

**Temporality and Causal Configurations: Combining
Sequence Analysis and Fuzzy Set/Qualitative Comparative Analysis**

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Temporality and Causal Configurations: Combining Sequence Analysis and Fuzzy Set/Qualitative Comparative Analysis

Contemporary debates over methods in political science revolve primarily around the relative merits of quantitative versus qualitative approaches to data collection, analysis, and interpretation. Quantitative methods generally incorporate many cases, analyze relations between variables, infer causality from statistical significance, and undertake ‘thin’ analyses of individual cases. Qualitative methods, in contrast, typically focus on a few cases, view variables in the context of the whole, detect causality through process-tracing, and engage in ‘thick’ description of individual cases. Searching for a middle ground, some scholars recommend recognizing the trade-offs when choosing one method over another (Brady and Collier 2004), mixing methods for different purposes in an investigation (Bowen and Petersen 1999), or engaging in a shared division of labor with other researchers to attain a more complete picture of a particular event or phenomenon (Sil 2000). Others advocate extending the logic of one approach to studies conducted primarily under the other approach, by either importing statistical rules of inference to qualitative research (King, Keohane, and Verba 1994), devising ‘analytic narratives’ that employ deductive logic to explain historical events (Bates et al 1998), or drawing on the standards of qualitative research to improve the constitution of populations in statistical research (Ragin 1997). Despite their claims to bridge quantitative and qualitative methods, however, these various solutions maintain the integrity of quantitative *or* qualitative approaches to social science. As such, they offer few tools for conducting medium-*n* analyses that enable systematic comparisons across cases but still remain sensitive to the regional and temporal specificities of each individual case.

Seeking to bridge this divide, a number of scholars propose medium-*n* solutions that tackle the layers of complexity embedded in case studies through two broad techniques for formal qualitative analysis. The first focuses on causal configurations by applying set theory to identify, simplify, and compare the various combinations of conditions associated with particular outcomes. This approach enables researchers to draw on in-depth knowledge to analyze causal configurations across a broader range of cases, but provides little guidance with regard to questions of causal sequencing. The second addresses the issue of causing ordering by elaborating a variety of techniques for mapping and comparing recurrent and non-recurrent causal paths, but offers no means for analyzing the configurations of causal conditions that combine at individual moments in time. Despite a common interest in medium-*n* samples, therefore, these two bodies of work adopt opposite research strategies: one set of techniques capture causal configurations at single moments in time, while the other outlines the temporal location and context of single causal conditions.

In this paper, I review these contributions, as well as three recent attempts to reconcile them through sub-process and full process analysis, temporal qualitative analysis, and two-step analyses and two-level theories. Arguing that these solutions do not achieve a true synthesis, I outline an alternative based on the study of ‘sequences of iterated reforms.’ This approach requires that analysts (1) construct a ‘truth table’ that maps causal conditions and outcomes as they change over time, (2) apply a ‘soft’ form of optimal matching to detect the changes that occur across configurations, and (3) construct and compare sequences of change and their effects on political outcomes. This procedure joins configuration and sequence analysis by using sequences to uncover the causal effects of configurations, and then employing shifts in configurations to theorize the trajectories and results of specific sequences of reform. To explore the possibilities of this method, I focus on one particular

set of policy reforms: the emergence and implementation of candidate gender quotas. While more than one hundred countries have witnessed the adoption of quota policies aimed at increasing the selection of female candidates, these policies vary widely in terms of their impact on the proportion of women elected to national parliaments, at the same time they interact with the patterns that already exist with regard to women's political representation. The analysis points to two distinct dynamics of reform with quite different prospects for improving women's access to political office. This research strategy thus has important theoretical and empirical implications in that it suggests a new way of conceptualizing policy change that highlights the multiple and temporally embedded dimensions of effective reform.

Bridging the Divide: Techniques for Formal Qualitative Analysis

Formal methods that seek to identify, simplify, and compare causal configurations are known as qualitative comparative analysis (QCA) and fuzzy set/qualitative comparative analysis (fs/QCA). Their main advantage is their ability to map conditions against outcomes in order to achieve parsimonious cross-case solutions that nonetheless take their inspiration – and validation – from in-depth case studies. Techniques that map and compare causal paths represent various kinds of sequence analysis. The allure of these methods is their capacity to capture both micro- and macro-level processes in order to shed light on causal connections between events, as well the role of intended and unintended consequences in political life. Despite their respective strengths, however, these approaches – at least in their present forms – cannot tackle the intersection of their concerns: the analysis of causal configurations as they evolve across multiple points in time.

Analyzing Causal Configurations

Many of the classic works in comparative politics are configurative, exploring the ways that various conditions combine to produce social, economic, and political change. Engaged at multiple levels of analysis, these studies approach cases as complex wholes in which variables may be regionally and temporally specific such that any given outcome may be the result of different causal conditions and, in turn, may have distinct causal consequences depending on the broader context. The various elements and causal claims embedded in the layers of these narratives, however, are not matched by similarly advanced techniques for qualitative analysis. Rather, these complex causal stories – most notably Barrington Moore’s *Social Origins of Dictatorship and Democracy* (1966) and Theda Skocpol’s *States and Social Revolutions* (1979) – have inspired an enormous body of subsequent methodological analysis on the evidence, concepts, and the relative values of both the independent and dependent variables in these particular studies (Dion 1998; Geddes 1990; Goertz and Mahoney 2005; Katznelson 1997; Mahoney 1999). One of the first scholars to formalize these intuitions was Charles Ragin (1987; 2000), who suggested using Boolean algebra – developed in mathematics to analyze set theoretic relationships – to identify, simplify, and compare causal configurations. The various techniques associated with this approach recognize that many qualitatively-inclined researchers intuitively incorporate notions of configuration in their work and, as such, seek to systematize the unique strengths of case study methods as an alternative to multivariate statistical analysis.

In QCA, researchers begin by assuming maximum causal complexity and use their existing knowledge of cases to construct a ‘truth table’ that records the presence and absence

of conditions and outcomes, which they sort into various combinations of input values and associated output values. Applying the principles of Boolean algebra, they then reduce this complexity to determine whether conditions are additive – existing in relationships of logical ‘and’ or logical ‘or’ – or multiplicative – joining with other conditions in causal combinations – and whether some redundancies can be minimized and some conditions and combinations subsumed into others. These operations reflect the possibility that the causal efficacy of one factor may be contingent on the presence or absence of other factors and, privileging causal diversity, pay no attention to the frequency of each combination. The result is a relatively parsimonious explanation that accounts for multiple causal paths, establishes necessary and sufficient conditions, and retains the integrity of individual cases while incorporating information from a much broader sample of cases (Ragin 1987; cf. De Meur and Rihoux 2002). Although these methods have been applied to study a range of different phenomena (cf. Brown and Boswell 1995; Chan 2003; Coverdill, Finlay, and Martin 1994; Hicks 1994; Redding and Viterna 1999; Wickham-Crowley 1992), they have also been criticized on the grounds that QCA treats variables as only two-valued, exhibits a high degree of sensitivity to coding, ignores the relative strengths of independent variables, and is logical in nature and thus exposed to greater distortion in selection bias and data problems than statistical techniques (Goldthorpe 1997; Lieberson 2004).

Responding to some of these criticisms, fs/QCA draws more extensively on the insights of set-theory to theorize the qualitative distinctions among cases by exploring the interval between full set membership and full set non-membership among both conditions and outcomes.¹ Although researchers follow procedures similar to those outlined for QCA, they pull more extensively from their existing theoretical and empirical knowledge to

¹ For a full user’s guide, see Ragin et al 2006.

constitute the relevant population of cases and to assign values to the conditions and outcomes included in the ‘truth table,’ which are no longer organized by presence or absence but by degree of set membership. Crucially, these values – which typically include the five states of full membership, mostly full membership, neither membership nor non-membership, mostly non-membership, and full non-membership – do not represent continuous intervals or rankings, but rather qualitative distinctions between types.² Combined with the Boolean operations of addition, multiplication, minimization, and implication, this approach enables scholars to explore the multiple relationships between conditions and outcomes, to identify probabilistic and partial necessary and sufficient conditions, and to incorporate more details of individual cases while generating greater insight into the broader universe of cases than with qualitative comparative analysis alone (Ragin 2000; cf. Smithson and Verkuilen 2006). Since they were introduced, these methods have also been employed to study a range of different phenomena (Goertz 2003; Goertz and Mahoney 2005; Kvist 2003; Schneider 2003), but have met with a new set of criticisms, which claim that fs/QCA cannot distinguish between real and random data, as well as express skepticism about the logic of introducing probabilistic criteria into the evaluation of necessary and sufficient conditions (Liebersson 2004).

The range of studies applying QCA and fs/QCA has nonetheless grown at a rapid rate, accompanied by new software packages and articles seeking to refine various technical aspects of these methods.³ A shortcoming seldom tackled in this literature, however, is a

² An example of this logic is the measure of wealth: in the set of rich countries – definitely rich, mostly rich, not rich and not poor, mostly poor, and definitely poor – the difference between \$23,000 and \$24,000 GDP has less of an impact on people’s standard of living than the difference between \$500 and \$1500 GDP. In each context, then, gaps of \$1000 – while appearing identical – are actually qualitatively distinct in the measure of ‘rich’ and ‘poor.’

