

Overreaction in Politics and Policy

Moshe Maor
Hebrew University of Jerusalem

May 2018

The peer-reviewed version is forthcoming in: Alex Mintz and Lesley Terris (Eds.).
Oxford Handbook on Behavioral Political Science, Oxford: Oxford University Press.

Abstract

Although research examining overreaction in politics and policy remains at an early stage, it is clear that it largely develops along three paths. The first path comprises psychological explanations which put all overreactions down to errors derived from cognitive biases and constraints on information processing, as well as socio-psychological dynamics in small decision-making groups. The second path comprises newly-emerging institutional explanations which put all overreaction down to errors derived from institutional values, procedures, myths, and routines. The third path comprises newly-emerging strategic explanations which revolve around the idea that at times overreactions in politics and policy reflect intentional choices which may be carefully developed, meticulously debated, executed as planned, and successful in achieving the intended goals, especially during crises involving panic and public fears. This chapter explains the conceptual foundations of these explanations, their analytical anatomy and their conceptual reach. It starts by defining overreaction in politics and policy, and then elaborates on the analytical foundations of these explanations and the ways they integrate theories and findings from cognitive sciences into organizational systems of human action. It then highlights the *disproportionate policy perspective* and the derived repertoire of intentional policy overreactions, including the distinction between overreaction rhetoric and doctrines, as well as the demarcation between selective and non-selective overreaction. Next, it elaborates on the way strategic explanations reconcile intentionality with behavioral micro-foundation. It then looks at policy and political overreaction which are sustained by positive feedback processes over a relatively long period of time—a phenomena termed “policy bubbles” and “political bubbles”, respectively. It concludes by sketching out a number of directions in which the overreaction agenda could be experimentally broadened to better encompass scope conditions of its cognitive causes and the dynamics of policy bubbles.

Keywords: Overreaction, Overinvestment, Disproportionate policy, Micro-foundation, Policy bubbles

The study of overreaction in politics and policy offers unique insight into modern political reality. Global and domestic threats coupled with publics that are relatively skeptical about politicians and political institutions, and rising negativity and populism in democratic politics imply that policy overshooting is increasingly required for the public to perceive policy action as sufficient and politicians as competent, at least in the short term. Not only has overreaction been a focal point for political actors seeking decisive and swift policy change in times of real or manufactured crisis, but such action has time and time again also made a dramatic impact upon the direction and the character of policy and politics. A classic example is the U.S. response to 9/11. It is, therefore, an exciting time for research on overreaction in politics and policy.¹

The study of overreaction is theoretically meaningful because it contributes to our basic understanding of fundamental processes. The insight of the *punctuated equilibrium theory*—that policy responses oscillate between periods of underreaction to the flow of information coming from the environment into the system and overreaction due to disproportionate information processing (Baumgartner & Jones, 1993)—implies that policy overreaction is a frequent phenomenon.

The study of overreaction in politics and policy is also practically important because, under certain conditions, such a response creates substantial value for policymakers. Indeed, there has recently been a conceptual turn whereby overreaction has been re-entering the political and policy lexicons as a type of intentional choice, as part of the newly-emerging disproportionate policy perspective (Maor, 2017a). This perspective comprises *strategic explanations* which revolve around the idea that at times overreactions in politics and policy reflect intentional choices which may be carefully developed, meticulously debated, executed as planned, and successful in achieving the intended goals (e.g., restoring confidence in government during crises involving panic and public fears). It challenges *psychological explanations* that put all overreactions down to errors, derived from overconfidence and other misconceptions of risks (Janis, 1989; Jervis, 1976; Meyer, 2016; Walker & Malici, 2011; Maor, 2012), human cognitive and emotional architectures which are the underpinnings of disproportionate information processing (Jones & Baumgartner, 2005), and socio-psychological dynamics in small decision-making groups (Janis, 1982; Mintz & Wayne, 2016; 't Hart et al., 1997). It also challenges *institutional explanations* which put all overreaction down to errors derived from institutional values, procedures, myths, and routines (Peters et al., 2017). This chapter elaborates the conceptual foundations of these explanations, their analytical anatomy, and their conceptual reach.

I start by defining overreaction in politics and policy, and then elucidate the analytical foundations of these explanations and the ways they integrate theories and findings from cognitive sciences into organizational systems of human action. I then highlight the disproportionate policy perspective and the derived repertoire of intentional policy overreactions, including the distinction between overreaction rhetoric and doctrines, as well as the demarcation between selective and non-selective overreaction. Next, I clarify the way strategic explanations reconcile intentionality with behavioral micro-foundation.

In discussing these conceptual issues, we shall see that strategic explanations balance the intentionality with behavioral micro-foundation by accepting the premise that collective activities in governments must be consistent with individual cognitive processes. At the

same time, strategic explanations are guided by the assumption that collective activities in governments must not always be derived from, that is, reducible to, individual cognitive processes. In other words, individual-level processes in the case of intentional policy overreaction may be sufficient, but not necessary, for the collective activities in governments to be possible.

I then look at policy overreaction which is sustained by positive feedback processes and contagion over a relatively long period of time—a phenomenon termed “policy bubbles.” I conclude by sketching out a number of directions in which the overreaction agenda could be experimentally broadened to better encompass scope conditions of its cognitive causes and the dynamics of policy bubbles.

1. WHAT IS OVERREACTION?

A critical aspect of political life is the inability or unwillingness of individuals and decision-makers to respond proportionally to new information. One manifestation of this phenomenon is overreaction, defined as an action which imposes costs without producing offsetting benefits. Such an action reflects a lack of ‘fit’ or balance between ends and means.

Overreaction is commonly viewed as comprising a set of behaviors that fall under two categories: “too much” and “too soon” (Walker & Malici, 2011). In an attempt to infuse the concept of overreaction with a robust analytical identity, two concepts have recently been introduced into the public policy domain. *Policy overreaction* is a policy that “impose[s] objective and/or perceived social costs without producing offsetting objective and/or perceived benefits” (Maor, 2012, 235). Costs and benefits may be tangible as well as intangible (e.g., the loss of reputation following political behavior which breaks non-legal principles of appropriate behavior and accepted practices). Costs and benefits may be incurred by policymakers, target populations, and/or the general public. In addition, what appears to be an overreaction at a certain point in time may differ later as the magnitude of a policy problem or relevant events become more apparent. Further, the salience of the costs and benefits conferred upon different parties may differ, as may their degree of concentration. This aspect cannot be underestimated: individuals react differently to transparent costs and benefits than to hidden ones (McCaffrey & Baron, 2006), as well as to diffuse rather than to concentrated ones.

One manifestation of policy overreaction is the clear-cut concept of *policy overinvestment*, which occurs “when government overinvests in a single policy instrument beyond its instrumental value in achieving a policy goal” (Jones et al., 2014, 149). Policy overinvestment is identified by measuring direct indicators of the policy problem and government investment in order to gauge the extent of overinvestment in a policy tool relative to the severity of the policy problem. The boundary conditions of this concept are therefore clear-cut. They refer solely to tangible costs and benefits and therefore enjoy definitional clarity which is a necessary component of measurement precision.

