-2.234*** (.707)	-2.056*** (.719)
Both militarized	.693*** (.236)	.669*** (.238)	.432 (.275)	.412 (.276)
Decay	1.553** (.620)	1.523** (.617)	1.431** (.631)	1.430** (.629)
Intercept	-10.428*** (.251)	-10.110*** (.264)	-10.844*** (.284)	-10.372*** (.313)
Wald Chi-square	736.17***	732.15***	645.70***	686.30***
N	474,753	474,753	478,105	478,105

¹Robust standard errors are listed in parentheses. Uses modified Polity 4 data (Gleditsch 2003).

²For competition and participation ‘democracy’ refers to high values on the individual indicators.

* p < .1; ** p < .05; *** p < .01, two-tailed tests.

The results show that both jointly high competition and jointly high participation have a significant impact on the likelihood of war onset. Remembering that the two are correlated and that Vanhanen see both as *independent* indicators of democracy; they could therefore be seen as competing explanations in Ray’s terms. Consequently,

analyses were also conducted including both the competition and participation dummies as explanatory variables in the same model. These tests reveal that when estimated together, both coefficients are somewhat reduced with participation showing the biggest decline. Competition stays significant at the $p < .05$ level across all three statistical approaches, while the impact of participation ceases to be significant⁶⁸.

The majority of the results are mainly robust, also when using the other two of Buhaug's alternate statistical approaches to Bremer's analysis. Geographical proximity, power difference, and major power status are consistently significant at the $p < .01$ level, as in Buhaug's analysis. The lack of spatial separation, the absence of power preponderance, and the presence of a major power all increase the risk of war in a dyad. These results are hardly surprising. For most states, geographic proximity relates directly to the opportunity of the two states to go to war against each other, while the other two findings fit well with the realist notion that 'one does not fight a fight that one can't win'⁶⁹. This is in line with the utility argument put forth by Bueno de Mesquita et al. (1999), even though the effect remains strong after correcting for democracy. This finding indicates that non-democracies also to an extent avoid wars that could be considered fools errands when taking into account the relative power difference in the dyad; democracies are just a little better at this tactic.

Second only to proximity, joint high competition has the highest coefficients of the Polyarchy derived explanatory variables. This finding is confirmed across all models. Contradictory to the *H3* hypotheses, dyads with jointly high competition perform better than either of the aggregated democracy measures. Both p-values and coefficients are consistently higher across all three statistical models. Jointly high competition is significant at the $p < .01$ level in two, and $p < .05$ in the third of the

⁶⁸ See Model 9, Appendix B.

⁶⁹ Unless the opponent is a major power. This effect could likely be related to hegemonic struggles, but might also indicate that states are more willing to accept fights they believe they cannot *lose*.

alternate approaches. Correspondingly, the joint democracy and joint high participation dummies show similar results to those presented above. The dummies for no democracies, joint low competition, and low participation yield similar (low) coefficients across statistical methods, but the finding that jointly low competition and jointly low participation increases the likelihood of war is only significant in the logit w/ decaying function model presented above. With Polity 4, the effect of the no democracies indicator ($\text{Polity} \geq 6$) changes direction compared to Buhaug's findings using Bremer's operationalization (democracy equals $\text{DEMOC} \geq 5$), but is insignificant for all methods. Finally, the effect for the mixed democratic dyads is very weak and insignificant in all approaches, both for the Polyarchy and Polity 4-derived measures.

The behavior of the alliance variable varies with the choice of democracy measure. When using the Polyarchy-derived regime indicators (Models 1–4; 7, 8), allied countries tend to fight less, and this result is reasonably stable across the various statistical approaches. The relationship yields similar coefficients being borderline significant in all but one of the models using the other two approaches ($p = .066$ to $.104$). However, when using Polity (Models 5–6) as the regime indicator the coefficients are virtually eliminated and the results are far from significant with p -values ranging from $.862$ to $.985$. Again, these results are observed across all statistical approaches. Buhaug (2005:107) concludes that alliances, having little or no effect in Bremer's original model, had a significant pacifying effect in the replication models and that this deviation could only be explained by differences between the versions of the alliance data being used. On the other hand, comparing these results to the results of Buhaug's alternate expanded models would seem to indicate that this explanation might not be entirely satisfactory. Moreover and perhaps related to the previous finding, the change from Polyarchy to Polity based regime indicators also increases the significance of militarization. Its effect is (to a somewhat varying degree) observable across models and methods, although the coefficients are not major. For the Polyarchy derived indicators the results for militarization indicate a weak significance that is not robust across measures and methods, while for Polity the

coefficients are a little stronger and consistently significant at $p < .01$ level. The coefficients for power difference and development also decrease notably across all methods when comparing the Polity indicators to the others, although for these variables the effects always remain strongly significant.