³ For a recent list of working papers, see <http://www.compass.org/WPFull.htm>. Recent software alternatives include TOSMANA, available at <http://www.tosmana.net>, and QCAGUI for R, available at <http://cran.r-project.org>.

curious one: although these techniques take their inspiration from qualitative case studies that are often historically based, they ignore the order in which events unfold by treating combinations of conditions as if they occur simultaneously (Caren and Panofsky 2005). While this assumption is justified in some instances of conjunctural causation – i.e., in cases where two trajectories of events do indeed intersect – it is undermined by research which suggests that when and in what order factors appear is crucial for understanding outcomes (Abbott 2001; Aminzade 1992; Mahoney 2000; Pierson 2004). Although several scholars have presented some solutions to this dilemma (see discussion below), these methods as a whole provide little guidance for exploring the temporal dimensions of causal configurations.

Incorporating Time and Sequence

Historians have long incorporated notions of time and sequence in their analyses, recognizing that all causal processes unfold within particular temporal contexts in which earlier events shape and influence paths to later outcomes. The ‘historic turn’ in sociology and political science imports these ideas to the general study of social phenomena (Somers 1996; cf. Mahoney and Rueschemeyer 2003). At the broadest level, this work recognizes three approaches to the relationship between time and causality: a teleological approach, in which history embodies an inherent logic of social development that explains individual events by reference to some future outcome; an experimental approach, in which history is frozen into artificially exchangeable units and compared across cases by means of ‘natural experiments;’ and an eventful approach, in which history is path dependent but unexpected events may suddenly shift the relationships between causal factors in radical and unanticipated ways (Sewell 1996). These scholars reject the assumptions underlying the

experimental approach, which imply that when and in which order events happen is irrelevant to causal analysis. Addressing the question of causal ordering, they theorize different kinds of causal sequences and present various techniques for identifying and comparing recurrent and non-recurrent causal paths.

This research, reflecting an eventful approach, argues that the impact of a given causal factor is shaped fundamentally by its location within a broader sequence of events (Aminzade 1992; Rueschemeyer and Stephens 1997). Thus, the same action may produce completely different results across cases, stemming from distinct causal antecedents (Falletti 2005; Griffin 1992). Causal sequences, however, may take a number of different forms: linear sequences, where one action leads inexorably to another towards a specific outcome; convergent or conjunctural sequences, where several actions come together in largely unanticipated ways to bring about a particular outcome; and path dependent sequences, where one crucial – and often contingent – action strongly shapes the path of later actions in the direction of a specific outcome (George and Bennett 2005; Griffin 1992; Mahoney 2000). Although a great deal of this work operates at a more theoretical level, a number of scholars have sought to systematize these insights by developing a variety of inferential strategies for identifying and comparing the order of causal events.

One group maps and compares the structure of whole sequences. These computer-based techniques include optimal matching, which measures agreement across sequences through the number of insertions, deletions, and substitutions required to transform one sequence into another (Abbott 1995; Abbott and Hrycak 1990; Dijkstra and Taris 1995); comparative narrative analysis, which traces sequences in individual narratives to gauge the role of intentional action and intended and unintended consequences (Abell 1987); and Gibbs sampling, which applies probability calculations to expand the data to detect small

regularities among sequences (Abbott and Barman 1997). A second set breaks down the components of individual sequences. These methods include event-structure analysis, another computer-based technique, which establishes causal connections between events through a series of yes/no questions that enable others to replicate or challenge these findings (Corsaro and Heise 1990; Griffin 1993; Griffin and Ragin 1994; Heise 1989), and more general narrative analysis or process-tracing, which takes many forms but generally involves case studies that reconstruct causal paths to illuminate causal mechanisms (George and Bennett 2005; Goldstone 1997; Stryker 1996; Tilly 2001).

Despite their potential for formalizing causal analysis, these various tools have been criticized – much like QCA and fs/QCA – on the grounds that they lack predictive power, since sequences can be charted systematically only after they have occurred, and are highly dependent on the level and accuracy of coding, since narratives are defined and orchestrated by their authors with little immediate oversight from others (Abbott 1997; Carley 1997; Griffin 1992; Patterson and Monroe 1998; Stryker 1996). A limitation that is rarely signaled, however, is somewhat counter-intuitive: although the goal of sequence analysis is to capture the broader context in which events occur, the various formal techniques associated with this approach in fact focus exclusively on single causal conditions. More specifically, they analyze how individual circumstances come together in chains of causal events, rather than how combinations of these factors emerge and evolve over time. While this is a feature of more qualitative case-study versions of this approach, therefore, these methods themselves offer little leverage on the multiple conditions that combine at various moments in time.

Tracing Causal Sequences: Time and Qualitative Comparative Analysis

Noting the current trade-off between mapping configurations and integrating temporality, a number of scholars attempt to overcome the divide between QCA and fs/QCA, on the one hand, and sequence analysis, on the other. Taken together, they offer three distinct but related solutions: sub-process and full-process analysis, temporal qualitative analysis, and two-step analyses and two-level theories. All three approaches present tools for visualizing distinct paths to similar outcomes by (1) focusing on the sequential ordering of events and (2) treating configurations of conditions as the elements joined in these sequences. These innovations bring crucial new insights to the study of causal complexity and diversity by developing new tools for structuring research that is sensitive to questions of time and causal conjunction. However, they fall short of a true synthesis: upon further inspection, they privilege configurations *or* sequences at distinct points in the analysis. As a result, they do not resolve the question of how to track shifts in causal configurations through techniques that also account for the ways in which earlier incidents shape or influence the direction of later events.

Sub-Process and Full-Process Analysis

One solution for incorporating issues of time into the study of causal configurations focuses on the relations between sub-processes and full processes. This approach has been developed by Caty Clément (2005), who employs it as a means for detecting the conditions leading to state collapse. Her analysis proceeds in four steps. First, based on theoretical and case-study knowledge, she theorizes four causes of state collapse: an inconsistent external environment, an economic crisis or swift growth, the mobilization of advantaged groups, and poor reciprocal assimilation of elites. Second, drawing on qualitative information, she

hypothesizes that some of these factors are more important than others at various points in the process. To explore this possibility, she expands three instances of collapsed states – Lebanon, Somalia, and Yugoslavia – into nine cases defined by different time periods to capture changes in these conditions as state capacity breaks down. Third, with the help of a truth table, she determines that the presence of one condition results in a continuation of the status quo, the presence of two or three conditions leads to state crisis, and the presence of all four leads to state collapse. Fourth, she compares these configurations in order to make links between these three stages and discovers two distinct paths to state collapse.

By focusing on the relation between sub-processes and full processes, Clément is able to accomplish a number of feats: she expands the number of cases, gains validation for the intuition that variables do indeed play distinct roles at different moments in time, and illuminates how different combinations of conditions may in fact lead to similar outcomes. As such, she succeeds in bringing both time and configuration into causal analysis by treating earlier combinations as sub-sets of later configurations, producing a strikingly parsimonious portrayal of the process of state collapse. All the same, there are important limitations to her analysis. First, Clément lists her nine cases in the truth table as if they were independent of one another, when in fact they represent three countries at three distinct moments in time. While this strategy enables variation in the outcome – as state weakening and state crisis can be coded as instances of ‘non-collapse’ – it does not permit careful analysis of the changes that occur between time periods within the same country. This eliminates a crucial source of causal leverage, namely a comparison of the changes in these configurations over time. Second, her temporal schema is based on the idea that events unfold sequentially in a random manner, while her theoretical assumptions build instead on the importance of path dependence. Stated slightly differently, the notion of sub-processes that link together in a

single overarching process presumes that earlier conditions establish the environment in which later conditions emerge. The solution proposed by Clément ignores this possibility, and instead treats configurations in an experimental manner, as if their temporal locations have no effect on political outcomes.

Temporal Qualitative Comparative Analysis

A second approach blends features of Boolean algebra with elements of sequence analysis to develop an extension of QCA known as temporal qualitative comparative analysis (TQCA). Its originators, Neal Caren and Aaron Panofsky (2005), observe that outcomes are always the result of historical processes, suggesting that the order in which conditions appear may provide as much information about outcomes as the interaction of these attributes. In order to engage in systematic comparisons, therefore, researchers need to draw on their theoretical and case-study knowledge to establish not only the relevant conditions, but also the sequences in which events occurred. This approach results in a dramatic expansion of the number of possible configurations, but Caren and Panofsky offer two recommendations for reducing the number of sequences under consideration: (1) applying the principle that the presence of an attribute and not its absence will affect temporal order, and (2) deciding whether certain variables tend to occur first or last or else simply set the context for other conditions. They then present the major technical innovation of TQCA – a dash to note a temporal break, to be read as ‘then’ – and outline new minimization rules that follow from adopting this notational convention: when two conditions differ only by the order of two attributes separated by a dash, the dash can be replaced with the symbol for ‘and’; combinations that differ within a temporal block by the presence and absence of a condition

can be reduced by removing the attribute; and factoring – but never reducing – can take place across temporal boundaries when an attribute is in the same causal position across multiple sequences.

The major advantage of TQCA is that it presents a relatively straightforward technique for organizing and structuring narrative accounts that allows for configurations and sequences to be compared across a range of cases. As such, it offers an important step forward for scholars interested in building more systematic historical narratives that attend to causal complexity and diversity while also promoting general theory. However, this solution also has important shortcomings. First, it employs a conception of time as ‘trajectory’ to capture how causal conditions emerge and interact over time. The result is a ‘horizontal’ notion of causal configuration, which simply arrays single attributes in the order in which they appeared. Adding ‘time’ to the analysis thus comes at the expense of focusing on ‘vertical’ configurations, or the intersections of causal conditions at specific moments, as they evolve. Second, TQCA appears to offer a means for illustrating how earlier attributes shape or set the stage for conditions that come later, in turn producing a certain outcome. The dash as a notational convention, however, simply marks breaks in time: it does not theorize the explicit connections between the conditions divided by the dash. In other words, TQCA pays attention to temporal – but not causal – ordering.