2. EXPLANATIONS FOR OVERREACTION

Although research examining overreaction in politics and policy remains at an early stage,² it is clear that it develops along three paths. The first stream of research largely comprises psychological explanations that identify a pattern of overreaction thinking that systematically deviates from concepts of rational choice. This research revolves mainly around how systematic cognitive biases in human decision making (Kahneman, 2011; Kahneman et al., 1982) inform anomalies in the behavior of individuals and collectivities. Its conceptual structure comprises micro-foundations – key elements of human cognitive processes – which can thereafter be explicitly linked to collective activities in governments and other societal level systems. The second stream, which is still in its infancy and has so far been conceptual in nature, revolves around the independent effect of institutions. The third, which is also in its infancy and conceptual in nature, advances the idea that at times overreactions in politics and policy reflect intentional choices which may be successful in achieving the intended goals especially when the emotional arena surrounding the policy problem manifests panic and public fears which must be neutralized before the problem itself can be dealt with. The conceptual structure here comprises individual- and contextual-level conditions under which boundedly rational decision makers are able to make “reasonable” or “good enough” decisions to overreact at the levels of rhetoric, doctrine, and/or action on the ground. In the following sub-sections, I will review the literature and explore the conceptual structure of these three research streams. Much attention will be devoted to presenting the newly-emerging research on intentional policy overreactions.

2.1 PSYCHOLOGICAL EXPLANATIONS

Psychological explanations focus on overreaction as driven by individuals’ biases and cognitive constraints. A large body of laboratory research has shown that people do not exhibit the perfect rationality that economists commonly assume (Simon, 1982), and that many of their intuitive predictions are governed by heuristics, or rules of thumb (e.g., Tversky & Kahneman, 1974). Lichtenstein et al. (1978) highlighted the *availability bias* to explain why people relatively overestimate the frequencies of highly publicized causes of death (e.g., accidents and cancer) and underestimate underpublicized causes (e.g., stroke and tuberculosis). For Slovic et al. (2007), this finding could have been attributed to the *affective bias* as highly publicized causes appear to be more affectively charged. Whichever bias is invoked, the implication is that there is a potential for overreaction to small risks as well as to an increase of a risk from zero to some small positive value (Viscusi & Gayer, 2015).

Overreaction may also stem from behavioral heuristic such as the *representativeness heuristic*, which refers to judgments based on stereotypes (Kahneman and Tversky, 1973). Sunstein (2002) has suggested that public overreaction to highly politicized, low-probability risks could be explained by *probability neglect*, which occurs when people focus on the worst possible scenario. The strong emotions that are then triggered lead to the failure to inquire into the small probability that the worst case will occur (see also Sunstein & Zeckhauser, 2011) thereby taking excessive preventive action. Overreaction may also stem from an individual’s overconfidence—a summary of the extensive psychological research undertaken on *overconfidence bias* can be found elsewhere

(Lichtenstein et al., 1982; Moore & Healy, 2008). An interesting perspective in economics explains overconfidence as a social signaling bias, that is, as a means of gaining advantage by appearing more competent than others (Burks et al., 2013; Bénabou & Tirole, 2002). It is reasonable to speculate that one way of gaining this advantage, at least in the short-term, is by overreacting. Overreaction may also stem from *action bias* by governments following their natural tendencies to act regardless of whether an action is needed (Patt & Zeckhauser, 2000). This may occur, for example, in contexts wherein governments are able to obtain credit from the public for responding to the risk (Sunstein & Zeckhauser, 2010).

The finding that overreaction is driven by human cognitive and emotional architecture has also surfaced in the political science literature, and more specifically in agenda setting research derived from the punctuated equilibrium theory. Resting on the micro-foundation of bounded rationality, this theory views decision-makers as prisoners to their limited attention spans, with emotion as the key governor of the allocation of attention (Jones, 1994; 2001; 2003; Simon, 1983; 1986). Recent developments in macro-level agenda-setting have shown that limited attention spans in government, triggered by cognitive constraints, and the resistance to policy change structured into a governmental system, lead to underreaction, when the policy problem is “off the radar” and when rules for making binding decisions make change difficult. Conversely, these may lead to overreaction when the severity of the policy problem has passed some threshold (Jones & Baumgartner, 2005; Baumgartner et al., 2009). In other words, as the system underreacts to complex information streams, error accumulation implies that overreaction can occur only as a result of previous “serious under-response” (Jones, 2017, 71) of the system.

The punctuated equilibrium theory is currently the bedrock of our understanding of the policy process. However insightful this theory is, it provides little nuance regarding what the government is actually doing and how it affects the public (Dowding et al., 2016). Further, this theory implies a relatively high level of policy underinvestment but has little to say concerning policy overinvestment.

A recent study has advanced construct clarity by exploring the multi-dimensionality of policy overreaction and has suggested that this type of policy response has unique politics of its own and should, therefore, be studied in its own right. Drawing on robust experimental findings, Maor (2012) has raised a question regarding the likely policy outcomes in situations whereby policymakers believe that they are more talented and competent than they actually are, have more control over the event at hand than they in fact do, have greater chances of success in solving the policy problems than they genuinely do, and perceive the information that they possess as more precise than it actually is (Kahneman, 2011). Based on two key dimensions of policy overreaction, namely, (1) the effects of positive and negative events and (2) the effects of overestimation and accurate estimation of information, Maor has identified four distinct modes of policy overreaction that reflect differences in the nature of domestic policy change.

Preemptive overreaction emerges when policymakers overestimate information regarding a negative event (e.g., a misperception that a risk poses an imminent threat). The

subsequent policy comprises attempts by the government to neutralize or minimize the threat by, for example, a preemptive move. “*Calibrated*” *overreaction* emerges when policymakers overestimate information regarding a positive event (e.g., a misperception that a new policy idea, model, or theory precisely mimics some particular parameters of reality). The subsequent policy comprises attempts by the government to ensure that all relevant policies are implemented in accordance with the new model. *Regulatory overreaction* occurs when policymakers accurately estimate information regarding a negative event (e.g., a realistic recognition of the scope and intensity of a threat). The subsequent policy comprises attempts by the government to significantly increase the jurisdiction and powers of all relevant federal/state agencies even at the expense of undermining human rights. *Nearly mandatory overreaction* occurs when policymakers accurately estimate information regarding a positive event [e.g., a realistic recognition regarding the deeply contested nature of a (vaccination) policy, which is based on (medical) innovation]. The subsequent policy comprises attempts by the government to thrust all responsibility for policy implementation onto individuals (e.g., parents) and/or state-funded organizations (e.g., schools) (Maor, 2012). So, even when policymakers accurately estimate new information, a policy instrument which is implemented in a non-selective manner (e.g., a travel ban on certain countries or an open-door policy towards refugees), disregarding the heterogeneity of the target audiences, is likely to lead to policy overreaction.

Many of the psychological explanations focus on policy overreaction as driven by human cognitive and emotional architecture. As such, they implicitly consider only the political costs of this type of policy response, ignoring the political benefits that politicians and bureaucrats receive from overreacting. Not surprisingly, these studies together still subscribe to the conventional understanding centered on policy overreactions as mistakes of omission or commission (Walker & Malici, 2011).

2.2 INSTITUTIONAL EXPLANATIONS

A newly-emerging path in the study of overreaction comprises explanations that see decision-makers as being primarily guided by the “systematic properties of an interacting ecology” (March, 1994). Such explanations aim at highlighting the independent effect of structures beyond what can be explained by behavioral political science as well as by behavioral organizational theory (Hammond, 1986; 1990). Peters et al. (2017) have jumpstarted this research stream by highlighting the implications of the development of the new institutionalism in political science for the disproportionate policy subfield.

From the normative perspective of new institutionalism, overreaction may occur when the actions of institutions and organizations, or the demands for certain types of action, diverge from the stated norms of the institution (Brunsson & Olsen, 1993), as well as when threats grow to the institution’s core values (Peters et al., 2017). Rational choice institutionalism — especially the veto player theory (Tsebelis, 2002) which predicts status quo and most likely policy underreaction when veto players are cohesive — brings to the fore factors that mitigate the effects of veto players. An example includes the opportunities for overreaction created due to divergence of views amongst collective actors (e.g., political parties) on how

to address a given political or policy problem, as well as international regimes to which the state belongs (West & Lee, 2014), that can affect domestic politics by modifying how domestic institutions translate societal demands into policies (Betz, 2017). Another example is an extraordinary or urgent event that leads to a widespread consensus amongst policy actors justifying immediate and drastic policy response (e.g., Walgrave & Varone, 2008).