To determine if these results were due to the decreased number of valid observations when using the Polyarchy-based indicators, the models were rerun with a reduced dataset including only the 84 war onsets that have regime-type data for both Polity and Polyarchy (originally 110 and 88). For comparison purposes, results for the reduced dataset are included using the jointly democratic and mixed dyad indicators, with both Polity 4 and Polyarchy (analogous to Models 2 and 6 above). These results are presented in Table 6.7.

Table 6.7 Dyadic War Onset, 1816–1993: Polity 4 and Polyarchy (only shared obs.)¹

<i>Variable</i>	<i>Polyarchy</i>	<i>Polity 4</i>
Proximity	3.637*** (.295)	3.608*** (.288)
Not large power difference	1.073*** (.288)	1.169*** (.299)
At least one major power	1.592*** (.310)	1.592*** (.316)
Allied	-.560* (.329)	-.618* (.326)
Both democracies	-2.325** (1.017)	-1.749* (1.030)
Mixed Dyad	-.042 (.249)	.240 (.246)
Both developed	-2.009*** (.729)	-1.993*** (.739)
Both militarized	.280 (.285)	.267 (.282)
Decay	1.528** (.629)	1.612** (.639)
Intercept	-10.593*** (.313)	-10.859*** (.347)
Wald Chi-square	626.84***	586.37***
N	478101	478101

¹Robust standard errors are listed in parentheses. Uses modified Polity 4 data (Gleditsch 2003).

* $p < .1$; ** $p < .05$; *** $p < .01$, two-tailed tests.

Using the reduced dataset, alliances are returned to significance while the impact of militarization is diminished and insignificant across methods and models. Also, the impact of the jointly democratic dyads is diminished when using Polity 4. With the reduced dataset, the Polyarchy jointly democratic and jointly high competition indicators perform markedly and sometimes significantly better than their Polity 4 counterpart does, whereas on the full dataset the differences were consistent but minor. Given these revised results, I tentatively conclude that the findings for alliances and militarization are indeed robust across both differing measurements and statistical methods, but they are *very* susceptible to case selection and missing data bias. The originally observed discrepancies between the Polity and Polyarchy models are due to different number of observations on the dependent variable⁷⁰.

Nevertheless, the swings in the performance of the other indicators when removing some war-onset observations from the data could be an observation that impacts other findings in international relations research. When looking at neatly tabulated results with a relatively similar number of observations, it may be easy to look for substantial explanations, ignoring the possibility of differences in the data as an equally plausible cause. On the other hand, if there were indeed complex interactions occurring between Polity as a measure of democracy and other explanatory variables, then switching to a simpler regime indicator such as Polyarchy might help resolve some of the inconsistencies seen in multivariate models of conflict noted by Ray (2003; 2005) and others. They may thus warrant further investigation to determine the exact nature of these relationships.

A summary of Stata output covering the original models (1-8) + the additional jointly high competition and jointly high participation model (9) for the Logit w/ cubic splines and GEE statistical methods (suffixed *a* and *b*) are included in Appendix B.

⁷⁰ As was previously noted, the majority of the differences between the datasets stem from 18 war onset dyads related to the Seven Weeks War and the Franco-Prussian War. Without checking this further, I speculate that there may have been similarities between the smaller German states to an extent where it could have made a greater impact to the results than if the lost observations had been more evenly spread throughout the data in both time and space.

7. Conclusions

7.1 Summary of findings

In the introduction, I stated my main research hypothesis as following:

$H_0 =$ Different measures of democracy will not significantly alter the significance of the relationship between democracy and other variables.

I made this hypothesis under the assumption that such measures would be derived from a valid concept of democracy based on the same theoretical and conceptual foundation, and that therefore the choice of indicators should not matter when it comes to determining the relationship between democracy and other phenomena.