Two-Step Analyses and Two-Level Theories

A third and final solution is less explicit about its attempts to address configuration and sequence, but through two-step analyses and two-level theories implicitly operate at the intersection between causal conjunction and temporal and causal ordering. In a refinement

of fs/QCA, Carsten Q. Schneider and Claudius Wagemann (forthcoming) outline a two-step approach for reducing the number of simplifying assumptions – i.e., conjectures about configurations from cases that do not exist – while also determining the combined role of macro- and micro-level causes. Relying on a conceptual distinction between ‘distant’ and ‘close’ factors, they recommend first analyzing distant structural factors and then analyzing closer factors within these structurally defined contexts. While not overtly about sequence, these steps allow scholars to capture causal complexity at two distinct moments which exist in direct causal relation with one another. Along somewhat similar lines, Gary Goertz and James Mahoney (2005) develop the notion of two-level theories to explain outcomes with causal variables at two levels of analysis that are systematically related to one another. The ‘basic level’ encompasses the central causal variables, while the ‘secondary level’ involves attributes that are less central to outcomes but which exist in one of three causal relations with conditions at the basic level: causal relations, being ‘causes of causes’; ontological, being mutually constitutive; and substitutable, being individually sufficient but not necessary. Focused on connections between these two levels, this framework provides crucial insights into the mechanisms behind causal sequencing, as well as the origins of alternative paths to similar outcomes. Despite their concerns to link causal conditions at distinct points in time, however, both of these approaches retain a ‘horizontal’ notion of causal configuration, arranging factors according to their place in the temporal order. As such, they overlook the possibility that causal configurations themselves may change over time, with important ramifications for political outcomes.

Mapping Causal Configurations: Sequences of Iterated Reforms

The estimation of causal effects is a central concern in political science, although most scholars recognize the difficulties in discerning ‘cause’ – theoretically, empirically, and methodologically – in political phenomena. Although they embrace a range of philosophical positions on causality, most agree that reality is complex. One example, taken among recent trends around the world, is the impact of candidate gender quotas on women’s access to political office. While the effects of these policies may appear straightforward, they are complicated by two moving targets: existing variations in women’s political representation, and changing aspects of the political context that may facilitate or undermine quota implementation. To ascertain the role of quotas within and across cases, I develop a three-step research strategy that combines elements of fs/QCA and sequence analysis by focusing on sequences of iterated reforms.

Gauging Causal Effects: The Case of Candidate Gender Quotas

Women form more than half the population in most countries around the world, but constitute only a small minority of all political representatives. The degree of their underrepresentation, however, varies enormously across the globe. To remedy this situation, political parties and national legislatures in more than one hundred countries have adopted quota policies aimed at increasing the proportion of female candidates for political office. These measures fall into three broad categories. Reserved seats policies set aside a specified – and often limited – number of seats for women among elected representatives. Enacted through constitutional reforms, these seats are distributed in various ways but are most often allocated by designating certain districts as ‘women’s districts’ for the period of one election cycle, or by granting political parties the right to appoint a certain number of women in

accordance with the percentage of votes they received in the most recent elections. Party quotas, in contrast, aim to increase the proportion of women among a party's candidates. Adopted voluntarily by political parties, these measures establish a desired percentage of female candidates, although the actual wording of the reform may sometimes be gender neutral, setting a minimum or maximum representation of either sex. Legislative quotas, finally, require parties to nominate a particular proportion of women among their candidates. These quotas appear in constitutions or electoral laws – and sometimes both – and thus apply to all political parties within a given country, often but not always with oversight from central government authorities.

The rapid spread of quota provisions presents two challenges for analyzing women's political representation worldwide. First, quotas are introduced when variations already exist in the percentage of women in national parliaments. Current patterns are thus the combined result of quotas – where they are present – and other political, social, and economic factors that were often at work before quotas were established. Second, quota policies not only mandate various levels of representation – ranging from 5% to 50% – but also experience varying degrees of implementation. As a result, some countries experience dramatic increases following the adoption of new quota regulations, while others witness more modest changes or even setbacks in the number of women elected to national assemblies. These dynamics suggest that quotas do not simply lead to gains proportional to the quota policy, but also interact, both positively and negatively, with various features of the broader political context. Determining the impact of quotas on women's political representation thus requires careful attention to changing combinations of conditions over time, with an eye towards revealing not only the effects but also the relations between these various configurations.

The literature on women and politics suggests that there are three groups of factors that influence the selection of female candidates: formal features of the political system, formal and informal party practices, and formal and informal norms of equality and representation. Features of the political system include the laws and organizations that officially structure the conduct of political life, like electoral rules, ballot structures, district sizes, and political parties. Through extensive cross-national analysis, researchers find that proportional representation (PR) electoral systems, especially those with closed party lists and higher district magnitudes, tend to have much higher numbers of women in parliament than first-past-the-post (FPTP) electoral systems, which involve direct election of candidates in single-member districts. At the same time, they note that more women tend to be elected in multi-party as opposed to two-party systems (Kunovich and Paxton 2005; Norris 1993; Rule 1987). However, a closer look at the explanations for these patterns reveals that formal institutions promote female representation to the extent that their structural features combine with concerns to select more women – that is, party practices and general norms that support and even compel the recruitment of female candidates. More specifically, PR appears to offer more opportunities to women, because the presence of party lists and multi-member districts means that political parties are able – and may even feel pressed – to nominate at least a few women to ‘balance’ their electoral slates (Caul 1999; Matland 1995).

Formal and informal party practices determine the criteria that parties apply for selecting political candidates. Formal requirements include age, citizenship, party membership, while informal requirements encompass education, party service, legislative experience, speaking abilities, financial resources, political connections, kinship, name-recognition, group membership, and organizational skills (Rahat and Hazan 2001). These qualifications intersect with other aspects of party culture – namely, late hours of party work,

lack of childcare arrangements, and locations of political meetings – that shape the supply of potential candidates (Lovenduski and Norris 1993; Kittilson 2006). Although these practices vary across parties, evidence from a range of countries suggests that such processes produce consistent distortions between the characteristics of voters and candidates, as legislatures worldwide tend to include a larger share of affluent, male, middle-aged, and white-collar members than exist proportionally in electorates (Norris 1997). All the same, many of these accounts relate specific selection practices to the characteristics of political parties and underlying popular beliefs about the political qualifications of women – in other words, the formal institutions and informal norms that influence how party selectors and regular voters perceive female candidates (cf. Lawless and Fox 2005). For example, parties that are strongly committed to the goal of gender equality are most likely to take special steps to promote women during the selection process (Caul 1999; Lovenduski 1993).

Formal and informal norms, finally, comprise the definitions of equality and representation enshrined formally in constitutions, legal codes, electoral laws, and party statutes, and more informally in public speeches, political ideologies, and voter opinions and values. The literature observes that these norms frequently vary across countries and across political parties, with a basic divide between those that emphasize equality of opportunities and representation of ideas and those that promote equality of results and representation of social groups. Most research finds that countries and parties with more egalitarian political cultures, as well as long-standing traditions of group representation, tend to have greater numbers of women in parliament (Inglehart and Norris 2003; Siaroff 2000). Nonetheless, most analysis of these norms is embedded in discussions of electoral systems and party ideologies – namely, the formal institutions and party practices that give form to these principles and shape the legitimacy of affirmative action in candidate selection. In particular,

PR appears to be favorable to women's inclusion because it embodies a commitment to group representation (Matland 1995), while parties that select more women tend to have ideologies that favor equal results (Inhetveen 1999).

Existing explanations of women's representation thus focus on the combined effects of formal institutions, party recruitment practices, and general and party-specific norms of equality and representation. Although studies often highlight the causal importance of one set of factors above the others, a closer reading suggests that most acknowledge – albeit implicitly – the causal role of the other two sets of conditions. This survey indicates, therefore, that the causal impact of one attribute is linked to the presence or absence of other features, the basic hallmark of a causal configuration. The adoption of gender quotas, however, disturbs this balance in at least two ways. First, particular kinds of quota policies affect different aspects of these configurations: reserved seats alter formal institutions by revising mechanisms of election, party quotas reform party practices by establishing new standards for candidate selection, and legislative quotas revise norms in ways that permit affirmative action and recognize gender as a political identity (Krook 2005). Second, these measures often interact with the principles and practices associated with the other two sets of conditions: reserved seats may alter party strategies and introduce new political norms, party quotas may operate more effectively in certain party systems and normative frameworks, and legislative quotas may be subject to details of the electoral system and depend upon a general willingness to change existing party practices. In other words, quotas may change the broader political context at the same time that they are constrained by reigning political arrangements.

Dominant methods in political science point to two possible research strategies for gauging these effects. A quantitative solution would involve gathering information on a large

number of countries with and without quota policies in order to determine what sort of impact – on average – gender quotas exert on patterns of political representation (cf. Matland 2006; Tremblay 2006; Yoon 2004). The main drawback of this kind of analysis is that quotas do not in fact exert independent effects on political outcomes. Rather, their causal impact depends closely on the existing – as well as changing – configurations of other causal conditions, which themselves may shift as a result of quota adoption. A qualitative solution, in contrast, would trace events as they evolve in countries that adopt quotas, paying close attention to the factors that facilitate or undermine quota impact (cf. Bradbury et al 2000; Davidson-Schmich 2006; Meier 2003; Murray 2004). While this approach offers great potential for unraveling causal configurations, it is similarly limited in that it examines developments in only a small number of cases, preventing broader comparisons with other instances of quota reform. A third alternative – building on the insights outlined above – would be to devise a middle-range approach that enables both cross- and within-case comparisons. Focused on sequences of iterated reforms, one such method is to combine elements of fs/QCA and sequence analysis to study countries that have witnessed multiple attempts at quota adoption and implementation, drawing on these trial-and-error processes to construct and compare changing configurations of causal conditions over time.