Historical institutionalism highlights factors that drive path dependency process (Pierson, 2000). Policy overreaction may result, for example, from bad structures and ideas (e.g., regulatory ideologies) that are sustained by long-term processes related to institutions' values, myths, and routines. In this regard, Snyder (1984) generalizes that military decision-makers tend to overestimate the feasibility of an operational plan if a realistic assessment conflicts with fundamental beliefs or an organizational ideology. Levy (1986) argues that too much planning results in decision-makers' implementing a plan designed for other contingencies which could increase the probability of overreaction contributing to war or to the escalation of war.³

In addition, institutional rules and regulations regarding decision strategies may also lead to policy overreaction. This is because a decision to overreact is taken within the remit of the institution's particular context—in particular, its values and myths—and the institution's modes of operation—standard operating procedures for gathering information, aggregating preferences, and taking action. Different contexts entail variation in decision strategy: almost all institutions seem to have a variety of decision strategies that they can and do employ in making decisions. Systematic contextual properties may therefore make it more likely that one or another decision strategy will be selected (Allison & Zelikow, 1999; March & Olson, 1989).

With the remarkable progress that has been made in behavioral research with serious implications for policymaking and public management (e.g., Shafir, 2013; James et al., 2017), theorists are in a position to draw on relevant findings. It is therefore surprising that institutional explanations of overreaction in politics and policy bring little of these findings to our understanding of how institutions form, evolve, and interact with behavior. This strategy comes with the risk of severely misunderstanding the combined effects of institutions. An example of findings that should be incorporated is that psychological biases make bad structures and ideas alluring to individuals operating within institutions (Caplan, 2001; Hirshleifer, 2008; Hirshleifer & Teoh, 2009; 2017). Institutional theorists could then gauge the conditions which facilitate or inhibit this process. Another is the finding that, in certain issue areas, decision-making by groups is more readily adaptive to shifting environmental cues than decisions made through organizational deliberation; therefore, policies which are governed by group dynamics are less prone to instabilities and less likely to display disjoint change (Epp, 2017). Institutional theorists could then ascertain the conditions which facilitate or inhibit decision-making by groups in organizations. Another example is the finding that individuals interacting by cue-taking and mimicking produce disjoint changes even with no exogenous shock (Thomas, 2017). Last, the finding, based on evolutionary patterns by which human beings developed the capacity to form groups, that endogenous forces of coalition building can help us understand episodic disjoint

change (Leech & Cronk, 2017). Institutional scholars may therefore creatively blend styles of research by incorporating these and other behavioral findings in their explanations.

More recent explanations of policy overreaction reflect a conceptual turn where the concept of overreaction has re-entered the policy lexicon as a type of intentional policy choice which, at times, may be successful in achieving policy goals (Maor, 2017a). However, the actual use of this approach remains at an early stage.

2.3 STRATEGIC EXPLANATIONS

2.3.1 Conceptual Foundations

Strategic explanations see decision-makers as primarily autonomous actors. When they stand to benefit from overreacting, their decisions may be carefully thought out, carefully developed, meticulously debated, and executed as planned. Specifically, strategic explanations of policy overreaction view decision-makers as boundedly rational individuals who, in some contexts, may produce substantially rational outcomes (Simon, 1985, p. 294). This may be the case, for example, when decisions involve high stakes, and when decision-makers are motivated to make the right choice (Chong, 2013, 97). Strategic explanations thus bring to the fore the assumptions underlying bounded rationality that there is variation amongst individuals and contexts in decision-making processes and outcomes (Gigerenzer & Goldstein, 1996; Lupia & McCubbins, 1998; Simon, 1985; 1995). Because individuals differ in their motivations and opportunities to carefully process information, and because contexts differ in their complexity, individuals need not be consistent decision-makers (Lodge & Taber, 2000), as rational choice theory assumes (Becker, 1976; Rubinstein, 1998; Simon, 1995). In policy contexts, this insight implies that decision-makers do not need to place efficient goal attainment center stage in every decision they take, especially in times of crises.

Further, some individuals operating within particular contexts can overcome bias (Lau et al., 2008; Petty & Cacioppo, 1986) and make “rational”—read “reasonable” or “good enough”—decisions.⁴ They can also correct their misperceptions especially when they have an incentive to make superior decisions (Chong, 2013). This insight implies that some policy actors, operating within particular policy contexts, can overcome the “efficient goal attainment” bias and make “rational” disproportionate policy decisions at the levels of rhetoric, doctrine, and/or actions on-the-ground. In addition, considering the amount of experience that decision-makers bring to the task, as well as the findings that inexperience biases information processing and inference (Saunders, 2017) and that experience attenuates the relationship between low epistemic motivation and biased choice (Rathbun et al., 2017), it is reasonable to argue that they do try to choose political strategies and policy instruments that they believe will achieve their goals. At times, they are successful in achieving the right outcome. But what does “success” mean?

Politics evoke different dimensions of evaluation in different contexts (crisis vs. non-crisis; domestic vs. foreign policy). In this respect, strategic explanations assert that decision-makers want to make good decisions (Redlawsk & Lau, 2013, 137), but in political and

policy arenas, the public perception of a “good” decision may be easily manipulated by political opponents, the media, and the like. These are framing issues whose impact should not be underestimated. This is because the public is able to discern the direction of policy, to evaluate the competences of decision-makers, and to respond to public events in a reasonably accurate manner (Page & Shapiro, 1992; Stimson, 2004; Downs, 1957; Fiorina, 1981; Popkin, 1994). Furthermore, the problem with treating a “good” decision as a pillar of politics and policy is that, in itself, it provides little guidance for action. It must be contextualized and assessed in light of specific objectives and values.

Alternatively, one can invoke a more realistic dimension of decision-making that will (i) directly support action, (ii) trumps other concerns, that is, may not be sensitive to cost-effectiveness calculations, (iii) makes sense to politicians, bureaucrats, academics and the general public, and (iv) assists in developing a practical body of knowledge. When the stakes are high or when decision-makers are motivated to make the right choice, they may choose to switch dimensions when evaluating different outcomes: from “good” or “bad” to the dilemma of whether to change or not to change (or restore or not restore) the status quo, and if the inclination is to change (or restore) the status quo, whether this change should be fundamental, and whether it should be achieved “at all costs” at the levels of rhetoric, doctrine, and/or action on the ground. This dilemma faced by elite decision-makers is foundational for valid theory building in the sub-field of disproportionate policy response.

2.3.2. The Disproportionate Policy Perspective

Based on the aforementioned conceptual foundations, the *disproportionate policy perspective* (Maor, 2017a) provides a general framework for strategic explanations of overreaction. The framework has four central tenets. First, under certain conditions, policymakers may face incentives to design and implement disproportionate policy options, which, at times, may be successful in achieving a policy goal. Second, under certain conditions, policymakers may prioritize policy effectiveness over policy costs (policy overreaction or overinvestment), whereas under other conditions, a cost-conscious response may be chosen over an effective one (policy underreaction or underinvestment). Third, disproportionate policy options may be designed to be used as signaling devices, context setters (e.g., enabling policymakers to resolve issues related to the fragmentation of decision making), or for purposes other than implementation on the ground. Fourth, under certain conditions the emotional arena of policy may be equally or more challenging than the substantive one.

The disproportionate policy perspective represents a move away from the strongly normative fields of policy analysis and evaluation, which place efficient goal attainment center stage, and advances instead, a more nuanced analysis of policy overreaction options and actions which is applicable during crisis and non-crisis periods. At base, strategic explanations explore different strategies of policy overreactions as well as the ways politicians and bureaucrats balance the tension between these strategies and manage them.