I find evidence to indicate that both the null hypothesis and the assumption it was made under is false. First and foremost, the choice of democracy indicator does matter. Second, democracy is not a universally understood entity and, while Polity and Polyarchy may capture much of the same underlying phenomena, they measure things that are conceptually similar, but *not* the same. Third, researchers using democracy data may draw inferences from democracy ‘as they see it’ and not necessarily differentiate between this and the inferences that can feasibly be tested by the application the particular data that are being used.

Furthermore, disregarding the conceptual inconsistencies, different criteria of operationalization have an independent impact. When studying rare event outcomes, changes in where data is available for the various indicators chosen – even if the overall difference between them is minor – can have a significant influence on the outcome of statistical analyses if these discrepancies cause loss of observations on the dependent variable. Such an effect may not be easily identifiable on its own, as the change may modify the significance of other control variables as much as the regime variable, possibly leading to erroneous conclusions.

The most interesting finding among the empirical results is that the performance of Polyarchy as an indicator for peace is driven largely by the competition variable and that competition performs better in these tests than both the combined Polity indicator and the Polyarchy ID. This finding tie neatly into the lessons learned from the theoretical and methodological review in that it could – if confirmed – have substantial implications for the interpretation of the democratic peace.

On the face of it I find it hard to consolidate this finding – that countries with a high share of electoral votes not going to the winning party have a lower likelihood of experiencing a war onset – with most alternate rationalizations offered to counter the ‘democratic’ explanations for the democratic peace. An example of such an argument is Rosato (2003) who, in challenging the logic of the democratic peace, instead offers an explanation following Farber & Gowa (1997), asserting that it could be American preponderance in the Americas and Western Europe that has underpinned the perceived ‘democratic’ peace. In Section 5.1, the hypothesis regarding the effect of competition was based on the institutional logic of accountability and the realist desire to stay in power. Certainly, such mechanisms could – as Rosato himself (2003:600) points out – be in effect in countries that are not strictly democracies. I fail, however, to see how the fact autocratic losers’ chance of being ‘exiled, imprisoned, or killed in the process’ should weaken the institutional logic without checking whether autocrats have a higher chance of facing such consequences upon loss of power regardless of war involvement⁷¹. The institutional logic should rather be strengthened by the existence of causal mechanisms that are (possibly) required, yet not sufficient conditions for democracy, and it remains for me the most persuasive reasoning to explain the observed connection between competition and peace.

⁷¹ Updated and comprehensive data on the fate of leaders have recently become available which should make it easier to test such hypotheses. See the Archigos data project at: <http://mail.rochester.edu/~hgoemans/data.htm>

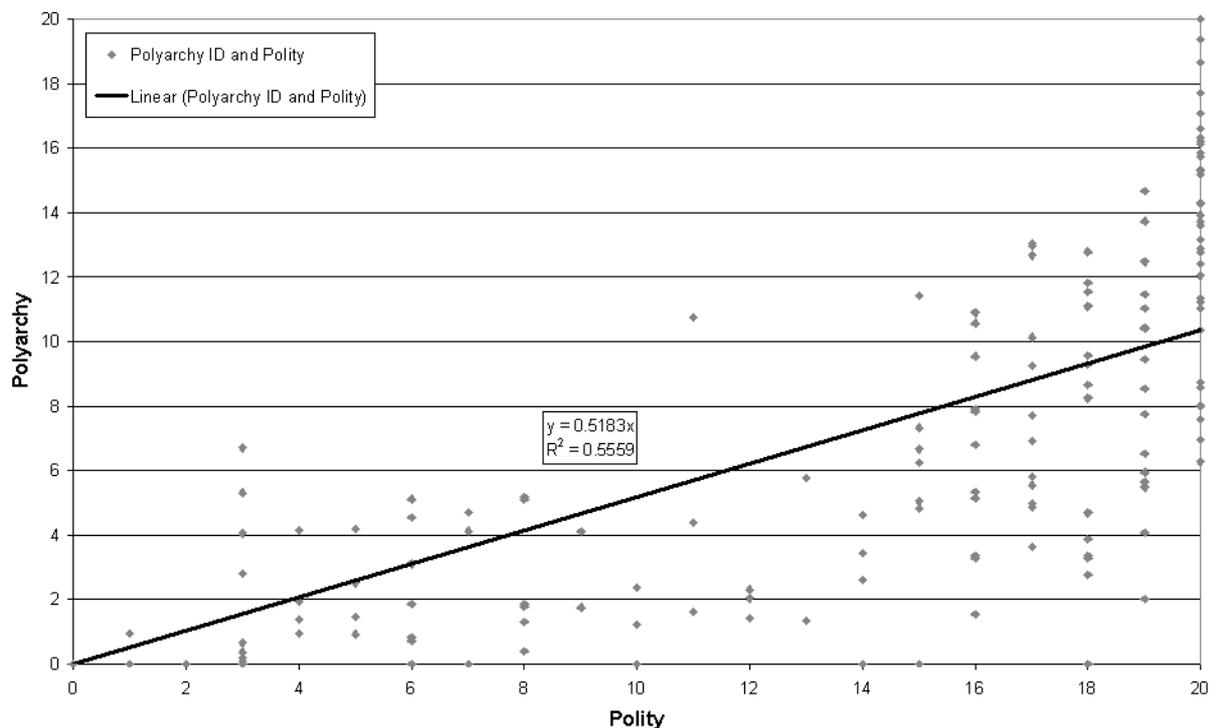
A further exploration into whether this relationship is robust over a wider range of applications and conflict data should indeed be a worthwhile endeavor as a possible continuation of the work done in this thesis.