Using Sequences to Map and Measure Causal Configurations: A Three-Step Approach

Seeking to understand paths of policy innovation, Jeffrey Haydu (1998) proposes an approach based on the analysis of ‘sequences of reiterated problem-solving,’ which he claims is particularly well-suited to understanding series of policy changes that, by their nature, constitute consecutive solutions to recurring policy problems. While quotas themselves

constitute a type of policy response to the problem of women's under-representation in electoral politics, a number of countries have experienced repeated efforts to improve specific quota policies by revising their terms, extending their scope, or correcting misinterpretations of their provisions. Adapting Haydu's insights, I characterize this group as examples of 'sequences of iterated reforms.' Although they constitute a minority of quota campaigns, I argue that these sequences have the potential to clarify the dynamics at work across the broader universe of quota reforms, because they afford a view in actors' own interpretations as to why certain measures fail or succeed, as well as into the role of intended and unintended consequences of individual quota policies. In contrast, attention to single attempts at reform enables inferences about possible connections between inputs and outcomes, but allows little theoretical space for evaluating the impact of various kinds of causal configurations. Analyzing sequences of iterated reforms – which are certainly not restricted to quota campaigns – involves three steps: (1) the construction of a truth table that maps causal conditions and outcomes as they change over time, (2) the application of a 'soft' form of optimal matching that distills the changes that occur across configurations, and (3) the construction and comparison of sequences of change and their effects on political outcomes. This method synthesizes the core concerns of fs/QCA and sequence analysis by utilizing sequences of reform to shed light on the existence and impact of causal configurations, and then examining patterns of change in configurations to characterize the dynamics and results of particular sequences of reform.

Surveying quota campaigns around the world, I identify fourteen cases of iterated reform: Argentina, Austria, Bangladesh, Belgium, Costa Rica, France, Germany, Mexico,

Pakistan, Spain, Sweden, Tanzania, Uganda, and the United Kingdom.⁴ Although the primary criteria for selecting these cases stems from their multiple efforts to adopt and refine quota policies, this group also reflects the diversity of countries that have witnessed quota campaigns (cf. Krook 2004; Krook forthcoming b). Appearing in a broader range of political, social, and economic contexts, these campaigns cover all three categories of quota policies, span periods from as little as fifteen to as many as seventy years, reflect both slow and incremental and quick and dramatic rates of change, and result in below average to nearly equal proportions of women in parliament. To gain a deep understanding of their dynamics, I examine the actors, strategies, and contexts in each country by drawing on a variety of primary and secondary sources, namely interviews, parliamentary debates, newspaper editorials, personal testimonials, on-line election reports, collections of newspaper articles, and scholarly analyses. Based on this information, I classify each country according the timing of major reforms, resulting in the expansion of cases from fourteen to fifty-six. These cases, importantly, include the period before quota adoption in order to capture not only the shifts in quota policies, but also the more general impact of quotas in comparison to the period without quotas.⁵

In step one, I code each country-period in relation to ten categories: the presence of a PR electoral system, a multi-party system, and a 50% reserved seats provision (formal features of the political system); the use of non-quota measures, placement mandates, and 50% party quotas (formal and informal party practices); the recognition of affirmative action, group representation, and 50% legislative quotas (formal and informal norms of equality and representation); and the achievement of equal representation in parliament (outcomes). I

⁴ For information on current quota policies, see the country profiles at <http://www.quotaproject.org>. For detailed analysis of Argentina, France, India, Pakistan, Sweden, and the UK, see Krook 2005.

⁵ Mark P. Jones (2004) adopts a somewhat similar research design when analyzing quota impact across four time periods in Costa Rica.

select these conditions based on theoretical expectations and extensive case-study knowledge.⁶ More specifically, in addition to factors that emerge in the literature reviewed above, I include information on the types of quota policies enacted, because some scholars argue the some kinds are more likely than others to lead to higher levels of representation (Jones 1998; Leijenaar 1997); the presence of non-quota measures to promote women in politics, because some prominent cases indicate that quotas are adopted only after substantial proportions of women reach parliament through party recommendations and targets (Dahlerup and Freidenvall 2005); and the existence of placement mandates, because numerous case studies suggest that – unless compelled – parties tend to place women in list positions and districts where they are unlikely to be elected (Htun and Jones 2002; Murray 2004). Reviewing the history of quota campaigns in all fourteen countries, I collect raw data for conditions and outcomes in each time period. I then transform this information according to degrees of fuzzy-set membership in each category, based roughly on the extent to which each condition might be expected to promote 50% female representation (for details on coding decisions, see Appendix). These scores are recorded in the truth table in Table 1, which tracks both stability and changes across these categories over time.

Table 1 about here.

Although this truth table by itself permits some comparisons within and across cases, a more systematic analysis requires closer attention to the specific changes that take place across time periods in each country. In step two, I track the shifts in configurations that take place across moments of reform. Employing a ‘soft’ version of optimal matching – in its original form, a computer-based technique that examines sequences with an eye to the insertions, deletions, and substitutions that are required to transform one sequence into

⁶ For extensive literature reviews on quota adoption and implementation, see Krook (forthcoming a) and Krook (forthcoming b).

another – I make a note in Table 2 of the nature of each reform as it relates to the period preceding it. On the initial line, I determine – based on the literature – whether system features, party practices, or political norms in a given country are favorable to women’s representation in parliament, using the designators ‘+’ for positive and ‘-’ for negative. Because some categories of conditions do not exist in all cases (i.e., reserved seats in Argentina), at the same time that some are altered while others are not (i.e., norms of affirmative action but not norms of group representation), I enclose in parenthesis the precise category of reform (i.e., placement mandates or party quotas). The first time a system feature, party practice, or political norm has a value greater than zero, I record its presence and include a ‘+’ sign. If the same category is reformed again, I include the descriptor ‘stronger’ or ‘weaker’ accompanied by a ‘+’ or ‘-’ sign. If no change takes place across periods, I simply leave the space blank. To register the outcomes of these combinations, I classify the starting point in reference to low (below 10%), low-medium (10%-15%), medium (15%-20%), medium-high (20%-25%), high (25%-40%), and high-equal (40-50%) levels of female representation.⁷ For each subsequent time period, I observe whether women’s representation increases or decreases until the final line, where I sum up all the reforms to list the most recent configuration of conditions and the most current level of female representation.

Table 2 about here.

These configurations – in line with the expectations of QCA and fs/QCA – reveal that multiple combinations of conditions may lead to greater or lesser numbers of women in parliament. Among countries with high levels of female representation, for example, there appear to be many different configurations favorable to women’s access: PR electoral

⁷ These approximations are based on the world average of women in the lower house of parliament, which currently stands at 16.8% (Inter-Parliamentary Union 2006).

systems, multi-party systems, strong placement mandates, strong acceptance of affirmative action, and strong legislative quotas (Argentina); PR systems, multi-party systems, non-quota measures, strong placement mandates, strong party quotas, strong affirmative action, and strong group representation (Austria); PR systems, multi-party systems, non-quota measures, strong placement mandates, strong affirmative action, strong group representation, and strong legislative quotas (Belgium); PR systems, multi-party systems, strong placement mandates, strong party quotas, strong affirmative action, and strong legislative quotas (Costa Rica); MMP systems, multi-party systems, non-quota measures, strong party quotas, strong affirmative action, strong group representation (Germany); PR systems, multi-party systems, strong placement mandates, strong party quotas, affirmative action (Spain); PR systems, multi-party systems, non-quota measures, strong placement mandates, strong party quotas, strong affirmative action, and group representation (Sweden); and strong reserved seats, strong affirmative action, and group representation (Tanzania). These combinations can be factored in a number of different ways, but conditions that appear to be consistent among most configurations are PR electoral systems, multi-party systems, strong placement mandates, and strong acceptance of affirmative action. Importantly, however, this group includes countries with all three kinds of quota measures – reserved seats, party quotas, and legislative quotas – and a variety of types of electoral systems. These insights undermine the expectation, implicit in a great deal of the literature, that there is a single ‘magic formula’ for achieving the equal representation of women and men in parliament.

The questions remains, however, as to whether or not there are any commonalities among the sequences that lead to greater or lesser gains in women’s representation over time. In step three, I examine each set of cases in a holistic way to get a sense of the dynamics of reform within each country. This exercise reveals that there are two basic kinds

of sequences: additive sequences, where attempts to reform one group of categories – that is, system features, party practices, and political norms – spill into reform of other groups of categories, resulting in a tighter bundling of features, practices, and norms; and extractive sequences, where efforts to reform one group of categories conflict with aspects of other categories, leading to disjunctures between features, practices, and norms. An example of an additive sequence is Argentina. Before the introduction of legislative quotas, the conditions shaping women’s access to political office were positive system features, negative party practices, and negative political norms. Over the course of the 1990s, however, campaigns focused on gaining new political norms in the form of legislative quotas, as well as securing increasingly stronger placement mandates and constitutional backing for affirmative action. As a result, system features, party practices, and political norms are now mutually reinforcing, enabling the translation of a 30% legislative quota into the election of 35% female deputies. In contrast, an example of an extractive sequence is the United Kingdom. Before the introduction of party quotas, the conditions shaping women’s access to political office were negative system features, some positive party practices, and some positive political norms. Over the course of the 1990s, the negative system features remained more or less constant, while practices and norms experienced a number of important – and repeated – advances and setbacks. As a consequence, there are crucial tensions between system features, party practices, and political norms, such that a 50% major party quota has an almost negligible effect on the proportion of women elected to the House of Commons.