Strategic explanations posit that policymakers may be motivated to overreact, for example, in order to restore confidence in a policy in a matter of days during crises involving panic

and popular fears; to produce an overwhelming effect as an act of leadership; to abruptly shift the contours of public debate; to create and secure a legacy, and to apply a grand strategy to policy problems and the public interest, especially over issues about which voters share a common preference, such as security and economic performance (Maor, 2017a). In international politics and in other areas in which verification and enforcement mechanisms are deficient, policymakers may be motivated to overreact in order to enable the other side to get an accurate read of their intentions thereby strengthening coercive diplomacy and avoiding unnecessary wars (Jervis 2017). Setting aside the risk of boomerang effects, policymakers may be motivated to overreact in order to achieve guaranteed success in either changing the status quo targeted or restoring it to its previous level. Intentional policy overreaction may be inferred from a policy decision that is backed by a credibly large amount of committed resources, is blind to the heterogeneity of the target population, and is executed as planned. The fact that a policy is perceived by policymakers as an overwhelming response may add a great deal of credence to the classification of a policy as an excessive one (Maor, 2017a).

2.3.3 The Repertoire of Intentional Policy Overreaction

Key choices in the repertoire of intentional policy overreaction are rhetoric and doctrine, as well as selective and non-selective policy overreaction. A *policy overreaction doctrine* refers to a coherent set of policy principles which presents an ‘all or nothing’ policy commitment in pursuit of a policy goal no matter what the costs are (Maor, 2018; 2017b, c). At the heart of a policy overreaction doctrine lie principles for the use of overwhelming government force in order to achieve a decisive and quick policy outcome in a particular policy domain. *Policy overreaction rhetoric*, a subset of policy overreaction doctrine, refers to arguments that policymakers employ to reach and persuade the target populations of their ‘all or nothing’ policy commitment to achieve their policy goal, no matter what the costs are (Maor, 2018).⁵

Non-selective mechanisms allow governments to provide resources for all individuals and institutions in need who come forward and seek assistance. This mode of policy overreaction is generally applied during natural disasters and other catastrophic events (Maor, 2017b, 2018). *Selective mechanisms*, such as stress tests for banks, include the design of more complex programs or methods that allow policymakers to be selective in the use of overwhelming policy response. Selectivity is gained by designing a mechanism that separates the fundamentally healthy institutions or individuals from the terminally ill or weak ones, and that is accompanied by a government commitment to make resources available through this mechanism to selected individuals or institutions unable to meet their needs independently (Maor, 2017b). Whether or not this type of response falls under the category of proportionate response or is an overreaction depends on whether the threshold separating the fundamentally healthy institutions or individuals from the terminally ill or weak ones is constructed with relatively narrow safety margins or, on the other hand, with large or very large safety margins. It is reasonable to suggest that during a crisis involving sudden losses of confidence, the government will deliberately select a threshold with large or very large safety margins so that all those in need and those that are border cases will be assisted. To increase the perceived credibility of this move, the government will be disinclined to publicize the threshold or any other information regarding it.

Intentional overreaction implies that policymakers operate in the policy system; they intentionally react to data generated by the environment, and have every reason to try to understand it and predict the consequences of the action to be pursued, and to incorporate those understandings and predictions into their behavior. For example, what is needed to combat a bank run is the ‘use of *overwhelming force* to quell panics’ (Geithner, 2014, 397, italics added). The financial manifestation of such a force is ‘a credibly large amount of committed resources available to use with discretion during a financial crisis’ (Gorton, 2015, 976). This policy rationale is coded in Bagehot’s (1873) rule, which states that to end a financial crisis, the central bank should lend freely, at a high rate, and on good collateral. This doctrine of non-selective policy overreaction was implemented during the US banking crisis of 2007–2008 by the Federal Reserve (Bernanke, 2014), the Bank of England (King, 2010) and the European Central Bank (Draghi, 2013). In the US, within a month of Lehman Brothers’ bankruptcy, Congress passed the Troubled Asset Relief Program (TARP), which allocated \$700 billion to address the banking crisis. Once the banking sector and the economy had stabilized, calibration of the policy response took place. Ultimately, the Dodd–Frank Wall Street Reform and Consumer Protection Act reduced the amount available to address the crisis to \$475 billion. The implementation of this doctrine was combined with selective policy overreaction, manifested in the stress tests of the 19 largest bank holding companies. These stress tests separated the fundamentally healthy banks from the terminally ill, exposing the banks that required government injection of capital. Although the results of these stress tests were made public, the model or process employed by the Fed in order to achieve the results, as well as the size of the safety margin, were not (Gorton, 2015).

Policymakers, who were guided by their preferred goals during this crisis, transmitted the policy instruments—in line with Bagehot’s policy overreaction doctrine—as stimuli to target populations to produce causal effects. Thus, rather than a behavior derived from human cognitive and emotional architecture or one which is random, policymakers were willing to overreact. A recent study has created a series of indexes to measure disproportionate policy response among the EU member states that experienced the 2007–2008 banking crisis (De Francesco & Maggetti, 2017). The extent of disproportionality has been measured by the distance of a given country’s set of policy responses to the average response of the countries under investigation, while accounting for domestic-level variation in the severity of the crisis. The main finding has been that a large majority of EU countries overreacted through public liability guarantee and budget commitment (De Francesco & Maggetti, 2017). The path forward is, therefore, to better understand collective outcomes as the product of disproportionate policy decisions undertaken by primarily autonomous decision-makers, without taking institutions or other contextual constraints as given, in order to support both theory development and policy advice.

3. HOW DO STRATEGIC EXPLANATIONS BALANCE INTENTIONALITY WITH BEHAVIORAL MICRO-FOUNDATION?

Psychological explanations of policy overreaction have a clear-cut commitment to a behavioral model of human behavior. Such a view provides an explicit endorsement of (radical) reductionism, namely, looking for underlying mechanisms that start from individuals. Such mechanisms may include key features of the cognitive system (i.e.,

limited attention and working memory, preconscious attitudes, the rapid formation of habitual mental association, and the interplay of affect and cognition), an individual's personality or characterological predispositions, biological attributes, and intergroup relations (i.e., in-group identity, intractable group conflict, collective action and group prejudice). These key features are then incorporated—as models of individual cognition within models of macro-political change, such as the punctuated equilibrium theory, which aims at explaining endogenous disjoint changes in organizations (Baumgartner, 2017). No free parameters—which cannot be experimentally estimated—are allowed.

Strategic explanations of policy overreaction balance intentionality with behavioral micro-foundation by accepting the claim that models of collective activities in governments must be consistent with individual cognitive processes. At the same time, strategic explanations are guided by the assumption that collective activities in governments must not always be derived from, that is, reducible to, individual cognitive processes. In other words, individual-level processes in the case of intentional policy overreaction may be sufficient, but not necessary, for the collective activities in governments to be possible. This premise is in line with Herbert Simon's contrasting of "the usual conception of the sciences as building upward from elementary particles, through atoms and molecules to cells, organs and organisms" with "[t]he actual history", which "has unfolded, as often as not, in the opposite direction, from top down" (Simon, 1996, 172). Collective activities in governments cannot always be meaningfully reduced to micro-foundations.