7.2 Implications for future research

Vanhanen (2000:260) shows a reasonably high correlation between his Polyarchy Index of Democratization and the Polity and Freedom House Measures. A simple covariance test is indeed the most common way that the many authors of the various indices attempting to measure governance attributes in the countries of the world have used to validate their data (Jagers & Gurr 1995; Vanhanen 2000). These attempts at comparison are not without merit and obviously cannot be dismissed outright as it indicates that: “For all the differences in conceptualization, measurement, and aggregation, they seem to show that the reviewed indices are tapping into the same fundamental underlying realities.” (Munck and Verkuilen 2002:29).

One precarious implication of this, however, is that the researches that have employed these measures have used high correlations as a sufficient rationalization for not having to worry about conducting sensitivity checks or elaborating on how possible conceptual differences may have influenced their results. Thus, researchers would tend to base “their choice of a particular measure on the time period covered, their preferred statistical applications, or the number of valid cases for the [other] variables with which they are most concerned” (Casper and Tufis 2002:9), rather than a clear idea of whether these measures actually conform to the assumptions of the theories they are chosen to test. This further indicates a belief that high correlations signify that any results gathered from their use will be robust across different measures, but as Caster and Tufis go on to show: High correlation does not necessarily imply interchangeability.

Figure 7.1 Spread of normalized Polity¹ and Polyarchy values, 2002



¹Polity figures adapted from the modified Polity 4 data (Gleditsch 2003).

A graphical representation of the disparity that can be present between the Polyarchy and Polity data is shown in Figure 7.1. Both measures have been normalized to a 0–20 scale and the regression line is plotted for the year 2002. While the impact of such differences would depend on the application, clearly simply relying on a reasonably high correlation coefficient can give a deceptively high impression of the datasets' reliability, and consequently the robustness of models across them.

For this reason I would not advocate the Polyarchy dataset as a 'drop in' replacement for the Polity data in international relations research, but rather that it, along with other alternative measures, can serve as a valuable addition to the analytical toolset available to researchers seeking to improve both their models and the theory that they are founded on. Being different in both conceptualization and operationalization, well documented, transparent, and with a reasonable theoretical foundation, Polyarchy can obviously provide a useful measure of democracy and have features that should make it viable for a wide array of analytical methods. Many of the difficulties outlined by its critics can certainly to some degree be alleviated by re-examining the aggregation

rules (Gates et al. 2005) or as in the case of systematic bias in the Participation indicator by swapping in better demographic data on population composition (see Section 4.3). In this regard, the dominant Polity dataset are certainly not without problems of its own.

Nevertheless, there would appear to be a near universal agreement in the theoretical literature on the assumption that the components of Polyarchy are necessary – but not necessarily sufficient – conditions for democracy. This suggests that, while some may find Polyarchy conceptually lacking in scope, such a deficiency does not in itself invalidate the components that *are* included in the measure. The challenge for researchers then becomes to acknowledge the potential shortcomings, and to take into account that different measures are indeed conceptually different: Each of them with their own individual problems. Not being perfect, however, does not inherently make the one measure any less suitable than the other for a particular purpose. Depending on the analytical context, Polyarchy should be able to provide indicators that could complement other data as well as provide an opportunity for more nuanced models based on a broader base of available information.