Table 3 about here.

In Table 3, I classify sequences of reform within each country as ‘additive’ or ‘extractive’ and then compare their levels of female representation before and after quotas are introduced. Viewed broadly, additive sequences appear to be much more favorable to the

increased election of women to parliament: countries with additive reforms all have more than 20% female representation, while those with extractive reforms – apart from Tanzania – have less than 20%. Before quotas were introduced, both sets of countries had roughly equal numbers of women, generally less than 10%. This juxtaposition of sequences suggests that it is not individual reforms, but rather bundles of reforms, which lead to the most gains in women’s representation. Stated slightly differently, quota policies have the greatest impact when they exist within a context that includes a combination of mutually supportive system features, party practices, and political norms. Crucially, these patterns are not random: revisiting the case studies reveals that actors in quota campaigns often devise their strategies in relation to prior advances and setbacks, seeking to extend positive gains or overcome negative obstacles to quota reform. A degree of path dependence thus comes into play in two respects: existing arrangements are often ‘sticky’ and difficult to change, at the same time that previous experiences of success or failure suggest very specific ways forward. In an instance of additive reform, like Germany, women inside the major left-wing party built on the success of 25% quotas by mobilizing for 33% and then 40% quotas. In a sequence of extractive reform, like France, quota supporters regrouped after quotas were declared unconstitutional by pursuing an amendment to the constitution. These patterns indicate that changing causal configurations in on-going quota campaigns are deeply interconnected in ways that transcend single moments in time.

Conclusions

Current debates over methods in political science focus on the relative merits of quantitative versus qualitative approaches. Recent contributions, however, aim to move

beyond this divide by exploring new approaches and techniques for analyzing causal configurations and incorporating elements of time and sequencing into causal analysis. Despite their common concern to rethink causal processes, these two solutions are – on their face – mutually exclusive, because the techniques of QCA and fs/QCA address combinations of conditions at single moments in time, while the methods of sequence analysis focus on the temporal location and context of single causal conditions. Seeking to overcome this gap, scholars offer three distinct but related solutions: sub-process and full process analysis, temporal qualitative analysis, and two-step analyses and two-level theories. These tools facilitate research that is sensitive to questions of time and causal conjunction, but do not achieve a true synthesis of these approaches as they privilege configurations *or* sequences at distinct points in the analysis. As a consequence, they do not answer the question of how to map and measure shifts in causal configurations through techniques that also address how earlier incidents shape or influence the direction of later events.

To address the evolution of configurations over time, I outline a three-step approach focused on ‘sequences of iterated reforms.’ This procedure involves constructing a truth table that maps causal conditions and outcomes as they change over time, applying a ‘soft’ form of optimal matching to detect the changes that occur across configurations, and constructing and comparing sequences of change and their effects on political outcomes. Taken together, these steps join the core concerns of fs/QCA and sequence analysis by (1) employing sequences of reform to shed light on the existence and impact of causal configurations, and (2) drawing on patterns of configurational change to characterize the dynamics and results of particular sequences of reform. Using this lens, I gauge the impact of gender quotas on women’s political representation by mapping configurations of causal conditions across fourteen countries broken down into fifty-six instances of quota reform.

In terms of sequences of policy change, I uncover multiple combinations of conditions leading to increased female representation. Turning to shifts in configurations, I observe two broad dynamics of reform with distinct implications for improving women's access to political office. This analysis thus makes both methodological and substantive contributions: it presents a novel synthesis of fs/QCA and sequence analysis, and in the process, provides new insights for analyzing and understanding the impact of gender quotas. This three-step approach, however, is not limited to the study of women in politics: it presents new tools for addressing causal complexity appropriate to the study of diverse instances of policy adoption, implementation, and change.

Bibliography

- Abell, Peter. 1987. *The Syntax of Social Life: The Theory and Method of Comparative Narratives*. Oxford: Clarendon.
- Abbott, Andrew. 1995. "Sequence Analysis: New Methods for Old Ideas." *Annual Review of Sociology* 21: 93-113.
- Abbott, Andrew. 1997. "On the Concept of Turning Point." *Comparative Social Research* 16: 85-105.
- Abbott, Andrew. 2001. *Time Matters: On Theory and Method*. Chicago: University of Chicago Press.
- Abbott, Andrew and Emily Barman. 1997. "Sequence Comparison Via Alignment and Gibbs Sampling: A Formal Analysis of the Emergence of the Modern Sociological Article." *Sociological Methodology* 27: 47-87.
- Abbott, Andrew and Alexandra Hrycak. 1990. "Measuring Resemblance in Sequence Data: An Optimal Matching Analysis of Musicians' Careers." *American Journal of Sociology* 96, no. 1: 144-185.
- Aminzade, Ronald. 1992. "Historical Sociology and Time." *Sociological Methods & Research* 20, no. 4: 456-480.
- Bates, Robert H. et al. 1998. *Analytic Narratives*. Princeton: Princeton University Press.
- Bowen, John R. and Roger Petersen. 1999. "Introduction: Critical Comparisons." Pp. 1-20 in *Critical Comparisons in Politics and Culture*, ed. John R. Bowen and Roger Petersen. New York: Cambridge University Press.
- Bradbury, Jonathan, David Denver, James Mitchell, and Lynn Bennie. 2000. "Devolution and Party Change: Candidate Selection for the 1999 Scottish Parliament and Welsh Assembly Elections." *Journal of Legislative Studies* 6, no. 3: 51-72.
- Brady, Henry E. and David Collier, eds. 2004. *Rethinking Social Inquiry: Diverse Tools, Shared Standards*. Lanham: Rowman and Littlefield.
- Brown, Cliff and Terry Boswell. 1995. "Strikebreaking or Solidarity in the Great Steel Strike of 1919: A Split Labor Market, Game Theoretic, and QCA Analysis." *American Journal of Sociology* 100, no. 6: 1479-1519.
- Caren, Neal and Aaron Panofsky. 2005. "TQCA: A Technique for Adding Temporality to Qualitative Comparative Analysis." *Sociological Methods & Research* 34, no. 2: 147-172.
- Carley, Kathleen M. 1997. "Comment: The Importance of Order." *Sociological Methodology* 27: 131-133.

- Caul, Miki. 1999. "Women's Representation in Parliament: The Role of Political Parties." *Party Politics* 5, no. 1: 79-98.
- Chan, Steve. 2003. "Explaining War Termination: A Boolean Analysis of Causes." *Journal of Peace Research* 40, no.1: 49-66.
- Clément, Caty. 2005. "The Nuts and Bolts of State Collapse: Common Causes and Different Patterns? A QCA Analysis of Lebanon, Somalia, and the Former-Yugoslavia." Working Paper. Online at: <http://www.compass.org/Clement2005.pdf>.
- Corsaro, William A. and David R. Heise. 1990. "Event Structure Models from Ethnographic Data." *Sociological Methodology* 20: 1-57.
- Coverdill, James E., William Finlay, and Jack K. Martin. 1994. "Labor Management in the Southern Textile Industry: Comparing Qualitative, Quantitative, and Qualitative Comparative Analysis." *Sociological Methods & Research* 23, no. 1: 54-85.
- Dahlerup, Drude and Lenita Freidenvall. 2005. "Quotas as a 'Fast Track' to Equal Representation for Women: Why Scandinavia is No Longer the Model." *International Feminist Journal of Politics* 7, no. 1: 26-48.
- Davidson-Schmich, Louise K. 2006. "Implementation of Political Party Gender Quotas: Evidence from the German *Länder* 1990-2000." *Party Politics* 12, no. 2: 211-232.
- De Meur, Gisèle and Benoît Rihoux. 2002. *L'Analyse Quali-Quantitative Comparée: Approche, Techniques et Applications en Sciences Humaines*. Louvain-la-Neuve: Bruylant-Academia.
- Dijkstra, Wil and Toon Taris. 1995. "Measuring the Agreement Between Sequences." *Sociological Methods & Research* 24, no. 2: 214-231.
- Dion, Douglas. "Evidence and Inference in the Comparative Case Study." *Comparative Politics* 30, no. 2: 127-145.
- Falleti, Tulia G. 2005. "A Sequential Theory of Decentralization: Latin American Cases in Comparative Perspective." *American Political Science Review* 99, no. 2: 327-346.
- Geddes, Barbara. 1990. "How the Cases You Choose Affect the Answers You Get: Selection Bias in Comparative Politics." *Political Analysis* 2: 131-150.
- George, Alexander L. and Andrew Bennett. 2005. *Case Studies and Theory Development in the Social Sciences*. Cambridge: MIT Press.
- Goertz, Gary. 2003. *International Norms and Decisionmaking: A Punctuated Equilibrium Model*. Lanham: Rowman & Littlefield.
- Goertz, Gary and James Mahoney. 2005. "Two-Level Theories and Fuzzy Set Analysis." *Sociological Methods & Research* 33, no. 4: 497-538.