As long as strategic explanations do not assume actors have fixed preferences—as rational choice theory does (Becker, 1976; Elster, 1989; Simon, 1995)—or respond to such preferences in an optimal manner, they leave much room for focusing on the cognitive and emotional aspects of individuals, political emotions included (Brader & Marcus, 2013). One has to bear in mind, however, that a reliance on micro-models of elite behavior and decision-making naturally directs attention towards limitations in human capacities, such as limited human information processing capacity (Jervis, 1976; Larson, 1985; Jones, 2001) or cognitive, motivational and emotional biases that distort elite threat perceptions and reactions to threat (Stein, 2013; 2017). Perhaps this is because rational choice theory provides a normative baseline for evaluating choice, thereby encouraging behavioral political scientists to study the ways in which human behavior fails to conform to the theory's high expectations. Although such limitations are a key facet of human cognitive capacity, they may be largely manifested during normal (policy) fluctuations. The problem is that normal fluctuations are ubiquitous, and the more we know about them, the more they are selected for further research. This positive feedback process results in knowledge regarding normal fluctuation being accelerated away from other fluctuation types. The challenge remains therefore to explain patterns of non-normal fluctuations.

4. POLICY AND POLITICAL BUBBLES

The concept of "policy bubbles" originated in the economic concept of an asset bubble which developed in the nineteenth century (MacKay, 1841; Bagehot, 1873). Since then bubble episodes have fascinated economists, who attempt to gauge investor expectations and draw conclusions about the direction of the market from cognitive errors investors make (e.g., Galbraith, 1954; Kindleberger, 1978; Shiller, 2000; 2008; 2017; Akerlof &

Shiller, 2009), and economic sociologists, who seek to understand the development of a gap between the price of an asset and its fundamental or intrinsic value through sociological and institutional lenses (e.g., Abolafia, 2004; Abolafia & Kilduff, 1988; Zuckerman, 2012a; 2012b; Turco & Zuckerman, 2014).

Policy bubbles are a socio-psychological phenomenon which occurs when policy overreaction/overinvestment due to distorted policy valuation is sustained by positive feedback over an extended period of time (For earlier definitions, see Jones et al., 2014; Maor, 2014a). Policy bubbles are defined therefore relative to an information set — which includes policy instrument valuations inflated by moral value, emotion, safety and/or cost-benefit concerns (e.g., efficiency, wastefulness), alongside other symbolic or ideational elements — with a specified temporal dimension. They encompass periods of overvaluations of policy instruments which may arise in either an endogenous way, when the bubbles' probability and size are affected by public policy, or by an exogenous shock. Agents of distortions in policy valuations may include norm entrepreneurs, reputation entrepreneurs, meaning entrepreneurs, standards and performance metrics entrepreneurs (Maor, 2017d) and emotional entrepreneurs (Maor & Gross, 2015).

Patterns of policy bubble dynamics can be demonstrated by a situation in which the central indicator of a policy problem is decreasing, while the policy instrument is increasingly employed over a relatively long period of time, resulting in overproduction of policy. One example is the crime policy bubble in the United States during 1991–2010. This bubble has been manifested by gross overinvestment in prisons and by unprecedented incarceration despite the clear decline in crime rates (Jones et al., 2014). It resulted largely from two processes: (i) growing punitive attitudes among citizens, due to public fear of crime, and (ii) the “get tough” sentencing policies of legislators representing rural America, where prisons had become a “growth industry. So when a policy instrument is increasingly applied—because it becomes a symbol of other things—despite a decline in the severity of the policy problem, and thereafter, positive feedback loops, in addition to social contagion, take hold, the policy becomes a bubble.

In political science, the scientific study of policy bubbles is still in its infancy. Two studies have recently put the processes that sustain policy overinvestment—positive feedback process and social contagion—at center stage by establishing the plausibility of this concept (Jones et al., 2014; Maor, 2014a). Although these studies use different terminology, they share an assumption regarding the emergence of policy bubbles and point to a similar dynamic regarding the growth of policy bubbles. Recently, Maor has conceptually extended bubble dynamics to include policy underreaction (Maor, 2014b) due to distorted policy valuation which is sustained by negative emotions and emotional sentiments—termed negative policy bubbles (Maor, 2016). To date, no study has systematically identified and examined policy bubbles, nor attempted to generate and manipulate such bubbles in experimental settings.

A connecting tissue exists between policy bubbles and political bubbles, which occur when political and bureaucratic executives as well as legislators hold, or are informed by, rigid and unchangeable ideologies, doctrines or ideas which are sustained by positive feedback

processes over an extended period of time. An example is the broader view of management as the key to better government which reached a point of a dominant ideology amongst UK and US politicians and bureaucrats in the late 1980s and early 1990s (Pollitt 1990, vi). According to McCarty et al. (2013), the channels through which politics exacerbates (financial) crises include rigid ideological thinking on policy making, political institutions which delay and weaken political responses to crises, and sector-specific interests, which take advantage of ideologies and political institutions to extract beneficial policies and to undermine the reputation of regulators (McCarty et al., 2013, p. 7). My view is that a great variety of policy and political bubbles are waiting to be explored.

5. PROMISING AVENUES FOR FUTURE RESEARCH

The premise underlying this chapter is that the study of overreaction in politics and policy is theoretically meaningful because it contributes to our basic understanding of fundamental processes, and it is practically important because, under certain conditions, such a policy response creates substantial value for policymakers. But we still lack a thorough understanding of the processes by which this type of elite decision-making occurs and is managed, and we still lack clarity regarding how that value is created. There are a few areas that offer the most promising possibilities for future research on this topic.

Much experimental work inside and outside the laboratory is needed to establish which biases that cause overreaction will matter when; to explore the interaction effects between psychological factors and the political and strategic context of decision-making, and to identify de-biasing strategies (i.e., when people shift from over- to underestimation of outcome probability).⁶ A careful process tracing is also needed to understand the underlying behavioral antecedents of decision-makers' engaging in the design of intentional policy overreaction in response to highly-structured and ill-structured policy problems. The challenge is to understand how policy overreaction is designed, and the underlying cognitive processes that allow it to create value for decision-makers. Overall, we need to identify heterogeneity across individuals, institutions, and situations, and gauge the linkage between these constructs.

Regarding long-term policy overreaction, scholars may design lab experiments that generate and manipulate policy bubbles in order to explain how individual factors and social influence affect policymakers' efficiency in handling policy problems, and whether some of the effects are problem-specific.⁷ They may draw on recent advances in decision theory, such as the importance of emotion in politics (for a review, see: Maor & Gross, 2015), the influence of emotion on the choice of reference points and processes of probability estimation (Kahneman, 2011; Mercer, 2005; 2010; Loewenstein et al., 2001; Renshon et al., 2017; Slovic, 2007; Slovic et al., 2004) as well as on novel experimental paradigms, such as experience-based decision models (Erev & Haruvy, 2015; Erev & Roth, 2014). They may test the effect of providing participants with particular types of information or a combination thereof (quantitative or textual; emotional or neutral) in order to gauge which types of information or which combinations facilitate greater efficiency in handling the policy problem, and whether there are systematic differences in the nature of deviations from efficiency (e.g., over/under investment, duration of deviations) according to the different types or combinations of information. An experimental paradigm can also be developed that requires participants to manage more than one political or social problem

simultaneously. This will enable testing the effect of attention limitation. Lastly, the experimental program can be developed to examine the difference between individual vs. group decisions and to test hypotheses pertaining to social pressure and human herding.⁸ Although citizens could be used as a convenient sample for decision-makers, it is preferable to use both groups in order to test for the impact of experience on choice.

The aforementioned avenues leave a broad agenda for research on overreaction in politics and policy. The most difficult challenges are the establishment of scope conditions and thresholds for biases that are found to be causes of overreaction among individuals and situations over big questions in political science and public policy, as well as the exploration of when and how decision-makers engage in the design and implementation of intentional policy overreaction. In my opinion, these are the most useful ways to proceed.⁹

ACKNOWLEDGEMENTS

The author gratefully acknowledges financial support from the *Israel Science Foundation* under grant 616/17.