This insight also have policy implications: If policymakers are to rely on social science research to provide them with input to be considered in their decision-making processes, it is crucial that everyone involved is clear on the definitions of what is being discussed. If one researcher's conception of democracy is different from the one from which his democracy indicator is drawn, and again different from the one held by the politician evaluating the work for policy advice, it is virtually inevitable that erroneous conclusions and actions will eventually arise. If the parts do in fact work together differently than the whole, and if the sequence of events does matter (Mansfield and Snyder 2005), then clearly no amount of statistical refinement can weigh up for a lack of conceptual comprehension and measurement validity. Nor can the fact that the high correlations between the various measures of democracy are indicative of a common underlying factor excuse us from considering the implications inherit their differences when dealing with the nuances of different polities. The

Kantian conception of a ‘perpetual peace’ may very well be the endpoint of global democratization, but if the social sciences are to have a role in society outside of suggesting some mechanism of implicit societal determinism, then how we get there should be equally-, or even more important. In the end I find it slightly counterproductive for the scientific community to quibble over advanced methodological issues such as complex statistical methods when the core concept of a ‘democratic peace’ – democracy – is not commonly understood, and the ‘menial’ tasks such as data selection and operationalization can potentially have a much larger impact. Data collection may be neither cheap, nor glamorous, but it *is* vital for the production of valid results. Acknowledging this fact might be the first step towards getting *better* data, as the research community should always seek the best information possible. This should be a good thing, even if it sometimes leads to less ambitious claims or negative findings. Several robust smaller understandings could give a better view of the whole than a broader claim that may or may not be a mistake.

Rosato’s (2003:600) conclusion that “[e]valuating whether the democratic peace finding is caused by democracy or by some other factor such as American preponderance has implications far beyond the academy” is a salient point regardless of whether the main claims in his article are valid or not. Consequently, I believe that the research into the democratic peace, or indeed any research dealing with democracy as an explanatory variable, would do well to explore the conceptual groundwork of their theories. Whether the results come through better compound measures, better insight into the disaggregated effects of individual indicators, or through a combination of the two – with the latter leading to the former: In the end, both science and society will benefit.

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Appendices

Appendix A: Sample Polyarchy country coding sheet

120. Namibia

Governmental system / year of election	Largest party / chief executive	Votes for the largest party % of total votes / seats	Total votes	Total population	Voters as a percentage of the total population
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Concurrent powers, 1990- (50-50%)

Parliamentary elections:

1989 ¹	South West Africa People's Organization (SWAPO)	57.3	670 830	1 316 000	50.9
1994 ²	SWAPO	73.9	489 636	1 499 000	32.6
1999 ³	SWAPO	76.2	536 036	1 695 000	31.6

Presidential elections:

1990 ¹	Sam Nujoma	100.0	72	1 352 000	0
1994 ²	Sam Nujoma	76.3	485 295	1 499 000	32.4
1999 ⁴	Samuel Nujoma	76.8	536 000	1 695 000	31.6

1. IPU 1989-90; Elections in Africa 1999: 667; Africa Research Bulletin 1989: 9472-76; 1990: 9579; Banks 1997: 682-87; Global Report 1997: 74. Nujoma was elected by the Constituent Assembly on March 21, 1990. See also World Parliaments 1998: 475-80.
2. IPU 1994-95; Europa 1996: 2275; Global Report 1997: 74, 96; Elections in Africa 1999: 670-72. Cf. IFES 1995 Vol. 5, 2: 35; Sandberg 1995.
3. IPU 1999; IFES 2000 Vol. 8, 4: 29. National Assembly election, 30 November and 1 December 1999.
4. IPU 1999; Keesing's 1999: 43302-203. Presidential election, 30 November and 1 December 1999.

The share of the smaller parties (%) of the votes cast or of the seats (Competition), voters as a percentage of the total population (Participation), and the Index of Democratization by year

Year	Competition	Participation	ID
1990	21.4	25.5	5.4
1991	21.4	25.5	5.4
1992	21.4	25.5	5.4
1993	21.4	25.5	5.4
1994	24.9	32.5	8.1
1995	24.9	32.5	8.1
1996	24.9	32.5	8.1
1997	24.9	32.5	8.1
1998	24.9	32.5	8.1
1999	23.5	31.6	7.4
2000	23.5	31.6	7.4
2001	23.5	31.6	7.4
2002	23.5	31.6	7.4