- Goldthorpe, John H. 1997. "Current Issues in Comparative Macrosociology: A Debate on Methodological Issues." *Comparative Social Research* 16: 1-26.
- Griffin, Larry J. 1992. "Temporality, Events, and Explanation in Historical Sociology: An Introduction." *Sociological Methods & Research* 20, no.4: 403-427.
- Griffin, Larry J. 1993. "Narrative, Event-Structure Analysis, and Causal Interpretation in Historical Sociology." *American Journal of Sociology* 98, no. 5: 1094-1133.
- Griffin, Larry and Charles C. Ragin. 1994. "Some Observations on Formal Methods of Qualitative Analysis." *Sociological Methods & Research* 23, no. 1: 4-21.
- Haydu, Jeffrey. 1998. "Making Use of the Past: Time Periods as Cases to Compare and as Sequences of Problem Solving." *American Journal of Sociology* 104, no. 2: 339-371.
- Heise, David. 1989. "Modeling Event Structures." *Journal of Mathematical Sociology* 14: 139-169.
- Hicks, Alexander. 1994. "Qualitative Comparative Analysis and Analytical Induction: The Case of the Emergence of the Social Security State." *Sociological Methods & Research* 23, no. 1: 86-113.
- Htun, Mala N. and Mark P. Jones. 2002. "Engendering the Right to Participate in Decision-Making: Electoral Quotas and Women's Leadership in Latin America." Pp. 32-56 in *Gender and the Politics of Rights and Democracy in Latin America*, ed. Nikki Craske and Maxine Molyneux. New York: Palgrave.
- Inglehart, Ronald and Pippa Norris. 2003. *Rising Tide: Gender Equality and Cultural Change Around the World*. New York: Cambridge University Press.
- Inheteven, Katharina. 1999. "Can Gender Equality Be Institutionalized? The Role of Launching Values in Institutional Innovation." *International Sociology* 14, no. 4: 403-422.
- Inter-Parliamentary Union. 2006. "Women in National Parliaments: Situation as of 31 July 2006." Online at: <http://www.ipu.org/wmn-e/classif.htm> Accessed August 21, 2006.
- Jones, Mark P. 1998. "Gender Quotas, Electoral Laws, and the Election of Women: Lessons from the Argentine Provinces." *Comparative Political Studies* 31, no. 1: 3-21.
- Jones, Mark P. 2004. "Quota Legislation and the Election of Women: Learning from the Costa Rican Experience." *Journal of Politics* 66, no. 4: 1203-1223.
- Katznelson, Ira. 1997. "Structure and Configuration in Comparative Politics." Pp. 81-112 in *Comparative Politics: Rationality, Culture, and Structure*, ed. Mark Irving Lichbach and Alan S. Zuckerman. New York: Cambridge University Press.
- King, Gary, Robert O. Keohane, and Sidney Verba. 1994. *Designing Social Inquiry: Scientific Inference in Qualitative Research*. Princeton: Princeton University Press.

- Kittilson, Miki Caul. 2006. *Challenging Parties, Changing Parliaments: Women and Elected Office in Contemporary Western Europe*. Columbus: Ohio State University Press.
- Krook., Mona Lena. 2004. "Gender Quotas as a Global Phenomenon: Actors and Strategies in Quota Adoption." *European Political Science* 3, no. 3: 59-65.
- Krook, Mona Lena. 2005. *Politicizing Representation: Campaigns for Candidate Gender Quotas*. Ph.D. Diss. Columbia University.
- Krook, Mona Lena. Forthcoming a. "Candidate Gender Quotas: A Framework for Analysis." *European Journal of Political Research*, forthcoming.
- Krook, Mona Lena. Forthcoming b. "Reforming Representation: The Diffusion of Candidate Gender Quotas Worldwide." *Politics & Gender*, forthcoming.
- Kunovich, Sheri and Pamela Paxton. 2005. "Pathways to Power: The Role of Political Parties in Women's National Political Representation." *American Journal of Sociology* 111, no. 2: 505-552.
- Kvist, Jon. 2003. "Conceptualisation, Configuration, and Categorisation – Diversity, Ideal Types and Fuzzy Sets in Comparative Welfare State Research." Paper presented at the COMPASSS Launching Conference, Louvain-la-Neuve and Leuven, Belgium, September 17.
- Lawless, Jennifer L. and Richard L. Fox. 2005. *It Takes a Candidate: Why Women Don't Run for Office*. New York: Cambridge University Press.
- Leijenaar, Monique. 1997. *How to Create a Gender Balance in Political Decision-Making: A Guide to Implementing Policies for Increasing the Participation of Women in Political Decision-Making*. Luxembourg: Office for Official Publications of the European Communities.
- Lieberson, Stanley. 2004. "Comments on the Use and Utility of QCA." *Qualitative Methods* 2, no. 2: 13-14.
- Lovenduski, Joni and Pippa Norris, eds. 1993. *Gender and Party Politics*. Thousand Oaks: Sage.
- Mahoney, James. 1999. "Nominal, Ordinal, and Narrative Appraisal in Macrocausal Analysis." *American Journal of Sociology* 104, no. 4: 1154-1196.
- Mahoney, James. 2000. "Path Dependence in Historical Sociology." *Theory and Society* 29, no. 4: 507-548.
- Mahoney, James and Dietrich Rueschemeyer, eds. 2003. *Comparative Historical Analysis in the Social Sciences*. New York: Cambridge University Press.
- Matland, Richard E. 1995. "How the Election System Structure Has Helped Women Close the Representation Gap." Pp. 281-309 in *Women in Nordic Politics: Closing the Gap*, ed. Lauri Karvonen and Per Selle. Brookfield: Dartmouth.

- Matland, Richard E. 2006. "Electoral Quotas: Frequency and Effectiveness." Pp. 275-292 in *Women, Quotas, and Politics*, ed. Drude Dahlerup. New York: Routledge.
- Meier, Petra. 2003. "Gender Quotas or Electoral Reform: Why More Women Got Elected During the 2003 Belgian Elections." Paper presented at the Annual Meeting of Dutch and Flemish Political Scientists, Dordrecht, Netherlands, May 22-23.
- Moore, Barrington. 1966. *Social Origins of Dictatorship and Democracy: Lord and Peasant in the Making of the Modern World*. Boston: Beacon Press.
- Murray, Rainbow. 2004. "Why Didn't Parity Work? A Closer Examination of the 2002 Election Results." *French Politics* 2: 347-362.
- Norris, Pippa. 1993. "Conclusions: Comparing Legislative Recruitment." Pp. 309-330 in *Gender and Party Politics*, ed. Joni Lovenduski and Pippa Norris. Thousand Oaks: Sage.
- Norris, Pippa, ed. 1997. *Passages to Power: Legislative Recruitment in Advanced Democracies*. New York: Cambridge University Press.
- Ragin, Charles C. 1997. "Turning the Tables: How Case-Oriented Research Challenges Variable-Oriented Research." *Comparative Social Research* 16: 27-42.
- Rahat, Gideon and Reuven Y. Hazan. 2001. "Candidate Selection Methods: An Analytical Framework." *Party Politics* 7, no. 3: 297-322.
- Patterson, Molly and Kristen Renwick Monroe. 1998. "Narrative in Political Science." *Annual Review of Political Science* 1: 315-331.
- Pierson, Paul. 2004. *Politics in Time: History, Institutions, and Social Analysis*. Princeton: Princeton University Press.
- Ragin, Charles C. 1987. *The Comparative Method: Moving Beyond Qualitative and Quantitative Strategies*. Berkeley: University of California Press.
- Ragin, Charles C. 1997. "Turning the Tables: How Case-Oriented Research Challenges Variable-Oriented Research." *Comparative Social Research* 16: 27-42.
- Ragin, Charles C. 2000. *Fuzzy-Set Social Science*. Chicago: University of Chicago Press.
- Ragin, Charles C. et al. 2006. *User's Guide to Fuzzy-Set/Qualitative Comparative Analysis*. Online at: <http://www.fsqca.com>.
- Redding, Kent and Jocelyn S. Viterna. 1999. "Political Demands, Political Opportunities: Explaining the Differential Success of Left-Libertarian Parties." *Social Forces* 78, no. 2: 491-510.

- Rueschemeyer, Dietrich and John D. Stephens. 1997. "Comparing Historical Sequences – A Powerful Tool for Causal Analysis: A Reply to John Goldthorpe's 'Current Issues in Comparative Macrosociology.'" *Comparative Social Research* 16: 55-72.
- Rule, Wilma. 1987. "Electoral Systems, Contextual Factors and Women's Opportunity for Election to Parliament in Twenty-three Democracies." *The Western Political Quarterly* 40, no. 3: 477-498.
- Schneider, Carsten Q. 2003. "Exploring the Complex Causes of the Consolidation of Democracy: An Application of the Two-Step fs/QCA Approach." Paper presented at the General Conference of the European Consortium for Political Research, Marburg, Germany, September 18-21.
- Schneider, Carsten Q. and Claudius Wagemann. Forthcoming. "Reducing Complexity in Qualitative Comparative Analysis (QCA): Remote and Proximate Factors and the Consolidation of Democracy." *European Journal for Political Research*.
- Sewell, William H., Jr. 1996. "Three Temporalities: Toward an Eventful Sociology." Pp. 245-280 in *The Historic Turn in the Human Sciences*, ed. Terrence J. McDonald. Ann Arbor: The University of Michigan Press.
- Siaroff, Alan. 2000. "Women's Representation in Legislatures and Cabinets in Industrial Democracies." *International Political Science Review* 21, no.2: 197-215.
- Sil, Rudra. 2000. "The Division of Labor in Social Science Research: Unified Methodology or 'Organic Solidarity?'" *Polity* 32, no. 4: 499-531.
- Skocpol, Theda. 1979. *States and Social Revolutions: A Comparative Analysis of France, Russia, and China*. New York: Cambridge University Press.
- Smithson, Michael and Jay Verkuilen. 2006. *Fuzzy Set Theory: Applications in the Social Sciences*. Thousand Oaks: Sage.
- Somers, Margaret R. 1996. "Where Is Sociology after the Historic Turn? Knowledge Cultures, Narrativity, and Historical Epistemologies." Pp. 53-89 in *The Historic Turn in the Human Sciences*, ed. Terrence J. McDonald. Ann Arbor: The University of Michigan Press.
- Stryker, Robin. 1996. "Beyond History Versus Theory: Strategic Narrative and Sociological Explanation." *Sociological Methods & Research* 24, no. 3: 304-352.
- Tilly, Charles. 2001. "Mechanisms in Political Processes." *Annual Review of Political Science* 4: 21-41.
- Tremblay, Manon. 2006. "Democracy, Representation, and Women: A Comparative Analysis." Paper presented at the International Political Science Association World Congress, Fukuoka, Japan, July 10-13, 2006.