REFERENCES

- Abolafia, M. Y. (2004). Framing moves: Interpretive politics at the Federal Reserve. *Journal of Public Administration Research and Theory*, 14(3), 349–370.
- Abolafia, M. Y., & Kilduff, M. (1988). Enacting market crisis: The social construction of a speculative bubble. *Administrative Science Quarterly*, 33(2), 177–193.
- Akerlof, G., & Shiller, R. (2009). *Animal spirits: How human psychology drives the economy, and why it matters for global capitalism*. Princeton, NJ: Princeton University Press.
- Allison, G., & Zelikow, P. (1999). *Essence of decision: Explaining the Cuban missile crisis* (2nd ed.). New York: Longman.
- Bagehot, W. (1873). *Lombard street: A description of the money market*. London: Henry S. King.
- Barberis, N., Shleifer, A., & Vishny, R. (1998). A model of investor sentiment. *Journal of Financial Economics*, 49, 307–343.
- Baumgartner, F. R. (2017). Endogenous disjoint change. *Cognitive Systems Research*, 44, 69–73.
- Baumgartner, F. R., Breunig, C., Green-Pedersen, C., Jones, B. D., Mortensen, P. B., Nuytemans, M., & Walgrave, S. (2009). Punctuated equilibrium in comparative perspective. *American Journal of Political Science*, 53(3), 603–620.
- Baumgartner, F. R., & Jones, B. D. (1993). *Agendas and instabilities in American politics*. Chicago: University of Chicago Press.
- Becker, G. S. (1976). *The economic approach to human behavior*. Chicago: University of Chicago Press.
- Betz, T. (2017). Trading interests: Domestic institutions, international negotiations, and the politics of trade. *Journal of Politics*, 79(4), 1237-1252.
- Bernanke, B. (2014). Central banking after the great recession: Lessons learned and challenges ahead: A discussion with Federal Reserve Chairman Ben Bernanke on the Fed's 100th Anniversary. Washington, DC: Brookings Institution.
- Bénabou, R. & Tirole, J. (2002). Self-confidence and personal motivation, *Quarterly Journal of Economics*, 117, 3, 871-915.
- Brader, T., & Marcus, G. E. (2013). Emotion and political psychology. In L. Huddy, D. O. Sears & J. S. Levy (eds.), *The Oxford handbook of political psychology* (pp. 165-204). 2nd ed. Oxford: Oxford University Press.
- Brunsson, N., and Olsen, J. P. (1993). *The reforming organization*. London: Routledge.
- Burks, S.V., Carpenter, J.P., Goette, L., and Rustichini, A. (2013). Overconfidence and social signaling, *Review of Economic Studies*, 80, 949-983.
- Chong, D. (2013). Degrees of rationality in politics. In L. Huddy, D. O. Sears & J. S. Levy (eds.), *The Oxford handbook of political psychology* (pp. 96-129). 2nd ed. Oxford: Oxford University Press.
- Condor, S., Tileagă, C., and Billig, M. (2013). Political rhetoric. In L. Huddy, D. O. Sears & J. S. Levy (eds.), *The Oxford handbook of political psychology* (pp. 262-300). 2nd ed. Oxford: Oxford University Press.
- Daniel, K., Hirshleifer, D., Hirshleifer, D., Subrahmanyam, A., & Subrahmanyam, A. (1998). Investor psychology and investor security market under-and overreactions. *Journal of Finance*, 53(6), 1839–1886.

- De Francesco, F. & Maggetti, M. (2017). Assessing Disproportionality: Indexes of policy responses to the 2007-2008 banking crisis. *Policy Sciences* <https://doi.org/10.1007/s11077-017-9309-x>
- Dowding, K., A. Hindmoor, & Martin, A. (2016). The comparative policy agendas project: Theory, measurement and findings *Journal of Public Policy*, 36(1), 3–25.
- Downs, A. (1957). *An economic theory of democracy*. New York: Harper & Row.
- Draghi, M. (2013, May 23). Building stability and sustained prosperity in Europe. Speech at the event entitled “The Future of Europe in the Global Economy.” Retrieved from <http://www.bis.org/review/r130524a.pdf?frames=0>.
- Elster, J. (1989). *The cement of society*. New York; Cambridge University Press.
- Epp, D. (2017). Public policy and the wisdom of the crowds. *Cognitive Systems Research*, 43, 53-61.
- Epp, D. (2018). *The structure of policy change*. Chicago: University of Chicago Press.
- Erev, I., & Haruvy, E. (2015). Learning and the economics of small decisions. In J. H. Kagel & A. E. Roth (eds.), *The handbook of experimental economics* (pp. 638-660). Princeton, NJ: Princeton University Press.
- Erev, I., & Roth, A. E. (2014). Maximization, learning and economic behavior. *Proceedings and National Academy of Science*, 111, 10818–10825.
- Fiorina, M. P. (1981). *Retrospective voting in American national elections*. New Heaven, CT: Yale University Press.
- Friedman, B. H., (2011). Managing fear: The politics of homeland security. *Political Science Quarterly*, 126(1), 77-106.
- Galbraith, J. K. (1954). *The great crash: 1929*. Boston, MA: Houghton Mifflin Co.
- Geithner, T. F. (2014). *Stress test: Reflections on financial crises*. New York: Crown Publishers.
- Gigerenzer, G. & Goldstein, D. G. (1996). Reasoning the fast and frugal way: Models of bounded rationality. *Psychology Review*, 103(4), 650-669.
- Gorton, G. (2015). Stress for success: A review of Timothy Geithner’s financial crisis memoir. *Journal of Economic Literature*, 53(4), 975–995.
- Hammond, T. H. (1986). Agenda control, organizational structure, and bureaucratic politics. *American Journal of Political Science*, 30, 379–420.
- Hammond, T. H. (1990). In defense of Luther Gulick’s ‘Notes on the Theory of Organization’. *Public Administration*, 68, 143–173.
- Hirshleifer, D. (2008). *Psychological bias as a driver of financial regulation*. Chicago: University of Chicago Press.
- Hirshleifer, D., and Teoh, S. H. (2009). The psychological attraction approach to accounting and disclosure policy. *Contemporary Accounting Research*, 26(4), 1067-1090.
- Hirshleifer, D., and Teoh, S. H. (2017). How psychological bias shapes accounting and financial regulation. *Behavioral Public Policy*, 1(1), 87-105.
- Hogwood, B. W., & Peters, G. B. (1985). *The pathology of public policy*. Oxford: Clarendon Press.
- Hong, H., & Stein, J. (1999). A unified theory of underreaction, momentum trading and overreaction in asset markets. *Journal of Finance*, 54(6), 2143-2184.

- Howlett, M., & Kemmerling, A. (2017). Calibrating climate change policies: the causes and consequences of sustained under-reaction. *Journal of Environmental Policy & Planning*, 19(6), 625-637.
- James, O., Jilke S.R., & Van Ryzin, G. G. (2017). *Experiments in public management Research: Challenges and contributions*. Cambridge: Cambridge University Press.
- Janis, I. L. (1982). *Victims of groupthink: A psychological study of foreign-policy decisions and fiascos*. 2nd ed. Boston: Houghton Mifflin. First published in 1972.
- Janis, I. L. (1989). *Crucial decisions. Leadership in policymaking and crisis management*. New York: The Free Press.
- Jervis, R. (1976). *Perceptions and misperceptions in international politics*. Princeton, NJ: Princeton University Press.
- Jervis, R. (2017). *How statesmen think: The psychology of international politics*. Princeton: Princeton University Press.
- Jones, B. D. (1994). *Reconceiving decision-making in democratic politics*. Chicago: University of Chicago Press.
- Jones, B. D. (2001). *Politics and the architecture of choice: Bounded rationality and governance*. Chicago: University of Chicago Press.
- Jones, B. D. (2003). Bounded rationality in political science: Lessons from public administration. *Journal of Public Administration Theory*, 13, 395–412.
- Jones, B. D. (2017). Behavioral Rationality as a Foundation for Public Policy Studies. *Cognitive Systems Research*, 43, 63–75.
- Jones, B. D., & Baumgartner, F. R. (2005). *The Politics of attention: How government prioritizes problems*. Chicago: University of Chicago Press.
- Jones, B. D., Thomas III, H. F., & Wolfe, M. (2014). Policy bubbles. *Policy Studies Journal*, 42, 146–171.
- Kahneman, D. (2011) *Thinking, fast and slow*. New York: Farrar, Straus, and Giroux.
- Kahneman, D., Slovic, P., & Tversky A. (Eds.) (1982). *Judgment under uncertainty: Heuristics and biases*. New York: Cambridge University Press.
- Kahneman, D., & Tversky, A. (1973). On the psychology of prediction. *Psychological Review*, 80, 237-251.
- Kindleberger, C. (1978). *Manias, panics, and crashes: A history of financial crises*. New York; Basic Books.
- King, M. (2010). Banking—from Bagehot to Basel, and back again. Speech at the Second Bagehot Lecture, Buttonwood Gathering, New York, October 25. Retrieved from <http://www.bis.org/review/r101028a.pdf?frames=0>.
- Larson, D. (1985). *The origin of containment*. Princeton, NJ: Princeton University Press.
- Lau, R. R., Anderson, D. J., & Redlawsk, P. (2008). An exploration of correct voting in recent U.S. presidential elections. *American Journal of Political Science* 52(2): 395-411.
- Leech, B. K., & Cronk, L. (2017). Coordinated policy action and flexible coalitional psychology: How evolution made humans so good at politics. *Cognitive Systems Research*, 43: 89-99.
- Levi, J. S. (1986). Organizational routines and the causes of war. *International Studies Quarterly*, 30(2), 193-222.

- Lichtenstein, S., Fischhoff, B., & Phillips, L. D. (1982). Calibration of probabilities: The state of the art in 1980'. In D. Kahneman, P. Slovic and A. Tversky (Eds.), *Judgment under uncertainty: Heuristics and biases* (pp. 306–333). Cambridge: Cambridge University Press.
- Lichtenstein, S., Slovic, P., Fischhoff, B., Layman, M., & Combs, B. (1978). Judged frequency of lethal events. *Journal of Experimental Psychology: Human Learning and Memory* 4, 551–578.
- Lodge, M., & Taber, C. S. (2000). Three steps toward a theory of motivated political reasoning. In A. Lupia, M. McCubbins, & S. Popkin (eds.), *Elements of reason: Cognition, choice, and the bounds of rationality* (pp. 182-213). New York: Cambridge University Press.
- Loewenstein, G. F., Weber, E. U., Hsee, C. K., & Welch N. (2001). Risk as feelings. *Psychological Bulletin*, 127(2), 267-286.
- Lupia, A., & McCubbins, M. D. (1998). *The democratic dilemma: Can citizens learn what they need to know?* New York: Cambridge University Press.
- Mackay, C. (1841). *Extraordinary popular delusions and the madness of crowds*. New York: Harmony Books.
- Manski, C. F. (2013). *Public policy in an uncertain world: Analysis and decisions*. Cambridge, Mass.: Harvard University Press.
- Maor, M. (2012). Policy overreaction. *Journal of Public Policy*, 32(3), 231–259.
- Maor, M. (2014a). Policy bubbles: Policy overreaction and positive feedback. *Governance*, 27(3), 469–487.
- Maor, M. (2014b). Policy persistence, risk estimation and policy underreaction. *Policy Sciences*, 47(4), 425–443.
- Maor, M. (2016). Emotion-driven negative policy bubbles. *Policy Sciences*, 49(2), 191–210.
- Maor, M. (2017a). The implications of the emerging disproportionate policy perspective for the new policy design studies. *Policy Sciences*, 50(3), 383-398.
- Maor, M. (2017b). Disproportionate policy response. In *Oxford Research Encyclopedia of Politics*, doi: 10.1093/acrefore/9780190228637.013.168.
- Maor, M. (2017c). Policy overreaction doctrine: From ideal-type to context-sensitive solution in times of crisis. In M. Howlett & I. Mukherjee (eds.), *Handbook of Policy Formulation* (pp. 539-553). Cheltenham: Edward Elgar Publishing.
- Maor, M. (2017d). Policy entrepreneurs in policy valuation processes: The case of the coalition for environmentally responsible economies. *Environment and Planning C: Government and Policy*, 35(8), 1401-1417.
- Maor, M. (2018). Rhetoric and doctrines of policy over- and underreactions in times of crisis. *Policy & Politics*, 46(1), 47-63.
- Maor, M., Tosun J., & Jordan, A. (2017). Proportionate and disproportionate policy responses to climate change: Core concepts and empirical applications. *Journal of Environmental Policy & Planning*, 19(6), 599-611.
- Maor, M., & Gross, J. (2015). Emotion regulation by emotional entrepreneurs: Implications for political science and international relations. Paper Presented at the 73rd Annual Conference of the Midwest Political Science Association, April 16–19, Chicago, <http://www.moshemaor.net/publications/policy-anomalies>

- March, J. G. (1994). *A primer on decision making*. New York; Free Press.
- March, J. G. & Olson J. P. (1989). *Rediscovering institutions: The organizational basis of politics*. New York: Free Press.
- McCaffery, E., & Baton, J. (2006). Isolation effects and the neglect of indirect effects of fiscal policies. *Journal of Behavioral Decision Making*, 19(4), 289-302.
- McCarty, N., Poole, K. T., & Rosenthal, H. (2013). *Political bubbles: Financial crises and the failure of American democracy*. Princeton, NJ: Princeton University Press.
- Mercer, J. (2005). Rationality as psychology in international relations. *International Organization*, 59(1), 77-106.
- Mercer, J. (2010). Emotional beliefs. *International Organization*, 64(1), 1-31.
- Meyer, C. O. (2016). Over- and under-reaction to transboundary threats: Two Sides of a misprinted coin? *Journal of European Public Policy*, 23(5), 735–752.
- Mintz, A., & Wayne, C. (2016). *The polythink syndrome: U.S. foreign policy decisions on 9/11, Afghanistan, Iraq, Syria, and ISIS*. Stanford: Stanford University Press.
- Montibeller, G. and Winterfeldt, D. (2015). Cognitive and motivational biases in decision and risk analysis. *Risk Analysis*, 35, 7, 1230-1251.
- Moore, D. A. & Healy, P. J. (2008). The trouble with overconfidence. *Psychological Review* 115, 2, 502–517.
- Page, B. I., & Shapiro, R. Y. (1992). *The rational public: Fifty years of trends in Americans' policy preferences*. Chicago: University of Chicago Press.
- Palan, S. (2013). A review of bubbles and crashes in experimental asset markets. *Journal of Economic Surveys*, 27(3), 570–588.
- Patt, A. & Zeckhauser, R. (2000). Action Bias and Environmental Decisions. *Journal of Risk and Uncertainty* 21(1): 45-72.
- Peters, G., Jordan, A., & Tosun, J. (2017). Over-reaction and under-reaction in climate policy: An institutional analysis. *Journal of Environmental Policy & Planning*, 19(6), 612-624.
- Petty, R. E., & Cacioppo, J. T. (1986). The elaboration likelihood model of persuasion. In L. Berkowitz (ed.) *Advances in experimental social psychology* (pp. 123-205). New York: Academic Press.
- Pierson, P. (2000). Increasing returns, path dependence and the study of politics. *American Political Science Review*, 94(2), 251–267.
- Pollitt, Christopher. (1990). *Managerialism and the Public Services: The Anglo-American Experience*. Oxford: Blackwell.
- Popkin, S. L. (1994). *The reasoning voter: Communication and persuasion in presidential campaigns* (2nd ed.). Chicago: University of Chicago Press.
- Rathbun, B. C., Kertzer, J. D., & Paradis, M. (2017). *Homo diplomaticus: Mixed-method evidence of variation in strategic rationality*. In *The Behavioral Revolution and International Relations*, supplement, *International Organization*, 71(S1), S33-S59.
- Redlawsk, D. P. & Lau, R. R. (2013). Behavioral decision-making. In L. Huddy, D. O. Sears & J. S. Levy (eds.), *The Oxford handbook of political psychology* (pp. 130-164). 2nd ed. Oxford: Oxford University Press.