Wickham-Crowley, Timothy P. 1992. *Guerillas and Revolution in Latin America: A Comparative Study of Insurgents and Regimes since 1956*. Princeton: Princeton University Press.

Yoon, Mi Yung. 2004. "Explaining Women's Legislative Representation in Sub-Saharan Africa." *Legislative Studies Quarterly* 29, no. 3: 447-466.

Appendix: Coding Scheme

PR Electoral System

Closed-list PR systems = 1, mixed-member proportional systems = .7, parallel systems = .5, two-round systems = .2, and FPTP systems = 0.

Multi-party System

3 or more effective parties = 1, two-party system = .5, one-party system = 0.

50% Reserved Seats

50% reserved seats = 1, 25% reserved seats = .5, 12.5% = .25, 6.25% = .13, 0% = 0.
(Percentages in between these breaks are scaled proportionally.)

Non-quota Measures

All parties with 50% targets = 1, many parties with 50% targets = .9, half of parties with 50% targets = .5, major party or multiple minor parties with large targets = .3, minor party with large target = .2, no parties with targets = 0.

Placement Mandates

50% legislative quota with mandate to alternate = 1, 50% major party quota with mandate to alternate or 40% legislative quota with limited mandate to alternate = .8, 40% major party quota with limited mandate to alternate = .7, 30% legislative quota with one per every three candidates mandate = .6, 25% legislative quota with one per every four candidates mandate = .5, major party with minimum commitment to alternation = .2, minor party with commitment to alternation = .1, no placement mandate = 0.

50% Party Quotas

50% party quotas in all parties = 1, 50% party quotas in one major party = .8, 40% party quota in one major party = .65, 25% party quota in one major party = .5, 50% party quota in one minor party = .4, 30% party quota in one minor party, no party quotas = 0. (*Combinations of major and minor parties lead to combined judgments.*)

Affirmative Action

Affirmative action (AA) is legal and promoted actively by the state and other actors = 1, AA is legal but commitment to it is weaker = .75, AA is legal but challenged = .5, AA is practiced but equality before the law is preferred = .25, AA is not legal and thus not promoted by the state or other actors = 0.

Group Representation

Extensive representational guarantees (RG) to many groups = 1, extensive state-led RG to some groups = .75, some state-led RG to groups = .5, some intra-party RG to groups = .25, no RG to groups = 0. (*Groups in question do not include 'women' as a group.*)

50% Legislative Quotas

50% legislative quotas = 1, 40% legislative quotas = .8, 30% legislative quotas = .6, 25% legislative quotas = .5, no legislative quotas = 0.

Equal Representation in Parliament

50% female representation = 1, 25% female representation = .5, 0% female representation = 0. (*Percentages in between these breaks are scaled proportionally.*)

Table 1. Truth Table for Cases of Iterated Reform in Gender Quota Campaigns

Country	Political System Features			Political Party Practices			Equality and Representation Norms			Outcome
Case	PR Electoral System	Multi-Party System	50% Reserved Seats	Non-quota Measures	Placement Mandates	50% Party Quotas	Affirmative Action Accepted	Guaranteed Group Representation	50% Legislative Quotas	50% Female Representation in Parliament
Argentina - 91	1	1	0	0	0	0	0	0	0	0.12
Argentina 91-93	1	1	0	0	0.4	0	0.5	0	0.6	0.28
Argentina 93-95	1	1	0	0	0.5	0	1	0	0.6	0.44
Argentina 95-00	1	1	0	0	0.55	0	1	0	0.6	0.56
Argentina 00-06	1	1	0	0	0.6	0	1	0	0.6	0.7
Austria -85	1	1	0	0	0	0	0.25	0.75	0	0.18
Austria 85-93	1	1	0	0	0.1	0.45	0.25	0.75	0	0.4
Austria 93-95	1	1	0	0	0.7	0.65	0.5	0.75	0	0.44
Austria 95-06	1	1	0	0.3	0.7	0.65	0.75	0.75	0	0.68
Bangladesh 72-78	0	0	0.1	0	0	0	0.5	0.5	0	0.1
Bangladesh 78-87	0	0	0.18	0	0	0	0.75	0.5	0	0.18
Bangladesh 87-90	0	0	0	0	0	0	0.75	0.5	0	0.02
Bangladesh	0	0.5	0.18	0	0	0	0.75	0.5	0	0.18

90-01										
Bangladesh 01-04	0	0.5	0	0	0	0	0.75	0.5	0	0.04
Bangladesh 04-06	0	0.5	0.26	0	0	0	0.9	0.5	0	0.3
Belgium -85	1	1	0	0.1	0	0	0.25	1	0	0.12
Belgium 85-94	1	1	0	0.3	0.1	0.5	0.8	1	0	0.18
Belgium 94-02	1	1	0	0.4	0.5	0.8	0.9	1	0.6	0.46
Belgium 02-06	1	1	0	0.4	0.8	0	1	1	1	0.7
Costa Rica -96	1	0.5	0	0	0	0	0.75	0	0	0.28
Costa Rica 96-99	1	0.5	0	0	0	0	0.9	0	0.8	0.38
Costa Rica 99-06	1	0.5	0	0	0.8	0.4	0.9	0	0.8	0.78
France -96	0.2	1	0	0	0	0	0	0	0	0.12
France 96-99	0.2	1	0	0	0	0.6	0.25	0	0	0.22
France 99-06	0.2	1	0	0	0	0	0.75	0	1	0.24
Germany -88	0.7	1	0	0	0.1	0.4	0.5	0.75	0	0.3
Germany 88-94	0.7	1	0	0.25	0.2	0.6	0.75	0.75	0	0.52
Germany 94-98	0.7	1	0	0.3	0.6	0.7	0.8	0.75	0	0.62

Germany 98-06	0.7	1	0	0.3	0.8	0.75	0.8	0.75	0	0.64
Mexico -96	0.7	0	0	0.3	0.1	0.2	0	0.25	0	0.28
Mexico 96-02	0.7	0.5	0	0	0.2	0.8	0.5	0.25	0.6	0.32
Mexico 02-06	0.7	0.5	0	0	0.5	0.8	1	0.25	0.6	0.52
Pakistan 56-73	0.5	0	0.08	0	0	0	0	0.5	0	0.08
Pakistan 73-80	0.5	0	0.1	0	0	0	0	0.5	0	0.1
Pakistan 80-90	0.5	0	0.19	0	0	0	0	1	0	0.2
Pakistan 90-02	0.5	0.5	0	0	0	0	0.25	0.5	0	0.04
Pakistan 02-06	0.5	1	0.38	0	0	0	0.25	1	0	0.44
Spain -88	1	1	0	0	0	0	0	0	0	0.18
Spain 88-97	1	1	0	0	0.5	0.6	0.25	0	0	0.5
Spain 97-06	1	1	0	0	0.8	0.65	0.5	0	0	0.72
Sweden -87	1	1	0	0.8	0	0	0.25	0.25	0	0.64
Sweden 87-92	1	1	0	0.9	0.8	0.8	0.5	0.25	0	0.68
Sweden 92-06	1	1	0	0.5	0.9	0.9	0.75	0.25	0	0.9
Tanzania	0	0	0	0	0	0	0	0	0	0.08

-75										
Tanzania 75-92	0	0	0.13	0	0	0	0.75	1	0	0.22
Tanzania 92-00	0	0	0.31	0	0	0	0.75	0.5	0	0.36
Tanzania 00-05	0	0	0.38	0	0	0	0.75	0.5	0	0.44
Tanzania 05-06	0	0	0.6	0	0	0	0.75	0.5	0	0.6
Uganda -89	0	0	0	0	0	0	0.25	0	0	0.02
Uganda 89-96	0	0	0.25	0	0	0	0.25	1	0	0.34
Uganda 96-01	0	0	0.25	0	0	0	1	1	0	0.36
Uganda 01-06	0	0	0.38	0	0	0	1	1	0	0.56
UK -93	0	0.5	0	0.35	0	0	0	0.25	0	0.18
UK 93-96	0	0.5	0	0.1	0.4	0.4	0.25	0	0	0.36
UK 96-02	0	0.5	0	0.2	0	0	0	0	0	0.35
UK 02-06	0	0.5	0	0	0.5	0.8	0.75	0.25	0	0.4

Table 2. ‘Soft’ Optimal Matching Across Configurations of Conditions Across Moments of Reform