- Renshon, J., Lee, J. J., & Tingley, D. (2017). Emotions and the micro-foundations of commitment problems." In *The Behavioral Revolution and International Relations*, supplement, *International Organization*, 71(S1), S189-S217.
- Rubinstein, A. (1998). *Modeling bounded rationality*. Cambridge, MA: MIT Press.
- Saunders, E. N. (2017). No substitute for experience: Presidents, advisers, and information in group decision making. In *The Behavioral Revolution and International Relations*, supplement, *International Organization*, 71(S1), S219-S247.
- Shafir, E. (ed.) (2013). *The Behavioral foundations of public policy*. Princeton, NJ: Princeton University Press.
- Shiller, R. J. (2000). *Irrational exuberance*. Princeton, NJ: Princeton University Press.
- Shiller, R. J. (2008). *The subprime solution*. Princeton, NJ: Princeton University Press.
- Shiller, R. J. (2017). Narrative economics. *American Economic Review*, 107(4), 967-1004.
- Simon, H. A. (1996). *The sciences of the artificial*. (3rd ed.). Cambridge, MA: The MIT Press.
- Simon, H. A. (1982). *Models of bounded rationality*, 3 vols. Cambridge, Mass.: MIT Press.
- Simon, H. A. (1983). *Reason in human affairs*. Stanford: Stanford University Press.
- Simon, H. A. (1985). Human nature in politics: The dialogue of psychology with political science. *American Political Science Review*, 79(2), 293-304.
- Simon, H. A. (1995). Rationality in political behavior. In P. K. Moser (ed.), *Rationality in action: Contemporary approaches* (pp. 189-204). New York: Cambridge University Press.
- Slovic, P. (2007). 'If I look at the mass I will never act': Psychic numbing and genocide. *Judgment and Decision Making*, 2(2), 79-95.
- Slovic, P., Finucane, M. L., Peters, E., & MacGregor, D. G. (2004). Risk as analysis and risk as feelings: Some thoughts about affect, reason, risk, and rationality. *Risk Analysis*, 24(2), 311-322.
- Slovic, P., Finucane, M. L., Peters, E., & MacGregor, D. G. (2007). The affect heuristic. *European Journal of Operational Research* 177, 1333-1352.
- Snyder, J. (1984). Civil military relations and the cult of the offensive, 1914 and 1984. *International Security*, 9, 108-146.
- Stein, J. G. (2013). Threat perception in international relations. In L. Huddy, D. O. Sears & J. S. Levy (eds.), *The Oxford handbook of political psychology* (pp. 364-394). 2nd ed. Oxford: Oxford University Press.
- Stein, J. G. (2017). The micro-foundations of international relations Theory: Psychology and behavioral economics. In *The Behavioral Revolution and International Relations*, supplement, *International Organization*, 71(S1), S249- S263.
- Stimson, J. (2004). *Tides of consent*. New York: Cambridge University Press.
- Sunstein C. R. (2002). Probability neglect: emotions, worst cases and law. *Yale Law Journal*, 112, 61-107.
- Sunstein C. R., & Zeckhauser R. J. (2010). Dreadful possibilities, neglected probabilities. In E. Michel-Kerjan and P. Slovic (eds.), *The irrational economist: Making decisions in a dangerous world* (pp. 116-123). NY: Perseus Books.

- T Hart, P., Stern, E. K., & Sundelius, B. (Eds.) (1997). *Beyond groupthink: Political group dynamics and foreign policy-making*. Ann Arbor: University of Michigan Press.
- Thaler, R., & De Bondt, W. F. M. (1985). Does the stock market overreact? *Journal of Finance*, 40(3), 793–805.
- Thomas, H. F. (2017). Modeling contagion in policy systems. *Cognitive Systems Research*, 44, 74-88.
- Tsebelis, G. (2002). *Veto players: How political institutions work*. Princeton: Princeton University Press.
- Tversky, A., & Kahneman, D. (1974). Availability: A heuristic for judging frequency and probability. *Cognitive Psychology*, 5, 207-232.
- Turco, C. J., & Zuckerman, E. W. (2014). So you think you can dance? Lessons from the U.S. private equity bubble. *Sociological Science*, 1, 81–101.
- Viscusi, W. K. & Gayer, T. (2015). Behavioral public choice: The behavioral paradox of government policy. *Harvard Journal of Law & Public Policy*, 38, 3, 973-1007.
- Walker, S. G., & Malici, A. (2011). *U.S. presidents and foreign policy mistakes*. Stanford: Stanford University Press.
- Walgrave, S. & Varone, F. (2008). Punctuated equilibrium and agenda-setting: Bringing parties back in: Policy change after the Dutroux crisis in Belgium. *Governance*, 21(3), 365-395.
- West, K. J., & Lee, H. (2014). Veto players revisited: Internal and external factors influencing policy production. *Legislative Studies Quarterly*, 39(2), 227-260.
- Zuckerman, E. W. (2012a). A sociological approach to market efficiency. In K. Knorr-Cetina & Preda A. (eds.), *Oxford handbook on the sociology of finance* (pp. 223-249). New York: Oxford University Press.
- Zuckerman, E. W. (2012b). Construction, concentration, and (dis)continuities in social valuations. *Annual Review of Sociology*, 38, 223–45.

¹ Although I refer to politics and policy research throughout this article, I mean it to incorporate public management and governance research as well.

² By contrast, behavioral economists have studied investor overreaction across various global markets over the last three decades (Barberis et al., 1998; Thaler & De Bondt, 1985; Hong & Stein, 1997; Daniel et al., 1998).

³ Interestingly, Hogwood and Peters (1985) have devised the terms *oversteering*, which refers to institutions' "moving back past the correct path to another set of mistakes in the opposite direction" (p. 83); *over-targeting*, which refers to "[t]he use of as many instruments as there are objectives" (p. 167), and *overinstrumenting*, which refers to a case in which "many instruments all target the same client group or objective" (pp. 167–168). Howlett & Kemmerling (2017) have referred to *underdesign*, which occurs when suboptimal designs are adopted, and to *overdesign*, which emerges when "the reverse occurs and resources are wasted in 'over engineering' a design vis à vis the significance of the problem" (p. 5). However, no attempt has been made to bring definitional clarity to these terms and integrate them in an analytical perspective or framework of disproportionate policy response.

⁴ For methods of credible policy analysis and decision-making see, for example, Manski (2013).

⁵ For a review of behavioral research of political rhetoric, see Condor et al. (2013).

⁶ For example, Montibeller and von Winterfeldt (2015) have looked into a large number of biases and classified them by whether they are easy or hard to correct with debiasing tools.

⁷ For a review of the literature on economic and financial bubbles and crashes in the most commonly used experimental asset markets, see Palan (2013).

⁸ I thank Raanan-Sulitzeanu-Kenan for raising this point.

⁹ Throughout this paper, I have omitted discussions of moral issues that might arise from overreactions in politics and policy.