	System Features	Party Practices	Political Norms	Female Representation
Argentina				
Argentina -91:	S+ (PR, multi-party)	P-	N-	Low
Argentina 91-93:		P+ (mandate)	N+ (quota, AA)	Increase
Argentina 93-95:			N+ (strong AA)	Increase
Argentina 95-00:		P+ (stronger mandate)		Increase
Argentina 00-06:		P+ (stronger mandate)		Increase
<i>Final configuration</i>	<i>S+ (PR, multi-party)</i>	<i>P+ (strong mandate)</i>	<i>N+ (strong AA, quota)</i>	<i>High</i>
Austria				
Austria -85:	S+ (PR, multi-party)	P-	N+ (AA, GR)	Low
Austria 85-93:		P+ (mandate, quota)		Increase
Austria 93-95:		P+ (stronger mandate, stronger quota)	N+ (stronger AA)	Increase
Austria 95-06:		P+ (non-quota)	N+ (stronger AA)	Increase
<i>Final configuration</i>	<i>S+ (PR, multi-party)</i>	<i>P+ (non-quota, strong mandate, strong quota)</i>	<i>N+ (strong AA, strong GR)</i>	<i>High</i>
Bangladesh				
Bangladesh 72-78:	S- (quota)	P-	N+ (AA, GR)	Low
Bangladesh 78-87:	S+ (larger quota)		N+ (stronger AA)	Increase
Bangladesh 87-90:	S- (no quota)			Decrease
Bangladesh 90-01:	S+ (two-party, quota)			Increase
Bangladesh 01-04:	S- (no quota)			Decrease
Bangladesh 04-06:	S+ (larger quota)		N+ (stronger AA)	Increase
<i>Final configuration</i>	<i>S+ (two-party, quota)</i>	<i>P-</i>	<i>N+ (strong AA, strong GR)</i>	<i>Low-Medium</i>
Belgium				
Belgium -85:	S+ (PR, multi-party)	P- (non-quota)	N+ (AA, GR)	Low

Belgium 85-94:		P+ (stronger non-quota, mandate, quota)	N+ (stronger AA)	Increase
Belgium 94-02:		P+ (stronger non-quota, stronger mandate, stronger quota)	N+ (stronger AA, quota)	Increase
Belgium 02-06:		P+ (stronger mandate), P- (no quota)	N+ (stronger AA, stronger quota)	Increase
<i>Final configuration</i>	<i>S+ (PR, multi-party)</i>	<i>P+ (non-quota, strong mandate)</i>	<i>N+ (strong AA, strong GR, strong quota)</i>	<i>High</i>
Costa Rica				
Costa Rica -96:	S+ (PR, multi-party)	P-	N+ (AA)	Low-Medium
Costa Rica 96-99:			N+ (stronger AA, quota)	Increase
Costa Rica 99-06:		P+ (mandate, quota)		Increase
<i>Final configuration</i>	<i>S+ (PR, multi-party)</i>	<i>P+ (strong mandate, strong quota)</i>	<i>N+ (strong AA, strong quota)</i>	<i>High</i>
France				
France -96:	S- (multi-party)	P-	N-	Low
France 96-99:		P+ (quota)	N+ (AA)	Increase
France 99-06:		P- (no quota)	N+ (stronger AA, quota)	Increase
<i>Final configuration</i>	<i>S- (multi-party)</i>	<i>P-(no quota)</i>	<i>N+(strong AA, quota)</i>	<i>Low-Medium</i>
Germany				
Germany -88:	S+ (MMP, multi-party)	P+ (mandate, quota)	N+ (AA, GR)	Medium
Germany 88-94:		P+ (non-quota, stronger mandate, stronger quota)	N+ (stronger AA)	Increase
Germany 94-98:		P+ (stronger non-quota, stronger mandate, stronger quota)	N+ (stronger AA)	Increase
Germany 98-06:		P+ (stronger mandate,		Increase

<i>Final configuration</i>	<i>S+</i> (MMP, multi-party)	stronger quota) <i>P+</i> (non-quota, strong mandate, strong quota)	<i>N+</i> (strong AA, strong GR)	<i>High</i>
Mexico				
Mexico -96:	<i>S+</i> (MMP)	<i>P+</i> (non-quota, mandate, quota)	<i>N+</i> (GR)	Low
Mexico 96-02:	<i>S+</i> (two-party)	<i>P+</i> (stronger mandate, stronger quota), <i>P-</i> (no non-quota)	<i>N+</i> (AA, quota)	Increase
Mexico 02-06: <i>Final configuration</i>	<i>S+</i> (MMP, two-party)	<i>P+</i> (stronger mandate) <i>P+</i> (strong mandate, strong quota)	<i>N+</i> (stronger AA) <i>N+</i> (strong AA, strong quota)	Increase <i>Medium-High</i>
Pakistan				
Pakistan 56-73:	<i>S-</i> (quota)	<i>P-</i>	<i>N+</i> (GR)	Low
Pakistan 73-80:	<i>S+</i> (stronger quota)			Increase
Pakistan 80-90:	<i>S+</i> (stronger quota)		<i>N+</i> (stronger GR)	Increase
Pakistan 90-02:	<i>S+</i> (two-party), <i>S-</i> (no quota)		<i>N+</i> (AA), <i>N-</i> (weaker GR)	Decrease
Pakistan 02-06: <i>Final configuration</i>	<i>S+</i> (multi-party, quota) <i>S+</i> (multi-party, quota)	<i>P-</i>	<i>N+</i> (stronger GR) <i>N+</i> (AA, strong GR)	Increase <i>Medium-High</i>
Spain				
Spain -88:	<i>S+</i> (PR, multi-party)	<i>P-</i>	<i>N-</i>	Low
Spain 88-97:		<i>P+</i> (mandate, quota)	<i>N+</i> (AA)	Increase
Spain 97-06:		<i>P+</i> (stronger mandate, stronger quota)	<i>N+</i> (stronger AA)	Increase
<i>Final configuration</i>	<i>S+</i> (PR, multi-party)	<i>P+</i> (strong mandate, strong quota)	<i>N+</i> (AA)	<i>High</i>

Sweden				
Sweden -87:	S+ (PR, multi-party)	P+ (non-quota)	N+ (AA, GR)	High
Sweden 87-92:		P+ (stronger non-quota, mandate, quota)	N+ (stronger AA)	Increase
Sweden 92-06:		P- (weaker non-quota), P+ (stronger mandate, stronger quota)	N+ (stronger AA)	Increase
<i>Final configuration</i>	<i>S+ (PR, multi-party)</i>	<i>P+ (non-quota, strong mandate, strong quota)</i>	<i>N+ (strong AA, GR)</i>	<i>High-Equal</i>
Tanzania				
Tanzania -75:	S-	P-	N-	Low
Tanzania 75-92:	S+ (quota)		N+ (AA, GR)	Increase
Tanzania 92-00:	S+ (stronger quota)		N- (weaker GR)	Increase
Tanzania 00-05:	S+ (stronger quota)			Increase
Tanzania 05-06:	S+ (stronger quota)			Increase
<i>Final configuration</i>	<i>S+ (strong quota)</i>	<i>P-</i>	<i>N+ (strong AA, GR)</i>	<i>High</i>
Uganda				
Uganda -89:	S-	P-	N+ (AA)	Low
Uganda 89-96:	S+ (quota)		N+ (GR)	Increase
Uganda 96-01:			N+ (stronger AA)	Increase
Uganda 01-06:	S+ (stronger quota)			Increase
<i>Final configuration</i>	<i>S+ (strong quota)</i>	<i>P-</i>	<i>N+ (strong AA, strong GR)</i>	<i>Medium-High</i>
United Kingdom				
United Kingdom -93:	S- (two-party)	P+ (non-quota)	N+ (GR)	Low
United Kingdom 93-96:		P- (weaker non-quota), P+ (mandate, quota)	N+ (AA), N- (weaker GR)	Increase
United Kingdom 96-02:		P+ (stronger non-quota), P- (no mandate, no	N- (no AA)	Decrease

United Kingdom 02-06:		quota) P- (no non-quota), P+ (mandate, quota)	N+ (AA, GR)	Increase
<i>Final configuration</i>	<i>S- (two-party)</i>	<i>P+ (mandate, strong quota)</i>	<i>N+ (strong AA, GR)</i>	<i>Medium-High</i>

Key:

AA = affirmative action

GR = guarantees for group representation

Table 3. A Comparison of the Effects of Additive Versus Extractive Sequences of Reform

	Female Representation Before Quotas	Female Representation After Quota Reform	Overall Increase in Female Representation
Additive Sequences			
Argentina	5.8% (1991)	35.0% (2005)	29.2 points
Austria	9.3% (1983)	33.9% (2002)	24.6 points
Belgium	5.7% (1981)	35.3% (2003)	29.6 points
Costa Rica	14.0% (1994)	38.6% (2006)	24.6 points
Germany	15.4% (1987)	31.8% (2005)	16.4 points
Mexico	7.6% (1991)	25.8% (2003)	18.2 points
Pakistan	3.8% (1962)	21.6% (2002)	17.8 points
Spain	9.4% (1986)	36.0% (2004)	26.6 points
Sweden	31.5% (1985)	45.3% (2002)	13.8 points
Uganda	0.8% (1980)	27.6% (2006)	26.8 points
Extractive Sequences			
Bangladesh	1.0% (1988)*	14.8% (2005)	13.8 points
France	6.4% (1993)	12.2% (2002)	5.8 points
Tanzania	3.9% (1970)	30.4% (2005)	26.5 points
United Kingdom	9.2% (1992)	19.7% (2005)	10.5 points

*Bangladesh introduced reserved seats at the time of independence. The only periods without quotas have been 1987-1990 and 2001-2004. The 1988 elections are used as a point of comparison.